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Sara Severance, Editor
Rhonda Reibenspies, Illustrator

The official University address is:
Wichita State University
Wichita, Kansas 67208
The general University telephone number is: (316) 689-3456.
For admission information call, toll free, (800) 362-2594.
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GENERAL INFORMATION

1982-83 Administrative Officers

WICHITA STATE UNIVERSITY

Clark D. Ahlberg .................................. President of the University
John B. Breazeale ................................. Vice President for Academic Affairs
and Dean of Faculties
James J. Rhatigan .................................. Vice President for Student Affairs
and Dean of Students
H. R. Reidenbaugh ................................. Executive Vice President of the Board of Trustees and
Executive Secretary to the Endowment Association
Roger D. Lowe .................................. Vice President for Business Affairs
Martin H. Bush .................................. Vice President for Academic Resource Development
George M. Platt .................................. Associate Vice President and Director for
Planning and Institutional Research
Jacqueline J. Snyder .............................. Associate Vice President for Academic Affairs
Lloyd M. Benningfield .......................... Dean of Graduate Studies and Research
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
Gordon B. Terwilliger .......................... Dean of the College of Fine Arts
Sidney D. Rodenberg .......................... Dean of the College of Health Related Professions
Paul J. Magelli ............................... Dean of Fairmount College of Liberal Arts and Sciences
C. Russell Wentworth .......................... Dean of University College and Continuing Education
and Director of Summer Session
David L. Meabon ................................ Dean of Student Life and Services
Jasper G. Schad ................................ Dean of Libraries and Media Resources Center
Barbara A. Mawhiney ......................... Assistant Dean of Faculties for Personnel
William E. Wynne .......................... Registrar
Stanley E. Henderson ......................... Director of Admissions
Max A. Schaible .......................... Director of Information and Public Events
Frederick Sudermann .................. Director of Research and Sponsored Programs
and Governmental Relations
Armin L. Brandhorst .......................... Director of Physical Plant
Kathryn Bunnell .......................... Assistant Director of Athletics
V. Jane Gilchrist .......................... Executive Director of the Alumni Association

Profile of Wichita State University

Wichita State University, a medium-sized, state-supported university, is located in the city of Wichita. Boasting a population of nearly 280,000 persons, Wichita is the largest city in Kansas and a center for cultural and economic activity.

With a growing enrollment of more than 17,000, Wichita State takes pride in its specialized attention to each student. Non-traditional programs and classes help meet the needs of all, including those who don't fit the mold of "typical" students—more than 84% of those enrolling at WSU are employed part- or full-time; students range in age from 15 to 81 years; 1,100 are receiving veterans' benefits.

More than 180 areas of academic concentration allow "Shockers" (as WSU students are known) to fit scholastic growth and progress to their individual talents and interests. Programs are offered in the Colleges of Business Administration, Education, Engineering, Fine Arts, and Health Related Professions, as well as in Fairmount College of Liberal Arts and Sciences, University College (for entering freshmen), Continuing Education Services (for adult students) and the Graduate School. Students can work toward one- and
two-year certificates, and associate, bachelor, master, specialist and doctoral degrees.

As part of its commitment to fulfill the needs of each student, WSU features a Summer Session with a flexible time format. A three-week presession and two four-week sessions are held concurrently with the regular eight-week session.

Wichita State programs emphasize four basic concerns:
1. The University provides general education through the General Education Program and University College.
2. The University offers advanced and special education through the various major studies in liberal arts and sciences and in the degree programs of the professional schools and colleges.
3. The University provides continuing educational opportunities for adults through special seminars, workshops, classes and related University programs and activities.
4. The University promotes graduate studies and stimulates research through a variety of graduate programs authorized by the Kansas Board of Regents, as well as through ongoing programs of University research, and research sponsored by outside organizations.

Implicit in all the University's objectives are student welfare and continuing public service.

HISTORY

Wichita State University began as Fairmount College in 1895 with 16 students and three instructors. Founded by the Congregational Church, the college was governed by the church until 1926, when the citizens of Wichita voted to make Fairmount College the Municipal University of Wichita. The University was then placed under the direction of the Board of Trustees.

After 38 years as a municipal institution, the University again changed its status on July 1, 1964, and officially entered the state system of higher education. In its present status, Wichita State is one of six state institutions of higher education 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 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 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 one semester 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.

Students should also comply with the principles in the following statement, which was adopted by the Student Senate, the Faculty Senate, and the Administrative Council of the University:

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

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

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

**Academic Honesty**

Opportunities for learning at Wichita State University involve the students’ rights to express their views and to take reasoned exception to the views of 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.

A standard of honesty, fairly applied to all students, is essential to a learning environment. Students violating such standards must accept the consequences; penalties are assessed by appropriate classroom instructors or other designated persons. Serious cases may result in discipline at the college or university level and may result in suspension or dismissal. Students accused of abridging a standard of honesty may protect themselves through established academic appeal procedures and are assured of due process and the right of appeal from accusations or penalties felt to be unjust.

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 their 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.

Accident or Injury

The state of Kansas and Wichita State University do not insure against accidents or injury to students which may occur during University sponsored activities on or off campus. The University will make every reasonable attempt to advise students concerning potential danger of accident or injury. Students are expected to act responsibly by taking necessary precautions to prevent accidents. Students 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 Wichita State University.

All students entering Wichita State for the first time must file an application for admission with the Office of Admissions, 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.

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 Office of Admissions 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 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 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 forms 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 the Wichita State Office of Admissions. ACT scores must also be submitted before enrollment.

Out-of-state students who will be or have been graduated from a non-Kansas high school must also submit application, transcript, and 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 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 the Wichita State Office of Admissions an application with 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 the Wichita State Office of Admissions.

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. Generally, Wichita State will determine credit awards in three categories described in the credit practices publication: courses applicable to a baccalaureate degree and taken at G schools are transferred to Wichita State with full credit; courses taken at L schools may be transferred to Wichita State only if it is determined that they are equivalent to Wichita State courses; and courses taken at P schools may be transferred to Wichita State only after students have completed 30 semester hours of 2.00 (C) or better work at Wichita State and the courses have been determined to be equivalent to Wichita State courses.

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

International students 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 not acceptable, the student must take a proficiency examination upon arrival on campus. Depending on the level of English proficiency, classes in intensive English may be required.
4. They must have a statement of financial responsibility in an amount of $7,900 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 in at least 9 hours at the graduate level.
Admission decisions for students with international secondary school or college records are made with reliance upon the resource materials 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 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 prove not to 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 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:

Office of Admissions
111 Jardine Hall
Wichita State University
Wichita, KS 67208

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 work, and no more than 9 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 several nondegree 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 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.

**Special Admissions**

Students who have accumulated a grade point average of less than 2.00 may petition the dean of their 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 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**

**Continuing Education 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 the Wichita State Office of Admissions. 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 Office of Admissions provides a simplified admission procedure. Students will be admitted to the continuing education 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 Continuing Education Services.

**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 Office of Admissions. Students applying for guest admission in the fall or spring semester must also submit an official transcript or a letter of good standing from the registrar of 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 in Continuing Education Services. 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 school’s permission to take college courses while still in high school.

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 residence of students entering Wichita State University is determined by acts of the state legislature, and the most recent statement reads as follows:

Persons enrolling in universities and colleges under the state board of regents who, if adults, have not been, or if minors, whose parents have not been, residents of the State of Kansas for one year (12 months) prior to enrollment for any term or session in a college or university are nonresidents for fee purposes. Notwithstanding the foregoing provisions of this section, the state board of regents may adopt rules and regulations authorizing the following to pay an amount equal to resident fees: (1) Employees of the university or college and their dependents, (2) persons in the military stationed in Kansas and their dependents, (3) other classes of persons having special domestic relation circumstances, and (4) persons who have lost their resident status within six months of their enrollment.

The state board of regents shall adopt rules and regulations prescribing criteria or guidelines for determination of residence of students, so long as such criteria or guidelines are not in conflict with the provisions of this act. The state board of regents shall adopt rules and regulations prescribing guidelines for the membership composition and procedure of a residence committee for each college and university under its control.

The responsibility of registering under proper residence is placed on the students. If there is any possible question of residence classification, it is the duty of a student when registering and paying fees to raise the question with
the Registrar's Office. Students who disagree with their residency classification are entitled to an appeal, provided they file a written appeal with the registrar within 30 days from enrollment and pay the fees as originally assessed. A standard appeal form is provided by the Registrar's Office. If notice of the appeal is not given in writing within 30 days, the classification or reclassification by the registrar becomes final.

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.

**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.

**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 University 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), a grade of W is recorded. If they withdraw from such a course after the tenth week of a semester (fifth week of the eight-week Summer Session), they receive a grade of NCr, subject to the right of petition to the University’s Committee on Admissions and Exceptions.

Cr/NCr may also be granted to a freshman for the first semester of work during the transition semester, as discussed in the Transition Semester section of the Catalog.

A/PASS/FAIL OPTION

Students in good standing with at least 12 hours of completed course credit and an overall grade point average of at least 2.50 as verified by a transcript of their college work may elect to enroll under the A/Pass/Fail (A/P/F) option in a total of three regularly graded courses outside their major or supporting minor area.

Under the A/P/F system, an A is awarded for A work; P (pass) is awarded for letter grades B, C, and D; and F is assigned for failing work. There is no distinction between an F assigned to an A/P/F course and an F assigned to a regularly graded course. No credit points are assigned for the grade of P; the grade point average is based only on the grades A, B, C, D, and F.

Students desiring the A/P/F option for a course must declare the option and obtain approval from their dean on or before the end of the second week of classes of the semester (first week of classes of the eight-week Summer Session). Students withdrawing from an A/P/F course before the end of the tenth week of the semester (or the fifth week of the eight-week Summer Session) 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 arbitrator 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.

Au  Audit. No credit given; no credit points. Does not affect grade point average. Auditors may take advantage of the same privileges of class participation and instructor evaluation afforded students enrolled for credit.

Cr  Credit (A, B or C). Used only in the transition semester and for courses defined as Cr/NCr in the Catalog. Credit given; no credit points. See 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; no credit points assigned.

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

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

The following conditions govern incompletes:

1. If students do not enroll at Wichita State within one calendar year following an incomplete and if their work is not completed within that calendar year, they must enroll in that course as a repeat during their next semester of enrollment, or the grade will be changed to F. If they do enroll in the course again, the I is changed to 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/Pass/Fail option but must be taken for a letter grade. (See Catalog section on A/Pass/Fail 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 Advanced Placement (AP) credit, for College-Level Examination Program (CLEP) credit, for course credit awarded on the basis of the American College Test (ACT), for credit by departmental examination, and for credit by credentials (military and similar background). Credit given; no credit points.

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 Au, 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 letter grade 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, F, Cr, S, or CrE). No student may earn hours of credit for any one course more than once, unless the description in the Wichita State University Catalog specifically states that the course is repeatable for credit.

CHANGE OF GRADES

Changes of grade due to errors in grading or reporting may be initiated by an instructor at any time during one calendar year following the assignment of the original grade. A grade change may also be initiated by the chairperson of the department that offered the course if, and only if, the instructor is not in residence. The approval of the dean of the college of the department concerned is needed to have the change in grade entered on the student’s transcript. The dean must then notify the chairperson of the department concerned that the grade has been changed.

An instructor who wishes to request a change in a grade assigned more than one year earlier may petition the University’s Committee on Admissions and Exceptions. If this committee approves a change in grade, the instructor, department chairperson, and dean concerned must be informed by the committee before its recommendation is transmitted to the Registrar’s Office and the grade change entered on the student’s transcript.

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

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

If a student requests a change more than a year after the original grades were posted, the student’s petition must also be approved by the University’s Committee on Admissions and Exceptions. The policy applies to all courses in a semester and can be invoked only for Wichita State University courses. It may not be applied after graduation to courses attempted prior to graduation.

TRANSITION SEMESTER

To accommodate students in their adjustment to college standards, they are allowed 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), they may request 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. (No grade point average is computed.) They may also elect to take no action and have the letter grades recorded on their official records. (Grade point average is computed.)

The decision to have letter grades translated into Cr/NCr must be declared by a student and approved by the dean of the college in which the student is
enrolled between the posting of the semester grades and his/her next semester of enrollment including Summer Session.

Students who request that their semester grades be changed to Cr/NCr under the policies governing the transition semester and who had a grade point average of less than 2.00 for that semester will not be placed on probation but will be limited to an enrollment of 12 semester hours (or a proportional enrollment during a Summer Session) or less during their next enrollment.

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 non-traditional 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 5 to a low of 1, 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 CrE, and it is recorded on a
student’s transcript after enrollment in the University. Students may not take a credit-by-examination test for credit in a course in which they have previously enrolled, unless they received a W for the course. They may not retake any such examination. Students may not request an examination for course credit in a course for which they do not have the stated prerequisite credit. Credit earned by examination is treated exactly like that earned by class enrollment for internal purposes at Wichita State (class standing, completion of course prerequisites, college requirements, etc.).

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 not 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 CrE 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 CrE 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 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 10 hours of completing the bachelor’s degree may take work for graduate credit under the Senior Rule. This work must go beyond the requirements for the undergraduate degree, and the degree must be completed within the semester in which a student takes the graduate courses. Students 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, department 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 life. 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 honors students to enroll in certain nonhonors courses and receive honors credit.

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.

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.

In order to remain in the program, students must enroll in a minimum of five honors courses 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 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 1509

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 6 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 well 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 up 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 credit hours completed, with the grade determined by the instructor under whom the work was performed. In no case may any student receive more than 6 hours of credit for independent study.

**ACADEMIC RECOGNITION**

Honors criteria are established for Wichita State students by the University and apply equally to students of all colleges.

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 3.250 or higher for a semester.

Degrees are conferred with distinction upon students who have shown excellence in scholarship. The minimum standard for graduation *summa cum laude* is both an overall grade point average of 3.900 and a grade point average of 3.900 on Wichita State course work. The minimum standard for graduation *magna cum laude* is both an overall grade point average of 3.550 and a grade point average of 3.550 on Wichita State course work. The minimum standard for graduation *cum laude* is both an overall grade point average of 3.250 and a grade point average of 3.250 on Wichita State course work.

**WITHDRAWAL**

**Voluntary Withdrawal**

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

Students may withdraw voluntarily from any or all courses through 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).

After the tenth week of a semester or the fifth week of the eight-week Summer Session, students may withdraw from one or more courses with a W only if they petition the dean of their college and the University’s Committee on Admissions and Exceptions approves their petition. (The alternative to a W is an F.)

When students wish to withdraw, they must consult an adviser, obtain drop slip(s) for every course (line number), and have their adviser sign in the appropriate place. They must then take the drop slip(s) to the instructor of each dropped course and obtain the instructor’s signature. After receiving the instructor’s signature for each dropped course, students must take the drop slip(s) and their certificate of registration to the office of the dean of the appropriate college for the dean’s signature and final approval. The completed drop slip(s) and certificate of registration must then be taken to the admissions and records office in Jardine Hall. Refund, if any, will be made according to the schedule published in the *Wichita State University Schedule of Courses*.

Complete withdrawal from Wichita State must be made in writing to the dean’s office of the appropriate college.
Administrative Withdrawal

Administrative withdrawal may be initiated by the dean’s office of the college in which a student is enrolled, the business office, the office of student affairs, or other appropriate University offices for the following reasons:
1. The student’s class attendance is so poor that in the instructor’s opinion full benefit cannot be derived from the course
2. A University College student fails to be accepted by a baccalaureate college by the time of completion of 60 credit hours
3. The student fails to complete successfully all prerequisites for those courses in which the student is enrolled
4. The student violates the provisions of the student’s responsibilities statements in the University Catalog. (See the Student Responsibility section of the Catalog.)
5. The student does not comply with the terms of a provisional admission
6. The student has unmet financial obligations to the University.

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

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 and/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 2.000 for University College and Continuing Education Services) 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 and Contin-
ning Education Services sections of the Catalog. Students should consult the appropriate section of the Catalog for these standards.

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

Students admitted in good standing will not be placed on probation regardless of their grade point average until they have attempted 12 credit hours after admission to Wichita State. 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. 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 at Wichita State with a 2.000 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 and Continuing Education Services 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, and 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 one semester 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 or 50 of the last 60 semester hours must be completed at Wichita State. Exception to this regulation may be made by the University's 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 6 hours of such credit may be among the last 30 semester hours.

General Education Program

The General Education Program consists of 42 hours—12 hours of basic skills courses and 30 hours of distribution courses.

Students entering Wichita State University during or after the fall semester, 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 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 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; and &quot;Q&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; or another math course for which one of these courses is a prerequisite.

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 "C" 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 9 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 6 hours must be completed in two different departments in Division B.
3. At least 6 hours must be completed in two different departments in Division C.
4. No more than 6 hours of work taken in any one department may be used to satisfy the distribution requirement.
5. The remaining 9 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 9 of the 30 hour distribution requirement must be taken in General Studies courses. These courses are offered only at 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; German/Russian (excluding basic first-year language courses); graphic design; history; interdisciplinary liberal arts and science program; linguistics; music education; music performance; musicology-composition; philosophy; religion; Romance languages (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; instructional services; 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: aeronautical engineering; basic emergency medical care; biological sciences; chemistry; communicative disorders and sciences; computer science; cytotecology; dental hygiene; electrical engineering; engineering; engineering technology; geology; health sciences; industrial education; industrial engineering; mathematics; mechanical engineering; medical technology; nurse clinician; nursing; physical therapy; physician’s 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 Wichita State University under the Transfer and Articulation Agreement of the Kansas Public Community Colleges and State Universities should see paragraph three 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. 230G, Exploring Literature
Eng. 231G, Exploring Literature in Media
Eng. 232G, Themes in American Literature
Eng. 307G, Narrative in Literature and Film
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng. 400G</td>
<td>The Literary Imagination: Epic, Romance, Tragedy, Comedy</td>
</tr>
<tr>
<td>Hist. 101G</td>
<td>History of Western Civilization</td>
</tr>
<tr>
<td>Hist. 102G</td>
<td>History of Western Civilization</td>
</tr>
<tr>
<td>Hist. 108G</td>
<td>A History of Lost Civilizations</td>
</tr>
<tr>
<td>Hist. 330G</td>
<td>The Americans: Conflict and Consensus in the Development of American Society and Culture</td>
</tr>
<tr>
<td>Ling. 110G</td>
<td>Learning Another Language</td>
</tr>
<tr>
<td>Ling. 150G</td>
<td>The Nature of Language</td>
</tr>
<tr>
<td>Mus.-Comp. 160G</td>
<td>The Heritage of Western Music</td>
</tr>
<tr>
<td>Mus.-Comp. 493G</td>
<td>American Music</td>
</tr>
<tr>
<td>Phil. 100G</td>
<td>The Meaning of Philosophy</td>
</tr>
<tr>
<td>Phil. 300G</td>
<td>Science and the Modern World</td>
</tr>
<tr>
<td>Rel. 120G</td>
<td>The Biblical Heritage</td>
</tr>
<tr>
<td>Rel. 131G</td>
<td>Traditional Religion and the Modern World</td>
</tr>
<tr>
<td>Speech 143G</td>
<td>The Art of the Theater</td>
</tr>
<tr>
<td>Speech 190G</td>
<td>Crises in Communication</td>
</tr>
</tbody>
</table>

**Division B, Social and Behavioral Sciences**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthro. 100G</td>
<td>Anthropology of Modern Life</td>
</tr>
<tr>
<td>Anthro. 126G</td>
<td>Popular Archaeology</td>
</tr>
<tr>
<td>Econ. 101G</td>
<td>The American Economy</td>
</tr>
<tr>
<td>Econ. 200G</td>
<td>What Economics Is All About</td>
</tr>
<tr>
<td>HAE 231G</td>
<td>Current Issues in Food and Nutrition</td>
</tr>
<tr>
<td>Mgmt. 101G</td>
<td>Introduction to Business</td>
</tr>
<tr>
<td>PE 280G</td>
<td>Fitness for Life</td>
</tr>
<tr>
<td>Pol. Sci. 103G</td>
<td>Games Nations Play: Problems in International Relations</td>
</tr>
<tr>
<td>Soc. 200G</td>
<td>Sociology and Everyday Life</td>
</tr>
</tbody>
</table>

**Division C, Mathematics and Natural Sciences**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biol. 102G</td>
<td>Biological Science Survey</td>
</tr>
<tr>
<td>Biol. 105G</td>
<td>The Human Organism</td>
</tr>
<tr>
<td>Biol. 509G</td>
<td>Foundations of Human Heredity</td>
</tr>
<tr>
<td>Chem. 101G</td>
<td>The Science of Chemistry</td>
</tr>
<tr>
<td>CS 103G</td>
<td>Computers: Their Uses and Abuses</td>
</tr>
<tr>
<td>Engr. 300G</td>
<td>Technology and Society</td>
</tr>
<tr>
<td>Geol. 300G</td>
<td>Energy, Resources, and Environment</td>
</tr>
<tr>
<td>Math. 300G</td>
<td>The Evolution of Mathematics</td>
</tr>
<tr>
<td>Phys. 195G</td>
<td>Introduction to Modern Astronomy</td>
</tr>
</tbody>
</table>

**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. They may not, however, be allowed to graduate under the requirements of a Wichita State University Catalog in effect earlier than two years preceding their enrollment at Wichita State.

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

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

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

The academic program in Cooperative Education finds paid professional internships for undergraduate and graduate students who wish to combine their classroom studies with academically related employment. 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 their 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 6 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. Administer courses with nontraditional presentations designed to meet the special time and place restrictions of the working public. The instructional services of the University are extended through courses on the Kansas Board of Regents’ Telenetwork, correspondence courses, courses that use radio, television, or newspaper as a portion of their presentation, and Weekend University.
6. Coordinate adult scholarships and senior citizen services
7. 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

Over 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, creative writing, economics, educational 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, secondary education, sociology, Spanish, student personnel and guidance, and urban affairs. The Specialist in Education, a degree beyond the master’s level, is awarded in educational administration and in student personnel and guidance. PhD programs are offered in communicative disorders and sciences and in engineering. A transfer arrangement with the University of Kansas allows substantial parts of doctoral programs in educational administration to be completed at Wichita State.
SUMMER SESSION

Wichita State’s Summer Session features a flexible time format. A three-week presession 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. Over 200 faculty teach more than 450 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
Wichita State University
Wichita, KS 67208

The Summer Session office is located in 102 Morrison Hall.

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. Students interested in the Metamorphosis Program should contact the director of admissions at Wichita State.

Spanish Program in Puebla, Mexico. The romance languages department 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 Romance Languages, 305 Jardine Hall.

Field Geology. Wichita State, Kansas State, and Fort Hays State University 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 6 hours of credit. Applicants should have completed course work in physical and historical geology and at least 12 hours of advanced geology. 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 current for 1982-83 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></th>
<th>Resident</th>
<th>Nonresident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition fee—regular semester and Summer Session 1 through 14 hours—per credit hour</td>
<td>$27.35</td>
<td>$80.00</td>
</tr>
<tr>
<td></td>
<td>15 hours and above—flat fee</td>
<td>410.00</td>
</tr>
<tr>
<td>Student fee—regular semester and Summer Session 1 through 14 hours—per credit hour</td>
<td>$8.20</td>
<td>$8.20</td>
</tr>
<tr>
<td></td>
<td>15 hours and above—flat fee</td>
<td>123.00</td>
</tr>
<tr>
<td>Multipurpose complex fee</td>
<td>$4.00</td>
<td>$4.00</td>
</tr>
<tr>
<td>Total required fees, based on 15 credit hours for regular semester</td>
<td>$537.00</td>
<td>$1,327.00</td>
</tr>
</tbody>
</table>

The student fee, required of all students enrolled on the Wichita State campus, supports parking, student union, stadium addition, academic and service buildings, multipurpose complex, student health services, athletic admissions, forensics, Student Government Association, University Forum Board, student publications, concerts, drama, opera productions and similar items.

Off-Campus Credit and Noncredit Courses and Workshop Fees

A specific course fee of $24.00 (undergraduate) or $37.00 (graduate) per credit hour is assessed for off-campus courses and workshops. Fees for noncredit courses are based on actual operating costs.
Workshop Fees—On Campus

A workshop fee of $36.20 per credit hour, including $28.00 for tuition and $8.20 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. Administration of justice, AJ 340, 344, 345, and 821—$10.00 per course
2. History, Hist. 105, 106, and 330C—$10.00 per course
3. Military science (ROTC)—$5.00 per semester
4. Music—During the academic school year undergraduates enrolled in 6 or more hours are not charged tuition and fees for the following ensembles: Orchestra, Mus. Perf. 211A, 411A, and 711A
   Band (Symphonic), Mus. Perf. 211B, 411B, and 711B
   Band (Concert), Mus. Perf. 212B, 412B, and 712B
   Band (Marching), Mus. Perf. 213B, 413B, and 713B
   Wind Ensemble, Mus. Perf. 210B, 410B, and 710B
   A Cappella Choir, Mus. Perf. 212F, 412F, and 712F
   University Singers, Mus. Perf. 211F, 411F, and 711F
   Jazz Arts Ensemble, Mus. Perf. 211T, 212T, 411T, 412T, 711T, and 712T
   Students enrolled in fewer than 6 hours are charged regular tuition and student fees for these ensembles. Tuition and fees, however, are not charged to graduate students enrolled in these courses.
   During Summer Session tuition and fees for these ensembles are not charged to undergraduate or graduate students enrolled for 2 or more credit hours in courses other than the ensembles.
5. Applied music—Students enrolled in applied music are assessed an instrument and equipment special services fee of $7.50 per semester or Summer Session.
6. Physical education—horsemanship—$70.00 per semester.
7. Physical education—skiing—$70.00 per semester.
8. Physical education—bowling—$20.00 per semester.
9. Physical education—ice skating—$28.00 per semester.
10. Physical education—motorcycling—$35.00 per semester.
11. Physical education—roller skating—$35.00 per semester.
12. Physical education—racquet ball—$34.00 per semester.
13. Physical education—pool—$15.00 per semester.
14. Physical education—billiards—$15.00 per semester.
15. Film user fee—499 courses—$10.00 per course.
16. Art—life drawing courses 240 and 340—$10.00 per course.
17. Multipurpose complex user fee
   Student—$4.00 per student beginning spring semester 1983
   Spouse of student—$40.00 per fiscal year
   Family of student—$50.00 per fiscal year
   Faculty or staff—$50.00 per fiscal year
   Faculty/staff and spouse—$80.00 per fiscal year
Faculty/staff and family—$100.00 per fiscal year*
*Rates are $10.00 less per year if paid in lump sum at beginning of year.
Partial year user fees will be prorated.
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 of user participation will vary.

**Laboratory Fees**

Fees are assessed to cover the cost of supplies and breakage. Additional fees are assessed where breakage is excessive.

<table>
<thead>
<tr>
<th>Type of Laboratory</th>
<th>Fee per Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology, Anthro. 204 and 501</td>
<td>$15.00</td>
</tr>
<tr>
<td>Biological sciences</td>
<td>20.00</td>
</tr>
<tr>
<td>Ceramics</td>
<td>20.00</td>
</tr>
<tr>
<td>Chemistry</td>
<td>20.00</td>
</tr>
<tr>
<td>Computer Science (courses with laboratory sections)</td>
<td>20.00</td>
</tr>
<tr>
<td>Geography</td>
<td>15.00</td>
</tr>
<tr>
<td>Geology</td>
<td>20.00</td>
</tr>
<tr>
<td>Graphic design, GD 139</td>
<td>5.00</td>
</tr>
<tr>
<td>Graphic design, GD 230, 231 and 330</td>
<td>15.00</td>
</tr>
<tr>
<td>Language laboratory, Span. 111 and 112; Ger. 111 and 112; Fr. 111 and 112; Ital. 111 and 112; Port. 111 and 112; In. Eng.</td>
<td>10.00</td>
</tr>
<tr>
<td>Photojournalism, Journ. 240, 340, and 440</td>
<td>15.00</td>
</tr>
<tr>
<td>Physics</td>
<td>15.00</td>
</tr>
<tr>
<td>Printmaking</td>
<td>10.00</td>
</tr>
<tr>
<td>Reading</td>
<td>5.00</td>
</tr>
<tr>
<td>Sculpture</td>
<td>20.00</td>
</tr>
</tbody>
</table>

**Special Fees, Deposits, and Waivers**

Certain other fees are assessed as indicated below:

- Identification card fee ..... $ 2.50
- International student application processing fee ..... 25.00
- New student orientation fee ..... 15.00
- Transcript per copy charge ..... 2.00
- Public documents per copy charge ..... .10
- Library fines and lost materials—cost per fine schedule or cost of replacement of material plus a processing fee .
- Telecourse special fee ..... 25.00
- Teacher placement fee
  - Students ..... 2.00
  - Alumni ..... 5.00
- College of Health Related Professions
  - Equivalency examination fee, per credit hour ..... 8.00
  - Physician's assistant application fee ..... 15.00
- Acceptance fees
  - Emergency medical technician* ..... 25.00
  - Dental hygiene* ..... 100.00
  - Medical technology* ..... 100.00
  - Nurse clinician* ..... 100.00

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Nursing*.................................................. 100.00
Physical therapy*................................. 100.00
Physician’s assistant*............................... 100.00
Respiratory therapy*............................... 100.00

* 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 $10.00 drop penalty will be assessed for all drop-add transactions submitted at the same time. A $10.00 drop fee will be assessed on full withdrawals. No penalty 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 cancellation 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 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 or 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 late are assessed the following fee:

- Enrolled in 1 through 6 hours ........................................ $ 5.00
- Enrolled in 7 or more hours ........................................ 15.00

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

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

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

Four rates are available for student housing at Wichita State University, depending on the number of meals the student chooses to eat in the residence hall. Prices are for air-conditioned suites in Brennan Hall or Fairmount Towers.

Housing costs for the 1983-84 school year, including double room and specified number of meals: Any 10 meals Monday through Friday, $1,973; any 15 meals Monday through Friday, $2,021; any 15 meals Sunday through Saturday, $2,126; any 19 meals Sunday through Saturday, $2,155.

A few non-air-conditioned rooms are available in Brennan Hall, and cost $75 less per semester.

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

Rates are current at the time of printing. 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.


Student Affairs

STRUCTURE

The Division of Student Affairs is comprised of University College and Continuing Education Services, Student Life and Services, Operation Success, Project Discovery, and Upward Bound. The vice president for student affairs and dean of students is responsible for the coordination and supervision of the Division of Student Affairs. The vice president is directly responsible to the University’s president and in this position encourages communi-
cation concerning student life, problems, and activities between the division and students, faculty, and department heads at Wichita State.

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

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

Operation Success is a federally funded program providing comprehensive, intensive, flexible tutorial help; personal counseling; career guidance; and assistance in the development of study skills for disadvantaged students.

Project Discovery, a federally funded talent search program, was established at Wichita State University in July of 1977. The project assists approximately 1,750 low-income people between the ages of 14 and 27 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 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 eight-week summer and academic year schedule to improve academic and social skills.

ORIENTATION

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

COUNSELING

Professional counseling is available through the Counseling Center. It is provided on a voluntary basis for students seeking such services. Areas specifically served include emotional and adjustment difficulties, vocational and professional planning, marital counseling, and educational counseling.

TESTING AND EVALUATION CENTER

The University Testing and Evaluation Center, located in 303 Grace Wilkie Hall, administers tests required for admission and placement in various WSU academic programs.

Registration materials are available for tests including the LSAT, GMAT, GRE, and MCAT. Since credit by examination at Wichita State University is coordinated by the testing center, information on departmental policies and procedures can be obtained from the office.

Optical scanning and test scoring services are available to faculty, staff, and graduate students who use machine-scorable forms in their classrooms or for
their research projects. The testing center staff has developed several computer programs for data processing which are accessible to WSU computer users.

THE INTERNATIONAL PROGRAM

The International Program, located in 318 Grace Wilkie Hall, serves the special needs of approximately 800 international students from over 50 countries enrolled at Wichita State. (For international student admission requirements, see the Admission to Wichita State section of the Catalog.) In addition, it offers access to coordinated study programs abroad for American students.

An orientation program specially 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 Host Family program, the International Conversation Partners program, the Global Classroom program, and various other activities that promote interaction between American and foreign students.

Information concerning Fulbright-Hays grants may be obtained from the Fulbright adviser in the International Program office.

PLACEMENT AND CAREER SERVICES

The office of Placement and Career Services provides employment placement and career services to students, graduating students, and alumni seeking employment or employment-related assistance.

Student placement services include direct referral to school-year jobs, as well as summer employment opportunities. Services such as on-campus interviews for summer training positions and co-op/work internships are also available.

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

Occupational and career information, employer directories, information on employment trends, employer recruiting literature, annual salary survey reports, and information on graduate school and professional school opportunities exist at Placement and Career Services and its associated career resource center.

Placement and Career Services also places considerable emphasis on career and job counseling services. Persons can, for example, learn about career fields, how to prepare job resumes and letters of application, how to conduct effective employment interviews, and in addition, can obtain helpful information on job-hunting procedures, strategies and techniques.

VETERANS AND MILITARY SERVICES

The Office of Veterans and Military Services, as its name implies, 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.

Wichita State University is designated a Serviceman’s Opportunity College.
HOUSING

The Wichita State housing policy for 1982-83 classifies housing units as follows:

1. University-approved housing which includes University-owned residence halls, and fraternity and sorority houses
2. University-registered housing which includes apartments, single rooms, and houses that are nondiscriminatory on the basis of race, creed, or color.

All single freshmen under 21 years of age enrolled for 9 or more credit hours who are not living with relatives or guardians are required to live in University-approved housing, with priority given to University-owned housing.

All other students can select their own accommodations; however, University-approved housing is highly recommended. Listings of registered housing facilities are available in the office of the Division of Student Affairs.

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 reservation. 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
Wichita State University
Wichita, KS 67208.

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 12 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 6 years old and 5:00 p.m. to 10:00 p.m. Monday through Thursday for children 2½ to 10 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 and 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 1982-83 school year has included notetakers, readers, library assistants, wheelchair pushers, test proctors, escorts, cafeteria aides, 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 styli, raised line drawing kits, the Speech Plus Calculator, Braille measuring instruments, mobility canes, print magnifiers, 4 track cassette tape recorder players with earphones, standard tape recorder players, phono-
graphs, 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 both 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, located in 209 Health Sciences Building, 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 clinicians 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 Service a physical examination form and chest x-ray report completed by a physician.

The student body has chosen to participate in the Lone Star 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 the 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, graduate and undergraduate students works together on policy-oriented research and publications, publishing *Kansas Economic Indicators (KEI)* both monthly and quarterly.

**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 Related 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 “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 Center for Management Development, a component of the College of Business Administration, provides continuing business education, professional development, specialized training programs, and direct assistance in management development for the state’s business, industries, and governmental and social agencies.

CENTER FOR URBAN STUDIES
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, 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 Urban Affairs degree is administered through the Center and its faculty in public administration and urban affairs. Service programs of the Center include public affairs seminars, work-
shops 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 Wichita and Sedgwick County governmental bodies and tax structures; a survey of energy conservation practices, and the origins of the city manager plan of government in Kansas. The 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.

**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 Romance Languages Department 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.

**MARCUS CENTER FOR CONTINUING EDUCATION**

Many educational services are offered through the Marcus Center for Continuing Education, an adult education facility located 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. More information is available in the Student Affairs section of the Catalog.

REGENTS PRESS

The Regents Press is operated jointly by six state Kansas universities: the University of Kansas, Kansas State University, 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.

RESEARCH AND SPONSORED PROGRAMS

The Office of Research and Sponsored Programs serves as the University liaison with local, state, and federal governmental units and organizations that support research, training, and other service programs. The office collects, maintains, and provides information regarding agency programs and interests in support of research and other activities; coordinates the preparation and submission of project proposals; and is responsible for the general administration and reporting of sponsored grants and contracts.

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 is responsible for development and coordination of 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.

WSU ENERGY CENTER

The WSU Energy Center promotes energy research by University faculty. Much of the research being done in the center is directly applicable to energy use in the state of Kansas, including projects in wind energy, conservation, and advising of individuals and agencies in the state. The results of these investigations on energy techniques and hardware can be used by any interested individual or agency.
Special Facilities

Instructional facilities on the 320-acre Wichita State University campus are in use 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. It is one of the last structures designed by the late Frank Lloyd Wright. An 18-hole golf course, tennis courts, and playfields are also a part of the campus.

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 Related Professions. Construction began in 1980 on a $10 million structure for recreation and physical education. This building will provide office space; gymnasiums for basketball, tennis, and volleyball; a 200 meter, six-lane track; swimming and diving pools; two dance studios; a rifle range; and eight racquetball courts.

Other special facilities meeting the needs of Wichita State are described on the following pages.

CABLE TELEVISION

Wichita State University operates Channel 13 on Wichita's cable television system. WSU 13 broadcasts 85 hours per week of adult-oriented educational, cultural, and informational programming. Channel 13 produces programs featuring distinguished guest speakers, fine arts performances, and other campus events. WSU 13 is affiliated with ACSN—The Learning Network, which provides telecourses and professional development and community service programming. In addition to full-time staff, 15 students are involved in the operation of the channel and 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 Wichita State University. Through its facilities and services, the center serves students, faculty, staff, alumni, and guests of the University.

The CAC has five food service areas to provide a variety of atmospheres and menus; the University Bookstore, which stocks textbooks, supplies, and gifts; a recreation area for leisure use that includes bowling and billiards; a movie theater with a weekly film program; lounges; student offices; and meeting rooms. Through the CAC Activities Office, students have the opportunity to develop a variety of programs for the campus. The CAC reservations office schedules the use of all facilities in the center as well as nearly all of the University facilities for out-of-classroom use.

The Campus Activities Center is supported through student fees and revenues produced from within the operation.

DIGITAL COMPUTING CENTER

The Digital Computing Center serves students, faculty, and staff of the University community 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, data preparation and data entry, 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 units are an IBM System/370 Model 3031-4 and an IBM 4341-L1, each with 4 million characters of main storage and more than 5 billion characters of on-line disk storage. Magnetic tape drives, line printers, card readers, a card punch, and an off-line digital plotter are available for general use. A network of more than 225 terminals provides interactive computing for campus classrooms, laboratories, and offices. These terminals may be used with the academic time-sharing systems (CMS and MUSIC), interactive computer graphics, computer-assisted instruction, and the administrative terminal system (CICS). Interactive terminal facilities for students and faculty are located in Ablah Library, the College of Business Administration, the College of Engineering, the departments of chemistry, mathematics, physics, geology, and anthropology, and in the Social Science Laboratory, where a remote batch card reader and line printer are located.

The Digital 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. User keypunch facilities and hard copy terminals are located in Room 113, which is open and available 24 hours a day, seven days a week. Scientific programming and consulting services for faculty and staff instructional and research projects are located in Room 109A. Student programming assistance and academic user services are located in Room 120A. 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 all students for group or individual worship and meditation.

HELPERN INTERNATIONAL CENTER

The Milton Helpern International Center for the Forensic Sciences, is supported by the Department of Administration of Justice, Fairmount College of Liberal Arts and Sciences, and Wichita State University. The center serves as an information center for scientists interested in solving crimes and trains future scientists in the field of criminal investigation and forensic science. It is located in the Liberal Arts and Sciences Building.

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 habili-
tation 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 275 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 coverage of major speeches, concerts, and other special events held at Wichita State.

**Learning Resource Center**

Wichita State offers a variety of services to students through the programs of the Learning Resource Center. Credit and noncredit courses are offered that help students improve their reading, writing, and listening skills. Complete descriptions of the credit and noncredit courses offered at the center are included in the University College and Continuing Education Services section of the Catalog.

In addition to formal course work, a voluntary writing and math laboratory program as well as tutorial referral services are offered to students enrolled at Wichita State. Individual instruction is provided on a walk-in basis.

**Library and Media Services**

Through a wide range of materials and services, the Library/Media Resources Center supports WSU courses and research. Its growing collection of over 2 million items includes not only books and periodicals, but 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.

The Library has open stacks and reference librarians are ready to 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 listening and viewing equipment, group-study rooms, microform reading equipment, copy machines, and typewriters.

The Media Resources Center houses films and video tapes. Its facilities include a television studio, graphic and photographic production areas, 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, Cable 13 provides job experiences for students who assist in its operation.

The Department of Special Collections houses a rapidly growing manuscript collection of more than 500,000 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.

MINICOMPUTER LABORATORY FACILITY
The electrical engineering department 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.

MULTIPURPOSE COMPLEX
The $10 million multipurpose physical education complex is scheduled to open in the spring of 1983.

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 wells, a 200-meter indoor track which surrounds five courts and eight handball-racquetball courts. The outdoor area contains a six-court tennis complex and four large play fields.

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

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 this research.

SATELLITE TRACKING STATION
Tracking station facilities are available at Wichita State for faculty and students to use in electrical propagation studies. The station consists of an antennae system of crossed Yagi arrays, together with receiving and recording equipment for decoding video and infra-red information.
SOCIAL SCIENCE LABORATORY

The Social Science Laboratory supports instruction in research methods and student and faculty research in the social sciences. The laboratory occupies a suite of rooms on the fourth floor of the Liberal Arts and Sciences Building and is equipped with various types of computer terminals and computational devices. It is open to students, faculty, and social science classes. Its library includes documentation of resources provided by the Inter-University Consortium for Political and Social Research. Wichita State University is a member of this group.

SPORTS AND RECREATION

Sports and recreation facilities available to students at Wichita State include a regulation 18-hole golf course and an outdoor swimming pool. The 10,200-seat Henry Levitt Arena is used for intercollegiate basketball games and major entertainment events. Cessna Stadium, a 31,500-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. The Shocker Baseball Field has its own artificial surface infield and grass outfield.

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

The campus recreation program has been designed to provide activities for all students, faculty and staff. In addition to intramurals and open recreation time, offerings include sport clubs; special events; children’s 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 at Wichita State University opened in December, 1974, in an effort to provide another avenue of enrichment to the University and the community. Since that time the museum has held approximately 270 exhibitions, including shows of the work of Alberto Giacometti, Milton Avery, Henri Manguin, Ernest Trova, David Hockney, and Joan Miró.

The installation of Miró's 28-foot by 52-foot mosaic mural Personnages Oiseaux ("Bird Characters") on the south facade of the museum was the culmination of a six-year project. The mural, designed especially for Wichita State University by Mr. Miró, is constructed of 1,000,000 pieces of hand-cut Venetian glass and marble.

The focus of the University’s permanent collection has been in the field of 20th century American art. More than 3,000 objects have been added to the collection, including large outdoor sculptures by Barbara Hepworth, George Rickey, Louise Nevelson, Kenneth Armitage, Jose deCreeft, and Lynn Chadwick.

The Ulrich Museum has become nationally recognized for the outstanding quality and vitality of its programs. Forty-six well-known artists have visited the University, where they attended openings of their exhibitions, met the public, and worked with students. In addition, the museum has an active publication program and has organized traveling exhibitions of work by Ernest Trova and Duane Hanson.
WALTER H. BEECH AND SUPersonic WIND TUNNELS

Three 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-foot 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, were given to Wichita State in 1963 by the Boeing Wichita Company.

A new 1 x 1.3 meter subsonic wind tunnel is nearing completion. 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 only if they have filed registration forms furnishing the Student Government Association (SGA) with lists of officers and other executive members, statements of purposes, and copies of constitutions and bylaws. Once an organization has 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

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 SGA is divided into three branches of student government. The Cabinet, Senate, and Courts carry out the executive, legislative, and judicial functions.

In addition to sponsoring such student activities as Homecoming, Hippodrome, and Parents Weekend, the Senate, which is completely student-elected, charters and registers all other student organizations. It appoints students to University committees and advises the University administration on student views about policy.

STUDENT RATES

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

FRATERNITIES AND SORORITIES

Eight national sororities are active at the University: Alpha Chi Omega, Alpha Kappa Alpha, Alpha Phi, Delta Delta Delta, Delta Gamma, Delta Sigma Theta, Gamma Phi Beta, and Sigma Gamma Rho. Twelve national fraternities are also on campus: Alpha Phi Alpha, 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 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
- Omicron Delta Epsilon
- Omicron Delta Kappa
- Phi Alpha Theta
- Phi Delta Kappa
- Phi Eta Sigma
- Phi Kappa Phi
- Phi Mu Alpha Sinfonia
- Pi Delta Phi
- Pi Epsilon Delta
- Pi Mu Epsilon
- Pi Omega Pi
- 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 Sigma
- Spurs
- 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 Kappa Psi
- 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
- Beta 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
- Gerontology 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 Français
- 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 Professional Journalists
- Society of Women Engineers
- Student Advisory Council for Nursing
- Student American Academy of Physician’s 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
Baptist Student Union
Black Scholarship Association
Black Student Union
Campus Advance (Churches of Christ)
Campus Girl Scouts (Trefoil)
Central America Solidarity Committee
Citizens for Information and Disarmament
Chess Club
Chinese Association of WSU
Christian Science Organization
Circle K (Kiwanis)
College Republicans
Crew Club
Cultural Organization of the Indian Continent
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
Latter Day Saints Student Organization
Lebanese League
Lebanese Student Association
Little Sisters of Minerva
Little Sisters of Pallas
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
Sisters of the Golden Heart
Soccer Club
Southern Africa Solidarity Committee
Students for Alternative Theatre
Student Alumni Association
Student Homophile Association
Students for Origins Research

Unitarian Student Organization
University Lutheran Center
Veterans on Campus
Vietnamese Student Organization
Wichita Rangers
Wind Energy Club
With One Accord Campus Prayer Fellowship
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
Interresidence Council
Panhellenic 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; and P, practicum, with the hours of practicum per week given in front of the letter (6-8P means 6 to 8 hours of practicum per week).

ABBREVIATIONS

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

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Department/Area</th>
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<tbody>
<tr>
<td>Acctg.</td>
<td>Accounting</td>
</tr>
<tr>
<td>AE</td>
<td>Aeronautical engineering</td>
</tr>
<tr>
<td>AJ</td>
<td>Administration of justice</td>
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<tr>
<td>AM</td>
<td>Applied music</td>
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<tr>
<td>Amer. Stud.</td>
<td>American studies</td>
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<tr>
<td>Anthro.</td>
<td>Anthropology</td>
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<tr>
<td>Art Ed.</td>
<td>Art education</td>
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<tr>
<td>Art Hist.</td>
<td>Art history</td>
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<tr>
<td>Av. Mgt.</td>
<td>Aviation management</td>
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<tr>
<td>Biol.</td>
<td>Biological sciences</td>
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<tr>
<td>B. Law</td>
<td>Business law</td>
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<tr>
<td>CDS</td>
<td>Communicative disorders and sciences</td>
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<tr>
<td>Chem.</td>
<td>Chemistry</td>
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<tr>
<td>Comm.</td>
<td>Communications</td>
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<tr>
<td>CS</td>
<td>Computer science</td>
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<tr>
<td>DH</td>
<td>Dental hygiene</td>
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<tr>
<td>DS</td>
<td>Decision sciences</td>
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<tr>
<td>EAS</td>
<td>Educational administration and supervision</td>
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<tr>
<td>Econ.</td>
<td>Economics</td>
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<tr>
<td>EE</td>
<td>Electrical engineering</td>
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<tr>
<td>EET</td>
<td>Electrical engineering technology</td>
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<tr>
<td>Eng.</td>
<td>English language and literature</td>
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<tr>
<td>Engr.</td>
<td>General engineering</td>
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<tr>
<td>ET</td>
<td>Engineering technology</td>
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<tr>
<td>Fin.</td>
<td>Finance</td>
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<td>Fr.</td>
<td>French</td>
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<tr>
<td>FST</td>
<td>Fire science technology</td>
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<tr>
<td>GD</td>
<td>Graphic design</td>
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<tr>
<td>Geog.</td>
<td>Geography</td>
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<td>Geol.</td>
<td>Geology</td>
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<td>Ger.</td>
<td>German</td>
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<tr>
<td>Geron.</td>
<td>Gerontology</td>
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<tr>
<td>HAE</td>
<td>Health administration and education</td>
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<tr>
<td>Hist.</td>
<td>History</td>
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<tr>
<td>Hon.</td>
<td>Honors Program</td>
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<tr>
<td>HS</td>
<td>Health sciences</td>
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<tr>
<td>IE</td>
<td>Industrial engineering</td>
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<tr>
<td>Ind. Ed.</td>
<td>Industrial education</td>
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<tr>
<td>In. Eng.</td>
<td>Intensive English</td>
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<tr>
<td>IS</td>
<td>Instructional services</td>
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<tr>
<td>Ital.</td>
<td>Italian</td>
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<tr>
<td>Journ.</td>
<td>Journalism</td>
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<tr>
<td>Legal</td>
<td>Legal assistant</td>
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<tr>
<td>Ling.</td>
<td>Linguistics</td>
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<tr>
<td>LS</td>
<td>Library science</td>
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<tr>
<td>Math.</td>
<td>Mathematics</td>
</tr>
<tr>
<td>ME</td>
<td>Mechanical engineering</td>
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<tr>
<td>MET</td>
<td>Mechanical engineering technology</td>
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<tr>
<td>MFT</td>
<td>Manufacturing engineering technology</td>
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<tr>
<td>Mgmt.</td>
<td>Management</td>
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<tr>
<td>Min. Stud.</td>
<td>Minority studies</td>
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<tr>
<td>Mkt.</td>
<td>Marketing</td>
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<tr>
<td>MS</td>
<td>Military science</td>
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<tr>
<td>MT</td>
<td>Medical technology</td>
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<tr>
<td>Mus. - Comp.</td>
<td>Musicology-composition</td>
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<tr>
<td>Mus. Ed.</td>
<td>Music education</td>
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<tr>
<td>Mus. Perf.</td>
<td>Music performance</td>
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<tr>
<td>NC</td>
<td>Nurse clinician</td>
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<tr>
<td>Nurs.</td>
<td>Nursing</td>
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<tr>
<td>PA</td>
<td>Physician's assistant</td>
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<tr>
<td>PD</td>
<td>Personal development</td>
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<tr>
<td>PE</td>
<td>Physical education, health, and recreation</td>
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<td>Pers.</td>
<td>Personnel</td>
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<td>Phil.</td>
<td>Philosophy</td>
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<tr>
<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>Phys.</td>
<td>Physics</td>
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<tr>
<td>Pol. Sci.</td>
<td>Political science</td>
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<tr>
<td>Port.</td>
<td>Portuguese</td>
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<tr>
<td>Psych.</td>
<td>Psychology</td>
</tr>
<tr>
<td>PT</td>
<td>Physical therapy</td>
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<tr>
<td>RE</td>
<td>Real estate</td>
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<tr>
<td>Rel.</td>
<td>Religion</td>
</tr>
<tr>
<td>RT</td>
<td>Respiratory therapy</td>
</tr>
<tr>
<td>Rus.</td>
<td>Russian</td>
</tr>
<tr>
<td>SA</td>
<td>Studio arts</td>
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<tr>
<td>Sm. Bus.</td>
<td>Small business/entrepreneurship</td>
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<tr>
<td>Span.</td>
<td>Spanish</td>
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<tr>
<td>SPG</td>
<td>Student personnel and guidance</td>
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<tr>
<td>Soc.</td>
<td>Sociology</td>
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<tr>
<td>Stat.</td>
<td>Statistics</td>
</tr>
<tr>
<td>SW</td>
<td>Social work</td>
</tr>
<tr>
<td>UA</td>
<td>Urban affairs</td>
</tr>
<tr>
<td>WS</td>
<td>Women’s studies</td>
</tr>
</tbody>
</table>

*Wichita State University/Symbols and Abbreviations 57*
More than 3,500 entering freshmen begin their university education in WSU's University College each year.

About 2,600 enroll as nondegree-bound students.

The college offers special personal development courses designed to help the young student and the returning adult student make the transition into college life.
The primary goal of University College and Continuing Education Services, 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 degree and nondegree-bound students requires a well-conceived and flexible system of programs and services.

The purpose of University College is to provide academic support services which will enable its students to make successful transitions to degree-granting colleges.

Continuing Education Services is a special organization of programs and services designed to be responsive to the unique needs, responsibilities, and learning styles of adult students.

Students in both University College and Continuing Education Services are enrolled in courses offered by departments in the degree-granting colleges and taught by faculty from those departments. Exceptions are the credit or noncredit personal development courses offered by University College and Continuing Education Services and by the Learning Resource Center that are listed below.

**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 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

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
POLICIES

Many policies affect students in both University College and Continuing Education Services, and some policies affect only those in a specific area. Policies immediately following are applicable to all University College and Continuing Education Services students; those listed under University College or Continuing Education Services headings apply only to students in these specific areas.

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 development and education through experience, knowledge, and skills development. Toward that objective, University College and Continuing Education Services provides personal development 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 director of the Testing and Evaluation 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 Wichita State University Catalog and in the Wichita State University Schedule of Courses.

Once students in University College or Continuing Education Services 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.)

Readmission after Academic Dismissal

Students who have been academically dismissed may seek readmission to
University College or Continuing Education Services by appealing, in writing, for an exception to the regulations. University College and Continuing Education Services require petitioners to meet with an academic counselor for a personal interview and to prepare a written petition which is considered by the University College and Continuing Education Services 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 should 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.

University College

University College is the first academic home for all first-semester freshmen working toward degrees and for 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. University College also extends guest student admission to students attending other colleges or universities who wish to attend Wichita State on a temporary basis (for one term only) and to selected high school students who have the consent of their high school principals.

Academic services provided by University College include orientation and educational planning programs; registration, advising, and consultation; personal development courses in reading, writing, listening, and study skills; freshman seminars and occupation seminars for personal development and vocational exploration; reports to students on their academic progress; coordination with the Emory Lindquist Honors Program; and transfer into one of Wichita State’s undergraduate degree-granting colleges. (These colleges are the College of Business Administration, College of Education, College of Engineering, College of Fine Arts, College of Health Related Professions, and Fairmount College of Liberal Arts and Sciences.)

While enrolled in University College, students 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.

High School Preparation and Admission to University College

Students are advised to complete their high school work with at least 4 units of English, 2 units of history and social sciences, 1½ units of algebra, 1 unit of geometry, and 2 units of a natural science excluding general science. Students planning to work toward a degree in Fairmount College of Liberal Arts and Sciences should also consider taking at least 2 units of one foreign language. Students planning to earn degrees in engineering or the physical sciences should take college algebra and trigonometry in high school.

University College  61
For more information on general Wichita State University admission requirements, see the Admission to Wichita State section of the Catalog.

Orientation

Orientation and educational planning programs help new students become a part of the learning community; teach the requirements, expectations, and procedures of that community; and 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.

Orientation and educational planning are not preludes to education, but rather are a part of college education itself. Therefore, all first-semester 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 payment for 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.

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.

Every semester all students enrolled in University College are expected to develop academic plans with the assistance of their academic advisers. Each University College student 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 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.

Career/Life Planning

The Career/Life Planning program is available to help students 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.
General Education Program

All degree programs at Wichita State require that a specific number of semester hours of general education courses be taken. Wichita State’s general education 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—Requirements 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.

Transferring to a Degree-Granting College

Students 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, meet the minimum GPA required by the college, and have 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.

Students may not continue in University College after the semester in which they complete 48 semester hours unless they petition for an exception and have it approved by the University College and Continuing Education Services Exceptions Committee and the University’s Committee on Admissions and Exceptions. Students may not continue in University College after the semester in which they complete 60 semester hours.

Probation and Dismissal Standards

Probation. Since a 2.00 (C) average is required for graduation, students are placed on academic probation whenever their cumulative grade point averages fall below 2.00 and they have attempted at least 12 credit hours. (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 2.00 grade point averages on work at Wichita State, and have 2.00 cumulative grade point averages 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 and Continuing Education Services. The limitation of 12 hours also applies to students who have declared a transition semester.

Dismissal. University College students who have attempted 12 credit hours since 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 if they have attempted a total of 13 through 24 credit hours and
their cumulative grade point average is below 1.50. Those who have attempted a total of 25 through 59 credit hours will be dismissed if their cumulative grade point average drops below 1.70, and those who have attempted a total of 60 or more credit hours may be dismissed if their cumulative grade point average falls below 2.00. The grading system is explained at length in the Academic Information section of the Catalog.

**Continuing Education Services**

The Continuing Education Services component of University College and Continuing Education Services is a special organization of programs and services designed to be responsive to the unique needs, responsibilities, and learning styles of adult students. Programs, services, policies, and procedures emphasize ease of access to the University and its resources and opportunities for individual assistance. Continuing Education programs and 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.

**ADMISSION**

*Regular Continuing Education Students.* Students who are not currently working toward specific undergraduate degrees at Wichita State are admitted to Continuing Education Services as regular Continuing Education students. To be admitted, they must submit high school transcripts—and if they have attended college, college transcripts—to the Wichita State Office of Admissions.

*Special Continuing Education Students (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 Continuing Education Services, 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 will be required at this point.

**Academic Advising**

Adults who attend classes on a part-time basis have different interests and needs from those students who devote full time to their educational programs. The continuing education academic counselors are adults who have experi-
enced these problems and who are committed to focusing the total resources of the University on solving them. 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 academic plans.

**Career-Life Planning**

Career-Life Planning program activities are designed to provide support for adult 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.

**Transferring Credit from Continuing Education Services**

Students in Continuing Education Services who subsequently wish to work toward Wichita State baccalaureate degrees may transfer their credits to University College or 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.** Students admitted to Continuing Education Services in good standing (having a 2.00 or higher grade point average) and special continuing education students will not be placed on probation regardless of their grade point average until they have completed 12 credit hours after admission or readmission to Wichita State University. (A definition 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.

Since the probation level of Continuing Education Services is 2.00, students are placed on academic probation whenever their cumulative grade point average falls below 2.00, except as noted in the preceding paragraph. They remain on probation as long as their cumulative averages are below 2.00 but are at least 1.50.

Students on probation are limited to a maximum load of 12 hours per semester unless an exception is made by the dean of University College and Continuing Education Services.

**Dismissal.** The dismissal level for Continuing Education Services is below 1.50. Students are dismissed whenever their current semester grade average is below 2.00 and their cumulative grade point average is below the dismissal level of 1.50. They are not academically dismissed at the end of a semester unless they entered that semester on academic probation. Moreover, students are not dismissed before accumulating 12 attempted semester hours of credit work at Wichita State after being placed on probation unless other standards are specified as a condition of admission.

*Continuing Education Services* 65
The college has one of the first programs in entrepreneurship and small business management in the nation.

Among the 11 undergraduate academic majors are several not found at other institutions in Kansas: aviation management, bank management emphasis within the finance major, real estate and land use economics, entrepreneurship and small business management, and a two-year program for legal assistants.

Five research/service centers help the college meet its teaching, research, and service mission.
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 EMPHASSES 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 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 the College of Liberal Arts and Sciences for students interested in specializing in a foreign area of the world, international business, international economics, or international 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 Related 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, or 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 6 hours of English composition, 3 hours of speech and 3 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 6 hours of elementary accounting, 6 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, 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
- FORTRAN or COBOL programming (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 2.250. Probation is removed when their cumulative grade point average reaches the 2.250 level. Students remain on probation if (1) they earn a 2.000 or better grade point average in the semester during which they are on probation, and (2) their cumulative grade point average does not fall below 2.000. Students on probation because of a deficient cumulative grade point average may not be academically
dismissed until they accumulate 12 or more attempted hours after being placed on probation.

Students on probation are dismissed from the 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 6 hours of the last 30 hours or 10 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.

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 faculty and staff in the college feel that students should have impartial and knowledgeable advising when desired and appropriate. The college's advising system offers students:

1. Guidance in the consideration of career objectives
2. Suggestions of specific courses of study that will satisfy career objectives and degree requirements of the college and University
3. Additional counsel and advice as required.

Advising is designed to provide assistance when desired and appropriate. Students are not required to seek advising if they do not feel the need.

Graduation Requirements

BACHELOR OF BUSINESS ADMINISTRATION

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

1. Complete at least 56 hours of course work offered outside the college. (Econ. 201 and 202 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, given later in this section.
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.

The following sequence of required courses is recommended:

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
Acctg. 210, Financial Accounting I
Acctg. 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. 201-202, 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  
Fin. 340, Finance  
Mgmt. 360, Concepts of Administration  
Mkt. 300, Marketing  
Upper-division economics course  
Major courses  

Senior Year  
Mgmt. 430, Business and Society  
Mgmt. 681, Administrative Policy  
Major courses  

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. 242, Introductory Analysis I, will be accepted in lieu of Math. 144*  
II. Environment of Business  
   Mgmt. 430, Business and Society  
   Econ. 201-202, 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  
   Acctg. 210, Financial Accounting I*  
   Acctg. 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 CS 200 and 205.*  

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 Freshman Year and Sophomore Year above.
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

MAJOR/MINOR AREAS

Candidates for the BBA 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 an accounting major. In addition, a minor in accounting is available to students who are not accounting majors. For information about the Master of Professional Accountancy degree, see the 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:

Course

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acctg. 310, 410, and 510, Financial Accounting II, III, 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 I</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. electives</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>†CS 200, Introduction to Programming</td>
<td>2</td>
</tr>
<tr>
<td>†CS 205, COBOL Language</td>
<td>2</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>

*May be counted as part of the College of Business Administration core requirements.

Accounting Minor—Undergraduate. A minor in accounting is available to any student whose major field or area of emphasis is outside of accounting. A minor consists of 15 hours: Acctg. 210 plus 12 hours of accounting coursework beyond Acctg. 210.

Professional Designations. Students interested in accounting may pursue several different professional designations. The designation Certified Public Accountant (CPA) requires that the candidate pass the Uniform CPA Examination and meet the requirements of Kansas law and the regulations of the Kansas State Board of Accountancy. The areas tested on the examination include auditing, business law, accounting theory, and accounting practice.

*Note: These courses are prerequisite for upper-division courses.
The Certificate in Management Accounting (CMA) has no requirements to sit for the examination. The areas tested include economics and business finance; organization and behavior, including ethical considerations; public reporting standards, auditing and taxes; periodic reporting for internal and external purposes; and decision analysis, including modeling and information systems.

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

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

**Aviation Management Major**

**Department of Marketing and Small Business**

*Required courses:*

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Av. Mgt. 320, Introduction to Aviation</td>
<td>3</td>
</tr>
<tr>
<td>Av. Mgt. 420, General Aviation: Management and Marketing</td>
<td>3</td>
</tr>
<tr>
<td>Av. Mgt. 421, Airport Planning and Management</td>
<td>3</td>
</tr>
<tr>
<td>Av. Mgt. 422, Airline and Air Travel Management</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 615, Economics of Transportation</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 616, Economics of Air Transportation</td>
<td>3</td>
</tr>
<tr>
<td>Geog. 235, Meteorology</td>
<td>3</td>
</tr>
</tbody>
</table>

*Electives:*

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Av. Mgt. 222, Ground School</td>
<td>2</td>
</tr>
<tr>
<td>Av. Mgt. 223, Private Flight</td>
<td>3</td>
</tr>
</tbody>
</table>

**Business Administration Major**

*Required courses:*

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acctg. 310, 320, 410, 430</td>
<td>15</td>
</tr>
<tr>
<td>DS 375, 550</td>
<td></td>
</tr>
<tr>
<td>Econ. 304, 340, 661, 672</td>
<td></td>
</tr>
<tr>
<td>Fin. 640, 641, 643</td>
<td></td>
</tr>
<tr>
<td>Mgmt. 462, 464, 665, 667, 680, 683, Pers. 466</td>
<td></td>
</tr>
<tr>
<td>Mkt. 403, 405, 609</td>
<td></td>
</tr>
</tbody>
</table>

*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>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acctg. 210, 220</td>
<td>6</td>
</tr>
<tr>
<td>Econ. 201, 202</td>
<td>6</td>
</tr>
<tr>
<td>Three of the following four courses (DS 350, Fin. 340, Mgmt. 360, Mkt. 300)</td>
<td>9</td>
</tr>
<tr>
<td>Electives from upper-division CBA 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 may elect to use two economics courses and two of the professional business courses to fulfill part of their General Education requirement. 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 a 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. 138, 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. 138 and 237; and 9 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 6 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. 201 and 202 (or equivalent) must be included.

College of Business Administration 75
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>
</tbody>
</table>

Electives, from the following: 6

<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>Fin. 645, Security Analysis and Valuation</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. 310, Financial Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 340, Money and Banking</td>
<td>3</td>
</tr>
<tr>
<td>RE 611, Real Estate Finance</td>
<td>3</td>
</tr>
<tr>
<td>RE 618, Real Estate Investment Analysis</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 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>
</tbody>
</table>

Free business elective 3

Management Major

Department of Management

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mgmt. 462, Leadership and Motivation</td>
<td>3</td>
</tr>
</tbody>
</table>
Mgmt. 464, Organizational Communication ....................... 3
Mgmt. 665, Organizational Development .......................... 3
Mgmt. 667, Organizational Structure and Design—Organizing Func-
tion ........................................................................... 3
Mgmt. 680, Decision Making—Planning and Selection of Alternatives 3
Electives, selected with consent of major adviser .................. 6

Marketing Major

Department of Marketing and Small Business

Required courses: Hrs.
Mkt. 403, Marketing Research ........................................... 3
Mkt. 405, Consumer Behavior .......................................... 3
Mkt. 609, Marketing Programs .......................................... 3
Electives, from the following: .......................................... 6
Mkt. 404, Retail Management
Mkt. 601, International Marketing
Mkt. 604, Distribution Management
Mkt. 606, Product and Price Policies
Mkt. 607, Promotion Management
Mkt. 608, Selling and Sales Force Management

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

Personnel Administration Major

Department of Management

Required courses: Hrs.
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

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

Production Management Major

Department of Finance, Real Estate, and Decision Sciences

Required courses: Hrs.
DS 375, Introduction to Management Science ....................... 3
DS 550, Problems and Cases in Production Management .......... 3
DS 659, Seminar in Production Management ........................ 3
DS 675, Intermediate Management Science ........................ 3
Electives, selected with consent of major adviser .................. 9
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  
Electives, selected with consent of major adviser  ................. 12

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 Wichita State University, plus additional nonbusiness course work, for a total of 56 semester hours. The following courses are specifically required by the School of Accountancy and may be counted within this 56 hours:
   - CS 200, Introduction to Programming .................................... 2
   - CS 205, COBOL Language ................................................. 2
   - Econ. 201 and 202, Principles of Economics I and II .................. 6
   - Eng. 210, Composition: Business, Professional, and Technical Writing 3
   - Eng. 685, Advanced Composition .......................................... 3
   - Math. 111, College Algebra ............................................... 3
   - Math. 144, Business Calculus ............................................. 3
   - Phil. 144, 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:
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 course work 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 1,000 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 minimum GMAT score of 400
4. A grade point average not less than 2.75 on all courses identified as College of Business Administration core courses
5. 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 9 hours of specific preprofessional course requirements may be admitted on a conditional basis. These 9 hours must be completed in the first semester following conditional admission or as soon thereafter as course scheduling permits.

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.

Professional Program

Candidates in the professional curriculum must complete 55 credit hours in the following courses while maintaining an overall grade point average of 3.0 or better based on all courses taken while in professional status.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acct. 710 and 715, Financial Accounting IV and V</td>
<td>6</td>
</tr>
</tbody>
</table>
ASSOCIATE OF SCIENCE IN LEGAL ASSISTANT

A legal assistant program is offered through the Department of Finance, Real Estate, and Decision Sciences to prepare students for law-related employment in law firms, corporations, and government. The 64-hour program is geared to the role concept of the legal assistant who is not a lawyer but who is trained to handle extensive professional responsibilities under the supervision of a lawyer. Some of the tasks a graduate of the program might be expected to perform are legal research, preparing briefs, interviewing clients and witnesses, preparing corporate instruments, drafting wills and probate instruments, drafting pleadings and interrogatories, filing papers, assisting in trial preparation, and numerous other matters of challenge and responsibility. The program has been granted approval by the American Bar Association.

Degree Program Admission

Students are admitted to the associate degree program upon meeting the general entrance requirements of the University and completing the program's admission procedures. An application for admission form must be obtained from the Legal Assistant Program office. The completed application should be returned to the Legal Assistant Program, Campus Box 88, Wichita State University, Wichita, Kansas 67208. Applications for admission are not acted upon until all transcripts are on file and ACT test scores have been received. Students who meet any one of the following criteria are admitted to the program without an admission interview: (1) a grade point average of 3.00 based on 15 or more semester hours; (2) scores in the upper one-third on the English usage and composite percentiles of the ACT; or (3) a bachelor's degree. Students who do not meet any of the above criteria must make an appointment with the director or associate director for an interview. The purpose of the admission interview is to counsel the student as to the personal qualifications which are important for success as a legal assistant and to identify any deficiencies which may need to be corrected. The admission procedures described above should be completed prior to enrollment in any course for which B. Law 130 and Legal 230 are stated prerequisites.

Students entering the program with fewer than 24 semester hours are
assigned to University College. Students who meet the 24 semester credit hours and 2.00 cumulative GPA admission requirement of the College of Business Administration are required to have their records transferred to the College of Business Administration.

Nondegree and Single Course Admission

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

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

Degree Requirements

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

Course

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. General Education Requirements (30 hours)</td>
<td></td>
</tr>
<tr>
<td>Eng. 101, College English I</td>
<td>3</td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>Humanities/Social and Behavioral Sciences (May include general studies courses. A minimum of 3 hours is required in each category.)</td>
<td>6-18</td>
</tr>
<tr>
<td>Natural Sciences and Mathematics (May include general studies courses.)</td>
<td>6-18</td>
</tr>
</tbody>
</table>

II. Professional Curriculum (34 hours)

A. Required Courses (19 hours)

* | Legal 231A, Legal Research and Writing I* | 3 |
| Legal 233, Litigation I* | 3 |
| Legal 238, Legal Assistant Internship | 3 |
| Legal 240, Substantive Law | 3 |
| B. Law 332, Law and Society | 3 |
| Acctg. 210, Financial Accounting I | 3 |

B. Professional Electives (15 hours)

* | Legal 232, Legal Aspects of Business Organizations* | 3 |
| Legal 234, Estate Administration* | 3 |
| Legal 235, Law Office Management and Technology | 3 |
| Legal 236, Litigation II* | 3 |
| Legal 237, Family Law* | 3 |
| Legal 239, Special Topics* | 1-3 |
| Legal 241, Legal Research and Writing II* | 3 |
| Legal 242, Estate Planning* | 3 |
| B. Law 435, Law of Commercial Transactions | 3 |
| B. Law 436, Law of Business Associations | 3 |
| B. Law 437, Regulatory Law | 3 |
| RE 438, Real Estate Law* | 3 |
| Acctg. 430, Taxation I | 3 |

College of Business Administration/Legal Assistant 81
The 34-hour professional curriculum must include a minimum of 15 hours of legal specialty courses. Legal specialty courses are identified with an asterisk (*). Other courses may qualify as legal specialty courses for students with corporate, 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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composition and Speech</td>
<td></td>
</tr>
<tr>
<td>Eng. 101, College English I</td>
<td>3</td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or</td>
<td></td>
</tr>
<tr>
<td>Speech 112, Basic Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>3</td>
</tr>
<tr>
<td>Humanities</td>
<td>6</td>
</tr>
<tr>
<td>Science and/or Mathematics</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>7</td>
</tr>
<tr>
<td>Accounting</td>
<td></td>
</tr>
<tr>
<td>Acctg. 110, Basic Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>Acctg. 120, Basic Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>Administration</td>
<td></td>
</tr>
<tr>
<td>Mgmt. 360, Concepts of Administration or</td>
<td>3</td>
</tr>
<tr>
<td>B. Law 332, Law and Society</td>
<td></td>
</tr>
<tr>
<td>Economics</td>
<td></td>
</tr>
<tr>
<td>Econ. 201, Principles of Economics</td>
<td>3</td>
</tr>
<tr>
<td>Business Education</td>
<td></td>
</tr>
<tr>
<td>Bus. Ed. 133, 138, 237, Typewriting</td>
<td>6-9</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. 231, 234, and 240, Shorthand</td>
<td>6-9</td>
</tr>
<tr>
<td>Bus. Ed. 260, Automated Word Processing</td>
<td>3</td>
</tr>
</tbody>
</table>

Total hours                                | 64-70
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

110. Basic Accounting I. (3). An introductory course to accounting and the keeping of basic records in a business. A practical, applied course with heavy emphasis on problems and simulations. This course meets the needs of students who want basic accounting and bookkeeping skills. Should not be taken by degree candidates in the College of Business Administration; such students should take Acctg. 210. B 11 110 0 0502

120. Basic Accounting II. (3). A continuation of Acctg. 110. Should not be taken by degree candidates in the College of Business Administration; such students should take Acctg. 210. Prerequisite: Acctg. 110. B 11 120 0 0502

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

Upper-Division Courses


320. Managerial Accounting I. (3). The study of accounting in terms of management's information requirements. Emphasis is given to the use of accounting in planning and controlling a firm's activities. Prerequisite: Acctg. 210. B 11 220 0 0502

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

410. Financial Accounting III. (3). A con-
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.


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, CS 200, and CS 205. B 11 560 0 0502; B 11 760 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 quantitative methods of accounting is included. Prerequisite: Acctg. 220. B 11 620 0 0502; B 11 720 0 0502

630/730. Taxation II. (3). A study of the federal income tax law and its relationship to corporations, partnerships, and estates and trusts. The course is designed primarily for students who wish to work with income tax as a part of their career objective. Prerequisite: Acctg. 430. 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 and 560/760. B 11 640 0 0502; B 11 740 0 0502

690/790. Seminar in Selected Topics. (1-3). Repeatable for credit with School of Accountancy consent. B 11 690 0 0502; B 11 790 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 interpretation and analysis of financial statements are 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 the use of accounting data to analyze management problems. 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 how substantially different tax liabilities sometimes attach to nearly identical economic events. Emphasizes practical results, giving little or no consideration to political considerations inherent in those results. Designed for the manager or businessman who has little accounting background. This course is not open to accounting majors or those who have had previous income tax courses. 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 interrelationship between accounting and socioeconomic factors. Prerequisite: undergraduate emphasis in accounting, admission to the MPA program, or instructor's consent. B 11 810 9 0502

812. Theoretical Foundations of Accounting. (3). A systematic treatment of the basic concepts and methodology of
accounting theory and their application to problems of income determination and asset/liability valuation. Prerequisite: undergraduate emphasis in accounting or admission to the MPA program. B 11 812 9 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. 340 and either an undergraduate emphasis in accounting, admission to the MPA program, or instructor's consent. B 11 825 0 0502

830. Taxation III. (3). A research course emphasizing the utilization of various income tax research materials in the preparation of written reports on tax problems. A review and discussion of current problems in taxation and tax practice are included. Prerequisite: Acctg. 630/730. B 11 830 0 0502


860. Accounting Information Systems II. (3). A study of the concepts of information systems, their design and operation, and the relationship of these concepts to the economic information requirements, information flows, decision criteria and control mechanisms in the business organization. Prerequisite: Acctg. 560/760. B 11 860 0 0502

880. Contemporary Issues in Accounting. (3). An examination of current issues in accounting, with emphasis on the releases of the American Institute of Certified Public Accountants and of other professional organizations and governmental agencies. Prerequisite: Acctg. 510/710. B 11 880 0 0502

890. Professional Seminar. (1). An orientation to the accounting profession. Continuous enrollment and satisfactory completion of designated segments required of all students in the School of Accountancy. B 11 890 9 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 including a course in statistics, admission to the MPA program, or instructor's consent. B 11 895 9 0502

899. Thesis Research. (1-3). B 11 899 4 0502

AVIATION 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/Nc 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/Nc 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, airport management, government activities, airline operations and military aviation. Covers employment opportunities in the field. Representatives from the various facets of the aviation industry and government will participate. B 17 320 0 0506


College of Business Administration/Aviation Management 85
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. It covers both air cargo 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 credit/no credit only. Closed to graduate credit. Prerequisites: junior standing and 2.75 grade point average in aviation management. B 17 491 3 0501

492. Internship in Aviation Management. (1-3). Offered for credit/no credit only. Prerequisites: junior standing, 2.75 grade point average in aviation management, and departmental consent. B 17 492 3 0501

Course 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, electronic calculators, office duplicating machines, proportional spacing typewriters 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 1 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 mailable transcripts. 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 2 units secretarial training in high school or departmental consent. B 14 237 5 0514
240. Technical Shorthand. (3). Advanced dictation, with emphasis on technical vocabularies. Prerequisites: Bus. Ed. 234 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 development of automated word processing. Each student will receive individualized instruction on the Magna I memory unit covering basic function of input, revision and playback procedures as well as the more advanced abilities of the Magna I such as thought reorganization and word search. 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 mailable copies. Prerequisites: 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 procedures. Also included are various methods of teaching office machines, the functional use of selected machines and a survey of available equipment. Prerequisites: business education major or minor with credit in Bus. Ed. 237 or departmental consent, and junior standing. B 14 300 5 0514

460. Directed Studies. (1-5). Prerequisites: departmental consent and junior standing. B 14 460 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 methods, materials, research and curricular problems. The instructor is assisted by guest lecturers. Repeatable for credit. Prerequisites: teacher certification or departmental consent, and junior standing. B 14 750 9 0514

BUSINESS LAW

DEPARTMENT OF FINANCE, REAL ESTATE, AND DECISION SCIENCES

Lower-Division Courses

130. Introduction to Law. (3). A basic introduction to law. Considers the nature and functions of law, the structure of the American legal system, and legal processes and procedures. Also surveys the major areas of substantive law. Open to students with a general interest in law. Students interested in the Legal Assistant Program should enroll concurrently in Legal 290. B 15 130 0 0506

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

Upper-Division Courses

332. Law and Society. (3). An analysis of our legal system in operation. The nature and functions of law, legal institutions and processes, and the subject matter of law are included. The role of the legal system in society is examined through the study of such topics as constitutional rights, tort liability, freedom of contract, consumer protection and environmental protection. Prerequisite: junior standing. B 15 332 0 0506


435. Law of Commercial Transactions. (3). Law of contracts, bailments, sales, commercial paper and secured transactions. This course centers on the Uniform Commercial Code. Prerequisite: junior standing. B 15 435 0 0506

436. Law of Business Associations. (3). Law of agency, partnerships and corporations. This course considers the organizational and relational aspects of both small, closely held businesses and large corporate enterprises. Prerequisite: junior standing. B 15 436 0 0506

437. Regulatory Law. (3). An introduction to the realm of regulatory law and its business context. Considers the legal principles common to most regulatory agencies. Topics considered include trade regulation, occupational health and safety, product safety and environmental law. Prerequisite: junior standing. B 15 437 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 business law. B 15 491 2 0506
492. Internship in Business Law. (1-3). Offered for Cr/NCr only. Prerequisites: junior standing, 2.75 grade point average in business law and departmental consent. B 15 492 2 0506

Courses for Graduate/Undergraduate Credit

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing. B 15 690 9 0506

750. Workshop in Business Law. (1-4). Prerequisite: junior standing. B 15 750 2 0501

Courses for Graduate Students Only

831. Legal Environment of Business. (3). Consideration of the legal environment of business from a managerial perspective. Coverage includes a survey of the frameworks of private and public law and the institutions and processes of the legal system. Emphasis is placed on regulatory processes and the realm of public law, including the ethical and social responsibility of business behavior. B 15 831 0 0501

890. Seminar in Special Topics. (1-3). Repeatable with departmental consent. B 15 890 9 0501

891. Directed Studies. (1-5). Prerequisite: departmental consent. B 15 891 3 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 Management. (3). Basic concepts for planning and controlling the production of either goods or services. Topics included are: aggregate and process planning, scheduling, quality control and inventory systems. Prerequisites: Econ. 231 and Math. 144, or equivalent, and junior standing. B 15 350 0 0506

375. Introduction to Management Science. (3). Introduction to quantitative models that are used in business as aids to the decision-making process. Topics include linear programming, integer programming, inventory models and waiting-line models. Prerequisites: Econ. 231 and Math. 144, or equivalent, and junior standing. B 15 375 0 0507


491. Independent Study. (1-5). Offered Cr/NCr only. Closed to graduate credit. Prerequisites: junior standing and 2.75 grade point average in decision sciences. B 15 491 3 0506

492. Internship in Decision Sciences. (1-3). Offered Cr/NCr only. Prerequisites: junior standing and 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 application. Prerequisite: one course in programming from CS 201-216 or equivalent. Prerequisite or corequisite: DS 350. B 15 495 0 0701

Courses for Graduate/Undergraduate Credit

550. Problems and Cases in Production Management. (3). Analysis and resolution of a variety of problems encountered in the production of either goods or services. Through the use of cases and other methods, the course integrates the concepts and models presented in DS 350. Prerequisite: DS 350. B 15 550 0 0506

659. Seminar in Production Management. (3). Topics that may be included are: (1) current issues in production and operations management; (2) material logistics and control; and (3) diagnostic analysis of operations. Repeatable for credit with departmental consent. Prerequisite: DS 550 or departmental consent. B 15 659 9 0506

models for business. Topics include dynamic and goal programming, material requirements planning, sequencing and routing models, and competition models. Prerequisite: DS 375. B 15 675 0 0507

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

695. Simulation. (3). An examination of concepts and procedures of simulation. Prerequisite: DS 375. B 15 695 0 0507

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. Prerequisite: calculus and statistics. B 15 850 0 0506

851. Intermediate Production Management. (3). Theory of productive systems, decision making under uncertainty and advanced technological forecasting methods for business and industry. Application of forecasting methods and some operations research models to real-world productive systems. Prerequisite: DS 350 or 850. 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. (4). A study of business information systems for management decision making and control. Includes coverage of system components, controls, and application. 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, queuing theory and simulation. Not open to students with credit in DS 695. 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. Open only to MS in administration 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 information at the beginning of this section. It should be noted that the courses BA 211 and BA 212 may appear in the course listings as prerequisites to certain courses. These courses have been dropped, but students who have already successfully completed them may use them as prerequisites to certain courses, as indicated in the Catalog.

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, 200G
Economic principles and theory—Econ. 102, 201, 202, 203H, 204H, 301, 302, 304, 605, 800, 801, 802, 803, 804
Industrial organization and regulated industries—Econ. 614, 615, 616, 617, 618, 810, 814, 815
History and comparative systems—Econ. 100, 622, 625, 626, 627
Statistics and econometrics—Econ. 231, 631, 831, 836
Monetary theory; money and banking—Econ. 340, 640, 840
Public finance—Econ. 653, 654, 655, 853
Labor, manpower, and health economics—Econ. 303, 360, 364, 660, 661, 662, 663, 665, 861
Economic growth and development; international economics—Econ. 671, 672, 674, 870, 871
Urban environmental and regional economics—Econ. 285, 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

102. 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 13 102 0 2204

200G. What Economics Is All About. (4). An exploration of the tension between the economic interests of individuals and those of the society in which they live. Begins with concept formation, theory construction and testing, and uses this framework to examine the writings of several contemporary political economists to discover how each deals with individual and collective interests. Prerequisite: grade of C or better in Eng. 101. B 13 200G 0 2204

202. Principles of Economics II. (3). (Microeconomic theory) An introduction to price and distribution analysis. Market structure and performance, contemporary issues and public policy are also included. Prerequisite: Econ. 201. B 13 202 0 2204

203H. Honors Principles of Economics. (4). A general survey of economic method, character and scope, and basic microeconomic and macroeconomic principles with applications aimed at helping the student develop an analytic framework for interpreting economic events, trends, institutions and public policies. Included is an analysis of resource use, price and output determination, the level of national income and the general price level, business fluctuations, the monetary and banking system, international trade, economic growth and development. Open only to honors students. B 13 203H 0 2204

204H. The Economics of Public Issues. (3). A seminar on selected topics of current interest in economics that analyzes major economic problems of the day as a guide to making public policy decisions. Included are the economics of environmental control, externalities, public goods, social costs and their effects in the market system; related problems such as urban development and economic growth, inflation, unemployment, concentration of economic power, depletion of resources, pollution and conservation. Open only to honors students. Prerequisite: Econ. 203H. B 13 204H 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, nonparametric methods, elements of Bayesian decision theory, linear regression and correlation, and time series analysis. Prerequisite: Math. 111 or 112. B 13 231 0 0503

285. Economics of Environmental Quality. (3). An introduction to the scientific, engineering and economic principles needed for the enhancement of the quality of man's total environment. Also included is a discussion of air and water pollution, solid waste disposal, water resources and conservation. The course introduces various principles of economics, such as marginal analysis, cost/benefit analysis, systems approach and externalities as appropriate. B 13 285 0 2204

Upper-Division Courses

301. National Income Analysis. (3). (Macroeconomic theory) Aggregate economic analysis and examination of policies affecting the level of income and employment. Prerequisites: Econ. 202 and junior standing. B 13 301 0 2204

302. Production, Price, and Distribution Analysis. (3). (Microeconomic theory) Analysis of production and pricing by firms and industries and the distribution of income to factors of production. Prerequisites: Econ. 202 and junior standing. B 13 302 0 2204

303. Economic Problems of the Aged. (3). Cross-listed as Geron. 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 emphasis is on economic principles and on improving the consumer knowledge and management skills of the elderly. Prerequisite: Econ. 202 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. 202, one course in calculus, and junior standing. B 13 304 0 0517

340. Money and Banking. (3). A study of money, credit and inflation. The structure and role of the commercial banking and Federal Reserve systems. The relationship between banks and other financial institutions is included, as is the role of money in determining the level of economic activity and prices. Prerequisites: Econ. 201 and junior standing. B 13 340 0 0504

360. Labor Economics. (3). A survey of labor economics, labor markets, trade unionism and collective bargaining. Wage determination, employment, unemployment and labor legislation are also included. Prerequisites: Econ. 202 and junior standing. B 13 360 0 0516

364. Economic Poverty. (3). An examination of the problem of economic poverty in the United States. The extent of poverty, its causes and the problems created and methods of attacking poverty are probed. Prerequisites: Econ. 201 or in-
Courses for Graduate/Undergraduate Credit

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. 202 and junior standing. B 13 605 0 2204

614. Government Regulation and Public Policy Toward Business. (3). A critical appraisal of the objectives and results of government policy and practice in controlling business activity, including a study of the effects of government regulations on business, and the social responsibility of business with respect to public issues. 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. 202 and junior standing. B 13 615 0 0510

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

617. Economics of Public Utilities. (3). A study of general economic characteristics and regulation of water, gas, electric, communications and related industries, including atomic power. Prerequisites: Econ. 202 and junior standing. B 13 617 0 0510

618. Urban Transportation. (3). A study of urban transportation theory, practice and problems. Areas to be examined include the history of urban transportation, relationships between transportation and urban development, the urban transportation planning process and public policy toward urban transportation. Economic concepts and theory will be used to assess the effects of urban transportation changes on urban areas and to evaluate various past, present and proposed public policies related to urban transportation. Prerequisite: Econ. 202 or instructor's consent. B 13 618 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 overseas expansion, technology, precious metals, politics and war; changes in economic ideologies, and cultural effects of economic change. Prerequisites: Econ. 201 and junior standing. B 13 625 0 2204

626. Origins of the Industrial State. (3). Cross-listed as Hist. 516. 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. 201 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 and the changing role of the government in economic activity are explored. Prerequisites: Econ. 201 and junior standing. B 13 627 0 2204

631. Intermediate Business Statistics. (3). A study of the regression model with extensions, analysis of variance models, 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. 202, 340 and junior standing. B 13 640 0 0504

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

654. Fiscal Policy. (3). A study of the economics of government spending and taxation and an analysis of the fiscal role and instruments of government and their effects on the economy. Prerequisites: Econ. 202 and junior standing. B 13 654 0 2204

660. Labor Market and Manpower. (3). An examination of the sources of labor supply and the marketing, placement and utilization of labor. Changing composition and trends in the labor force are included, as are training and retraining programs and public policy toward manpower problems. Prerequisites: Econ. 202 and junior standing. B 13 660 0 0516

661. Collective Bargaining and Wage 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. 202 and junior standing. B 13 661 0 0516

662. Public Policy Toward Labor. (3). An examination of federal and state legislation, judicial action and administrative practice directed toward controlling or mitigating problems arising from the labor-management relationship. Regulations in the private sector and employment practices in the public sector are studied. Prerequisites: Econ. 202 and junior standing. B 13 662 0 0516

663. Economic Insecurity. (3). Cross-listed as Geron. 663. Personal economic insecurity, such as unemployment, old age, health care, disablement and erratic economic fluctuations. Costs and benefits of government action to aid in meeting such insecurities are included. Prerequisites: Econ. 202 or instructor's consent, and 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, including the demand for and supply of health care services, the quality, quantity and pricing of health services; the need for insurance; and the role of government in the health sector. Prerequisites: Econ. 202 and junior standing. B 13 665 0 0516

671. Economic Growth and Development. (3). Survey of leading growth theories, with an emphasis on the processes of development and capital formation in developed and underdeveloped economies. Determinants of real income, resource allocation, investment criteria, balance of payment problems, national policies and related topics are analyzed within this framework. Prerequisite: Econ. 202 and junior standing. B 13 671 0 2204

672. Introduction to International Economics and Business. (3). Cross-listed as Mgmt. 561. 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. 202 and junior standing. B 13 672 0 0513

674. International Finance. (3). Cross-listed as Fin. 648. The study of foreign exchange, balance of payments, the international monetary system and the world's money and capital markets, and their relationships with the financial operations of multinational firms. Also, relevant aspects of international financial management are explored through a series of case studies. Prerequisites: Fin. 340, Econ. 202 and junior standing. B 13 674 0 0513

680. Economics of Energy and Natural Resources. (3). A study of the business and economic aspects of energy and natural resources problems. Includes energy demand and supply, the price of energy, energy industry characteristics and government regulations, conservation, environmental problems and public policies. Statistical data are extensively used to evaluate the past and present energy and natural resources situations and the trends for the future. Simple economic concepts and theories are employed to interpret the facts and to assess the impacts of various public policies on the use of energy and natural resources. Prerequisite: Econ. 202 or instructor's consent. B 13 680 0 2204

685. Natural Resources and Regional Planning. (3). A study of the approaches to the optimal allocation of natural resources. Criteria for policy decisions and the evaluation of the social and economic benefits and costs of the use of resources through time are examined. Prerequisites: Econ. 202 and junior standing. B 13 685 0 2204

687. Introduction to Urban Affairs. (3). Cross-listed as Pol. Sci. 687 and Soc. 687. An introduction to the study of the metropolis as a social, political and economic system. Prerequisites: Econ. 202, a course
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 13 800 0 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 13 801 0 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 13 802 0 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 0 2204

804. Managerial Economics. (3). A survey of theoretical and analytical tools of economics that are useful in decision making by managers. Not for graduate credit in the MA program in economics. Prerequisites: Econ. 202 or 800 and one course in calculus. B 13 804 0 0517

810. Business and Public Policy. (3). The study of the effects of government regulation, monetary and fiscal policy on business, as well as the social responsibility of business. Not for graduate credit in the MA program in economics. Prerequisite: departmental consent. B 13 810 0 2204


815. Seminar in the Regulated Industries. (3). An intensive analysis of the economic characteristics of the regulated industries (i.e., transportation and public utilities) with emphasis on problems, issues and public policy in these industries. Prerequisite: one of Econ. 302, 615, 616, 617 or 804. B 13 815 9 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. 231 or equivalent. Not for graduate credit in the MA program in economics. Prerequisite: calculus. B 13 830 0 0503

831. Introduction to Econometrics. (3). Analysis of time series, multiple regression, multiple and partial correlation, analysis of variance and introduction to econometric techniques. Prerequisites: Econ. 631 and one course in calculus. B 13 831 9 0503

836. Methodology of Economics. (3). A study of what constitutes the basis of knowledge in economics. The manner in which the principles of abstract reasoning, deduction and induction, can be applied to produce knowledge in economics is explored. Prerequisites: Econ. 302 and 631. B 13 836 9 2204

840. Seminar in Monetary Theory. (3). An examination of neoclassical and contemporary monetary theories. An analysis and an evaluation of current monetary problems are included. Repeatable for credit with departmental consent. Prerequisites: Econ. 202 and 340. B 13 840 9 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
892. Directed Study. (1-3). Individual study of various aspects and problems of economics. Repeatable for credit with departmental consent. Prerequisite: graduate standing and departmental consent. B 13 891 3 2204

893. Group Studies in Economics. (1-3). Repeatable for credit. Prerequisite: departmental consent. B 13 892 9 2204

FINANCE
DEPARTMENT OF FINANCE, REAL ESTATE, AND DECISION SCIENCES

Lower-Division Courses

140. Personal Finance. (3). Management of the cash flows experienced by individuals and families. Analysis of alternative strategies to meet individual financial goals through various investment media, 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 15 140 0 0504

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

Upper-Division Courses

340. Finance. (3). A study of corporate organization, types of securities and obtaining short- and long-term capital. Financial planning and control, forecasting and budgeting are included. Prerequisites: Acctg. 210 and 220 and junior standing. B 15 340 0 0504

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

640. Financial Management. (3). An exploration of the problems and operations for which the financial officer is responsible, emphasizing controversial aspects of financial analysis. Prerequisites: Fin. 340, 6 hours of accounting or departmental consent, and junior standing. B 15 640 0 0504

641. Investments. (3). An analysis of investment risks, financial information and industry characteristics. Corporate, government, municipal and financial institution securities and other investment types are examined. Personal portfolio construction, supervision and management are presented. Prerequisites: Fin. 340 and junior standing. B 15 641 0 0505

643. 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 15 643 0 0504

644. 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 banking are also explored. Prerequisites: Fin. 643 and junior standing. B 15 644 0 0504

645. Security Analysis and Valuation. (3). Comprehensive study of methods of analyzing major types of securities. Market behavior analysis is also made. The formulation of investment objectives, the design of portfolios for classes of institutional and individual investors, and portfolio theory are explored. Prerequisites: Fin. 641 and junior standing. B 15 645 0 0505

648. International Finance. (3). Cross-listed as Econ. 674. The study of foreign exchange, balance of payments, the international monetary system and the world's money and capital markets, and their relationships with the financial operations of multinational firms. Also, relevant aspects of international financial management are explored through a series of case studies. Prerequisites: Fin. 340, Econ. 202 and junior standing. B 15 648 0 0513

690. Seminar in Selected Topics. (1-5). Repeatable with departmental consent. Prerequisite: junior standing. B 15 690 9 0504

750. Workshop in Finance. (1-4). Prerequisite: junior standing. B 15 750 2 0504

Courses for Graduate Students Only

820. Seminar in International Trade and Finance. (3). Cross-listed as Econ. 870. A seminar in theoretical concepts and contemporary selected issues of international economics and finance. Selected issues would include such areas as foreign exchange markets, the Eurodollar market, Arab oil dollars in the international monetary system, transference of inflation between countries, developments in the common markets, 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 institutional structure and an analysis of a variety of practical problems of business finance. Prerequisite: Acctg. 800 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 policies of financial institutions, including planning, measuring and achieving financial goals. Prerequisite: Fin. 840 or equivalent. B 15 842 0 0504

of growth rate of firms, rate of return, uncertainty, dividend payout, leverage and the cost of capital are studied intensively. Prerequisite: Fin. 641 or departmental consent. B 15 844 0 0504

845. Security Analysis. (3). An analysis and valuation of investment securities issued by corporations and governmental agencies. Prerequisite: Fin. 641 or departmental consent. B 15 845 0 0505

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 explained. 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 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 paralegals do, types of paralegal employment, education and licensure, professional ethics, authorized and unauthorized practice of law and an introduction to paralegal skills. Prerequisite: B. Law 130 or 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. Prerequisites: Legal 230 and 240 or concurrent enrollment in 240, or departmental consent. B 15 231 0 5096

232. Legal Aspects of Business Organizations. (3). The law of business organizations, with emphasis on the practice aspects related to formation of operation of proprietorships, partnerships and corporations. Includes drafting aspects related to employment agreements, partnership agreements and corporate documents. Prerequisites: B. Law 130 and Legal 230 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. Prerequisites: Legal 231A and 240 or concurrent enrollment or departmental consent. B 15 233 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 the probate process. Prerequisite: Legal 231A 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. Prerequisites: B. Law 130 and Legal 230 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: Legal 233 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, support, adoption and guardianship matters. Prerequisite: Legal
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. Prerequisites: B. Law 130 and Legal 230 or departmental consent. B 15 239 0 5096

240. Substantive Law. (3). An introduction to substantive law for the paralegal with emphasis on the law of contracts, torts and property. Special emphasis is placed on development of skill in recognizing substantive law issues. Prerequisite: B. Law 130. 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: Legal 231A or departmental consent. B 15 241 0 0506

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: Legal 234 or departmental consent. B 15 242 0 0501

MANAGEMENT

DEPARTMENT OF MANAGEMENT

Lower-Division Courses

100. Introduction to Business. (3). Introduction to the current issues, concepts and functions of business and its environment. Not open to upper-division students in the College of Business Administration. Students may not receive credit in both Mgmt. 101G and Mgmt. 100. B 16 100 0 0501

101G. Introduction to Business. (3). Everyone spends a lifetime dealing with and being influenced by business firms. Whether or not a student ever takes a formal course in business administration, everyone needs some awareness of business in order to more intelligently select a career and to be a better informed consumer. 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 101G 0 0501

163. Women in 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 both men and women aware of the role that women now play and their future potential. B 16 163 0 0506

190. Selected Topics. (1-3). Repeatable with departmental consent. B 16 190 3 0501

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 0506


430. 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, occupational safety and health, environmental protection and the challenge to the legitimacy of the firm are dealt with from the perspective of the decision-making manager. Prerequisite: junior standing. Completion of Mkt. 300, Fin. 340, DS 350, and Mgmt. 360 is strongly recommended. B 16 430 0 0501

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 probed, and leadership styles are analyzed. Prerequisites: Mgmt. 360, or concurrent enrollment, and junior standing. B 16 462 0 0506

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 are included. Prerequisites: Mgmt. 360, or concurrent enrollment, and junior standing. B 16 464 0 0506

491. Independent Study. (1-5). Offered for credit/no credit only. Closed to graduate credit. Prerequisites: junior standing and 2.75 grade point average in management. B 16 491 3 0501

492. Internship in Management. (1-3). Offered for credit/no credit only. Prerequisites: junior standing, 2.75 grade point average in management and departmental consent. B 16 492 3 0501

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. 202 and junior standing. B 16 561 0 0513

663. Organizational Interactions. (3). A study of interpersonal intraorganizational and interorganizational interactions. Prerequisites: Mgmt. 360, or concurrent enrollment, and junior standing. B 16 663 0 0506

665. Organizational Development. (3). Planned organizational change. Emphasis is upon team building in organizations. Individual, group and structural developments are included. Prerequisites: Mgmt. 360 or concurrent enrollment, and junior standing. B 16 665 0 0506

667. Organizational Structure and Design. (3). An introduction and exploration of the theories pertinent to the study of organizational subsystem structure and design. 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 and matrix organizations. Prerequisite: Mgmt. 360. B 16 667 0 0506

680. Decision Making. (3). Cross-listed as UA 730. A study of the theories of decision making, with attention directed to the factors of creativity, the quest for subjective certainty, rationality, cognitive inhibitors, problem identification, evaluation of alternatives, applications of quantitative methods to decision processes and decision implementation. Prerequisites: Mgmt. 360 or concurrent enrollment, and junior standing. B 16 680 0 0506

681. Administrative Policy. (4). 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, or departmental consent, and junior 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 of 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: nationalism 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 integration 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 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, occupational safety and health, environmental protection and the challenge to 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, social and cultural dimensions of the 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 behavioral control. 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. 860 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. 860 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. Prerequisite: Mgmt. 860 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 0 0506

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 only to MS in administration 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 Courses

190. Selected Topics. (1-3). Repeatable with departmental consent. B 17 190 3 0509
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. 231 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 selection, 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/NCR 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/NCR only. Prerequisites: junior standing, 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 relationships with wholesalers and retailers, as well as the management of the firm’s storage facilities, inventory control, procedures and shipping facilities. Prerequisites: Mkt. 300 and junior standing. B 17 604 0 0509

606. Product and Price Policies. (3). An examination of the issues involved with product development, planning of product services, branding and packaging. Price policies focus on such aspects as the establishment of a firm’s basic price strategies, price alternations, credit policies and transport and handling terms. Prerequisites: Mkt. 300 and junior standing. 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, management of the personal sales force, development of special promotional activities and management of public relations. Prerequisites: Mkt. 300 and junior standing. B 17 607 0 0509

608. Selling and Sales Force Management. (3). An analysis of current behavioral concepts of personal selling and the problems and policies involved in managing a sales force. Prerequisites: Mkt. 300 and junior standing. B 17 608 0 0509

609. Marketing Programs. (3). A study of all the aspects of the marketing mix that are integrated to make an effective and coordinated marketing program. Prerequisites: Mkt. 300, 3 additional hours of marketing and junior standing. B 17 609 0 0509

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

750. Workshop in Marketing. (1-4). Prerequisite: junior standing. B 17 750 2 0509

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 indi-
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-range marketing and corporate 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. 801 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 concepts 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. Prerequisite: 6 hours of marketing, including Mkt. 801. B 17 809 0 0509

890. Seminar in Special Topics. (1-3). Repeatable with departmental consent. B 17 890 9 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 candidates. B 17 893 3 0509

895-896. Thesis. (2-2). 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. 466 or consent of instructor. B 16 468 0 0515

491. Independent Study. (0-5). Offered for Cr/L or Cr/Nr only. Closed to graduate credit. Prerequisite: junior standing and 2.75 grade point average in personnel. B 16 491 3 0515

492. Internship in Personnel. (1-3). Offered for Cr/Nr only. Prerequisites: junior standing, 2.75 grade point average in personnel 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 in labor-management relationships. Prerequisite: junior standing. B 16 664 0 0515

666. Selection, Training, and Placement.

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R; 2L means 4 hours of lecture and 2 hours of lab.
(3). Analysis of advanced programs of employee selection, training and placement. Testing, interviewing, counseling, appraisal, job analysis and job design are explored. Prerequisites: Mgmt. 360 or concurrent enrollment, and junior standing. B 16 600 0 0515

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

891. Directed Studies. (1-5). Prerequisite: departmental consent. B 16 891 3 0501

893. 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 candidates. B 16 893 3 0501

895-896. Thesis. (2-2). B 16 895 4 0501; B 16 896 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 Cr/NCr only. Closed to graduate credit. Prerequisites: junior standing and 2.75 grade point average real estate. B 15 491 3 0501

492. Internship in Real Estate. (1-3). Offered for credit/no credit 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

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

614. Real Estate Appraisal. (3). Impact of socioeconomic 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

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

619. Residential Marketing, Management and Development. (3). Theory and prac-
tice. 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 studies 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 15 690 9 0511

750. Workshop in Real Estate. (1-4). Prerequisite: junior standing. B 15 750 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 re-development 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 15 890 9 0511

891. Directed Studies. (1-5). Prerequisite: departmental consent. B 15 891 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 candidates. B 15 893 2 0511

895-896. Thesis. (2-2). B 15 895 4 0511; B 15 896 4 0511

SMALL BUSINESS/ENTREPRENEURSHIP

DEPARTMENT OF MARKETING AND SMALL BUSINESS

Lower-Division Courses

160. Introduction of 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 new business. B 17 160 0 0506

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

Upper-Division Courses

361. Comparative Entrepreneurship. (3). The focus of the course is fourfold: (1) to study through selected readings the ways by which entrepreneurs in all historical eras have responded to business opportunities; (2) to study international and comparative entrepreneurship, analyzing both foreign entrepreneurs in the United States and U.S. entrepreneurs operating abroad; (3) to examine current entrepreneurial activities in the United States, including those in major subcultures; and (4) to familiarize potential entrepreneurs with the vast body of specialized literature designed especially to assist small business operations. Other related topics will be treated also. Prerequisite: junior standing. B 17 361 0 0506


465. Small Business Management. (3). The focus of this course is on the techniques of managing small businesses, from startup to goal setting to efficient operations. Topics to be covered are (1) management concepts; (2) marketing techniques; (3) record-keeping procedures; (4) new product strategies; and (5) small business finance. Prerequisites: Acctg. 210-220, Mkt. 300, Mgmt. 360 and junior standing. B 17 465 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 entrepreneurship. 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. Small Business Practicum. (3). This
is an applied course extending the material learned in the classroom into real situations that involve problem solving. One fourth of the course is an intensive review of the functional areas of a business. The student then assumes the role of consultant or problem solver for a particular firm. The instructor serves as director, helping to define problems and recommending solutions for the firm’s difficulties or needs. Prerequisites: Mkt. 300, Fin. 340, DS 350, Mgmt. 360. B 17 560 2 0506

668. Venture Creation. (3). The focus of this course is on identifying and developing a written analysis of the procedures for starting a new business. Topics interface with the substance of an actual business plan, such as the definition of the business, analysis of the market, sales forecasting, proforma development, business organization, financial analysis, capital requirements, etc. Prerequisites: Mkt. 300, Fin. 340, DS 350, Mgmt. 360, Acctg. 220, and senior or graduate standing. B 17 668 0 0506

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

868. 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 creative forms of financing, (2) marketing opportunity analyses, (3) proforma development, (4) feasibility decision making, 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 17 868 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 candidates. B 17 893 3 0506

895-896. Thesis. (2-2). B 17 895 4 0501; B 17 896 4 0506
— The college ranks 91 among 1,300 colleges of education rated by the American Educational Research Association for contributions to its professional programs
— The college assists teacher placement through the Office of Educational Field Service and the Bureau of Educational Placement
— In cooperation with Wichita's Wesley Medical Center, a program assists recent cardiac patients with rehabilitation activities
Providing professional programs appropriate for the development of broadly educated and competent teachers, administrators, supervisors, counselors, 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, based on the premise that students need to understand themselves and their world for professional growth, are arranged to permit the development of (1) an understanding of the characteristics of a democratic society and education’s place within it, (2) a philosophy of education consistent with living within society, (3) an adequate professional preparation and the opportunity to relate content to the problems of living, (4) a knowledge of human growth and development, and (5) skills in the application of principles of human learning and adjustment.

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, the college can recommend to the board that appropriate teacher’s certificates be awarded without examination.

Degrees Offered

UNDERGRADUATE

The college offers programs leading to the baccalaureate degree and 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 or physical education and recreation provide optional 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.

The Department for Instructional Services offers a program in the area of training for paraprofessional (teacher aide) positions. Presently training is offered in the areas of mathematics, early childhood, and reading.

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, school psychology, and consultation may fulfill program requirements leading to the
Specialist in Education (EdS) in Student Personnel and Guidance. Students may also earn graduate credit toward the specialist's 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, special education teachers, reading specialists, school psychologists, speech and language pathologists and audiologists, and other specialists. For specific graduate programs see the Wichita State University Graduate School Bulletin.

Policies

ADMISSION

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, achieve a 2.00 grade point average, and have a grade of C or higher in Eng. 101 or 102, or a statement of proficiency from the Department of English.

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 check
   (d) computer awareness instruction
(2) complete 50 semester hours of University credit
(3) maintain 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

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 grade point average falls below 2.00. 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 2.00, and they will remain on probation until they achieve a cumulative grade point average of 2.00. Students who fail to earn at least a 2.00 for any semester on probation may be dismissed for poor scholarship.
Students may not 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 re-enroll only with the special permission of the Admissions, Exceptions, and Retention Committee.

**BUREAU OF EDUCATIONAL PLACEMENT**

Through the Bureau of Educational Placement, Wichita State provides job placement assistance for students and alumni desiring positions with schools and other educational agencies. A total of 15 semester hours at WSU and an overall grade average of 2.25 are required to apply. A registration fee of $2.00 for currently enrolled full-time students and $5.00 for part-time students and alumni is assessed. Application forms are obtainable 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 2.00 grade point average. Admission to the student teaching semester requires an overall grade point average of 2.50 and 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 teacher education representative 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.

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.)

Course work in some specialized fields can be started or completed at the
undergraduate level. Those interested in the following fields should contact an adviser in the College of Education: special education and school psychology; 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.

GENERAL EDUCATION
A total of 50 hours of general education courses is required for teacher certification, including the following requirements for graduation.

I. Basic Skills (12 hours)
   1. 6 hours of English composition—Eng. 101 and 102*
   2. 3 hours of speech—Speech 111 or 112*
   3. 3 hours of mathematics—Math. 109, 111, 112, or 211

II. General Education (30 hours)
   1. At least 3 hours of literature, linguistics, speech, or foreign language in Division A plus at least 6 additional hours in this division†
   2. At least 12 hours in Division B†
   3. At least 9 hours in Division C†
   4. At least 9 hours of the 30 must be in General Studies courses

III. Electives to complete the required 50 hours

Note: (a) No courses from the student’s major department may be counted in the general education area; (b) courses must be taken in at least two departments in each division outside the division containing the student’s major; and (c) one course in multicultural studies must be selected. Students may select Min. Stud. 100 or IS 456.

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
   In Division A, at least 3 hours of literature, linguistics, speech, or a foreign language are required plus a minimum of 3 additional hours in this division.

*Must have a grade of C or better in Eng. 101 and 102 and in Speech 111 or 112.
†The divisions contain the following departments and programs:
Division A: Humanities and the Fine Arts (excluding performance and studio arts courses):
American studies, art education, art history, dance, English, German/Russian (excluding basic first-year language courses), graphic design, history, interdisciplinary liberal arts and science program, linguistics, music education, music performance, musicology-composition, philosophy, religion, romance languages (excluding basic first-year language courses), speech communication, studio arts, and women’s studies.
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, instructional services, journalism, management, marketing and small business, military science, minority studies, personnel services, physical education, political science, psychology, social work, sociology, and urban studies.
Division C: Mathematics and Natural Sciences:
Aeronautical engineering, basic emergency medical care, biological sciences, chemistry, communicative disorders and sciences, computer science, cytotechnology, dental hygiene, electrical engineering, engineering, engineering technology, geology, health sciences, industrial education, industrial engineering, mathematics, mechanical engineering, medical technology, nurse clinician, nursing, physical therapy, physician’s assistant, physics, and respiratory therapy.
In Division B, at least 6 hours of psychology are required. Within Division B, or in the Professional Education section, either Psych. 314, 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 233, Educational Psychology: Child Development, 3 hours
- CDS 327, Clinical Methods in the Public Schools, 3 hours
- CDS 447, Speech and Language Practicum in the Public Schools, 5 hours
- CDS 448, Public School Speech and Language Programs, 2 hours
- Electives in special education (3-9 hours) to be selected in consultation with an adviser.

In the Professional Education section, or in Division B, either Psych. 314, Child Psychology, or IS 233, Educational Psychology: Child Development, must be taken.

Elementary Education

I. General Education

Students majoring in elementary education must meet the requirements in the General Education Program, as well as the following requirements in their 50-hour program.

1. In Division A, an American, English, or foreign literature course is required.
2. In Division B, Psych. 111 is required.
3. In Division C, Math. 501 and both a biological science and a physical science are required.
4. Within the general education hours or within Area III of the Professional Education section, one course in multicultural studies must be selected.

II. Professional Education

Area I. (12-14 hours)

1. IS 232, Introduction to Professional Education, 2 hours.
2. IS 231, Teacher Education Lab (health examination, English and mathematics competency examinations, and audiovisual and computer equipment use check), 0 hours.
3. The following course sequence must be followed.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>IS 233, Educational Psychology: Child 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>
<tr>
<td>IS 433, Educational Psychology: Learning and Evaluation</td>
<td>3</td>
</tr>
</tbody>
</table>

Area II. (34 hours)

The following requirements must be met.*

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>IS 319, Language Arts in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>IS 321, Science in Elementary Education</td>
<td>3</td>
</tr>
<tr>
<td>IS 406, Social Studies in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>IS 420, Reading in the Elementary School</td>
<td>3</td>
</tr>
</tbody>
</table>
IS 421, Teaching Methods and Instructional Materials for Elementary Reading ........................................ 3
IS 444, Mathematics in the Elementary School ................................................................. 3
IS 446, Elementary Education Student Teaching Seminar ........................................ 1
IS 447, Student Teaching in the Elementary School ......................................................... 13
or
IS 448, Student Teaching in Elementary/Early Childhood School .................. 13
IS 453, Classroom Dynamics .............................................. 2

Area III. (26-28 hours)

Division A (15-18 hours)
Art—Art Ed. 210, Art Fundamentals for the Classroom Teacher
Career education—IS 746, Introduction to Career Education, and IS 747, Curriculum Development in Career Education
Children’s literature—IS 316, Children’s Literature
Growth and development—IS 728, Growth and Development I, and IS 729, Growth and Development II (for early childhood and middle school emphasis only)
Health and nutrition
Industrial education
Language development
Literature for adolescents—IS 616, Literature for Adolescents
Multicultural education—IS 456, Multicultural Education
Music—Mus. Ed. 351, Music Fundamentals for the Classroom Teacher; Mus. Ed. 352, Music Methods for the Classroom Teacher; and Mus. Ed. 606, Music Methods for Early Childhood Education

Division B (8-13 hours)
Special Education—IS 601, Introduction to Exceptional Children, is required.
Suggested areas: a. Educational psychology
   b. Foundations of education
   c. Early childhood
   d. Middle school
   e. Library science
   f. Innovative practices in education
   g. Special education
   h. Cooperative education.

Secondary Education

I. General Education
Students majoring in secondary education must meet the requirements in the General Education Program as well as the following specific requirements within their 50-hour program.
1. Within the 9 hours stipulated in Division A, students must select at least 3 hours of American, English, or foreign literature.

*It is recommended that no more than two methods courses be taken in any one semester.
2. In Division B, Psych. 111 is required.
3. Within the General Education or the Professional Education sections, one course in multicultural studies must be selected.

II. Professional Education

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

III. Secondary Teaching Major

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.
3. Professional education
   a. IS 232, Introduction to Professional Education, 2 hours.
   b. IS 231, Teacher Education Lab (health examination, English and mathematics competency examinations, and audiovisual and computer equipment use check), 0 hours.
   c. The following course sequence must be followed.

Courses

<table>
<thead>
<tr>
<th>Course</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 (MITEC):

<table>
<thead>
<tr>
<th>Course</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>
</tbody>
</table>

Student Teaching—Secondary School *

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>IS 455, Advanced Methods of Secondary Teaching</td>
<td>1</td>
</tr>
<tr>
<td>IS 456, Multicultural Education (Optional)</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>
</tbody>
</table>

For majors in industrial education, music, physical education, foreign languages, and business education:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>IS 433, Educational Psychology: Learning and Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>IS 442, Special Methods in Teaching</td>
<td>4</td>
</tr>
</tbody>
</table>

Student Teaching—Secondary School *

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>IS 456, Multicultural Education (Optional)</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>
</tbody>
</table>

TEACHING FIELDS

The major is generally made up of not fewer than 30 semester hours. (For specific exceptions see mathematics, language, and the combined curricula

* See specific listing of course numbers under Instructional Services—Secondary Student Teaching.
programs.) Students may elect one 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 College of Education adviser to be sure they meet certification requirements. A check sheet of all requirements 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 counselor 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 elect 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

**Minors Only**

Accounting
American Studies
Anthropology
Geography

**Music**

Natural sciences—biological *
Natural sciences—physical *
Physical education
Physics
Political science
Psychology ✩
Social studies *
Sociology ✩
Spanish ✩
Speech

**Minors Only**

Geology
Journalism
Philosophy
Religion and philosophy §

**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.

* Needs no minor if a 50-hour field major is outlined in consultation with an adviser from the College of Education.

† A major in psychology, sociology or economics must be accompanied by a minor in history or political science.

‡ 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.

§ Religion must be combined with philosophy on a minor—no more than 8 hours of religion will count toward a degree.
Business Education

Secondary business teachers in Kansas will be certifiable in several business subjects.

Major. Course requirements for a major in business education are Acctg. 210 and 220; DS 350 and 495; Econ. 201-202 and 231; Fin. 340; Mgmt. 330, 360, and 681; Mkt. 300; typewriting (Bus. Ed. 138, 237), shorthand (6 hours)*; Bus. Ed. 300, 204, 136, 203 and 260, and CS 200, 211 or 205.

Minor. For a business education teaching minor, students must take Acctg. 210 and 220; Bus. Ed. 138 and 237; and 9 hours, including one upper-division course, from the following: accounting, business law, economics, finance, management, marketing, personnel, shorthand, or word processing.

* 15 hours of accounting may be substituted for shorthand.

Natural Sciences—Biological

Teachers in Kansas schools are required to have 50 hours in the field of science. A teacher who qualifies under this provision may also teach general science. Requirements for a major listed below include the general graduation requirements in mathematics and science for the College of Education.

Major. Requirements for a natural sciences—biological major are Biol. 203, 204, 416, 502, 520, 524, plus 5 hours of upper-division biological sciences. Chem. 123, 124, 533, and 534, or the equivalent, and either a physics or geology option consisting of Phys. 213 and 214 or Geol. 111 and 312 are needed.

Minor. A teaching minor in the natural sciences—biological requires Biol. 203, 204, 416, at least 4 hours of upper-division biological sciences, 5 hours of chemistry or physics, and Geol. 312. 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—Physical

The teaching requirements set forth under the natural sciences—biological field apply to the physical sciences as well. Requirements for the major listed below also include general graduation requirements in mathematics and science for the College of Education.

Major. Requirements for a natural sciences—physical major are Biol. 203 and 204; Chem. 123 and 124; Geol. 302; Phys. 213 and 214; and 10 hours from the following three areas, including at least 5 hours from one department: chemistry, geology, or physics. (Specific course prerequisites must be met.) The following courses are recommended in order to teach in these specific areas:
Chemistry—Chem. 533 and 534
Earth science—Geol. 111, 312, and 300G
Physics—Phys. 551 and 516
Astronomy—Phys. 195G, 196, and 198 or 601.

Minor. A teaching minor in the natural sciences—physical consists of at
least 24 hours including Biol. 102G, Chem. 111, Phys. 213, Geol. 302, and 6 additional hours from physical sciences. 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 or minor requirements only if they select additional hours equal to those taken to satisfy both the major and minor requirements.

**Social Studies**

All social studies majors at the secondary level will be certifiable in five teaching areas. These areas are history (either United States or world), political science, and three of the following: anthropology, economics, geography, or sociology.

**Major.** A major in history requires the following:

1. History (20 hours) Students choose either a or b, United States or world history.
   - a. United States history—20 hours of course work centering on United States history, excluding Hist. 131 and 132, History of the United States
   - b. World history—20 hours of course work centering on world history, excluding Hist. 101G and 102G, History of Western Civilization
2. Political science (12 hours)—Pol. Sci. 121, American Politics; Pol. Sci. 232, Basic Ideas in Political Theory; and 6 hours selected with adviser
3. Anthropology (6 hours)—Anthro. 124, General Anthropology, and 3 hours selected with adviser
4. Economics (6 hours)—Econ. 201, Principles of Economics I, and 3 hours selected with adviser
5. Geography (6 hours)—Geog. 125, Principles of Geography, and either Geog. 201, Physical Geography, or Geog. 210, World Geography
6. Sociology (6 hours)—Soc. 211, Introduction to Sociology, and 3 hours selected with adviser.

**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 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 PhD 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, audiology, or deaf education. 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 audiology, and CDS 457 and 458 are required for students wishing to qualify as audiologists in the public schools. CDS 785 is also required for all students on either an undergraduate or graduate level.

Undergraduate students may major in communicative disorders and sciences in either the College of Education or Fairmount College of Liberal Arts and Sciences. Most students take the program in the College of Education, but those wishing to prepare themselves exclusively for employment in community speech and hearing clinics or hospitals may enroll in Fairmount College of Liberal Arts and Sciences. In either case, all students must satisfy the general education requirements of the University. Students in the College of Education must select certain courses from the General Education Program that will satisfy teacher certification requirements. These are stated under general requirements at the beginning of the College of Education section of the Catalog.

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 111, 132, 214, 216, 218, 220, 315, 318, 322, 417, 431, and 525. 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, 725, 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 111, 132, 214, 216, 218, 220, 315, 318, 322, 417, 431, 441, 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 111, 132, 214, 216, 218, 220, 315, 318, 561, 540, 747, 760, and 785. In addition, selected methods courses in elementary education will be chosen in consultation with an adviser.
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 10 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.

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.

Students desiring to complete requirements for the department's clinical certification program should make formal application during enrollment in CDS 220 or no later than the second semester of their 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 111, 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 665, 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 at Wichita State, may be arranged with the Department of Communicative Disorders and Sciences. A minimal fee is charged.

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 111. 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 communication. Speech production and perception are studied at physiologic and acoustic levels, with primary emphasis on acoustics. Prerequisites: sophomore standing and prior or concurrent enrollment in CDS 111. D 12 216 0 1220

218. Phonetics: Theory and Application. (3). Cross-listed as Ling 218. The study of physiologic, acoustic and perceptual specification of speech sounds and a survey of current phonological theory and applications to speech improvement. Extensive practice is given in transcription of speech. Prerequisites: sophomore standing and prior or concurrent enrollment in CDS 111. D 12 218 0 1220

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 the light of current psychological and linguistic thought. Special emphasis is given to the development of phonology, morphology and syntax. Prerequisites: sophomore standing and prior or concurrent enrollment in CDS 218. D 12 220 0 1220

Courses for Graduate Students Only

828. Advanced Speech and Hearing Science. (3). 3R; 3L. 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. Prerequisite: CDS 216 or equivalent or departmental consent. D 12 828 1 1220

830. Laboratory Instrumentation. (3). 2R; 3L. An introduction to clinical and research instrumentation used in the 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 1 1220

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 1220

900. Communicative Sciences: Physio-
logical Phonetics. (3). 3R; 2L. A critical review of pertinent research concerning the physiological bases of speech: respiratory, laryngeal, resonatory and articulatory functions. Prerequisite: CDS 828. D 12 900 1 1220

910. Communicative Sciences: Acoustic Phonetics. (3). 3R; 2L. A critical review of research dealing with the acoustical characteristics of speech. Also included are speech perception and techniques of speech synthesis and analysis. Prerequisite: CDS 828. D 12 910 1 1220

920. Neurophysiology of Communication. (2). Special lectures, seminars, clinical demonstrations and independent study. D 12 920 0 1220

**SPEECH AND LANGUAGE PATHOLOGY**

**Lower-Division Courses**

111. Introduction to Speech and Language Pathology and Audiology. (3). Orientation to the professional disciplines of speech and language pathology and audiology, their place among the professions; communicative problems commonly found and treated and the impact of these problems on the individual; and general approaches to habilitation. D 12 111 0 1220

132. Introduction to Clinical Management in Speech and Language Pathology and Audiology. (2). 2R; 2D. An overview of management procedures for communicative disorders in relation to other educational disciplines. Techniques for observation of speech-language pathology management and audiology diagnostics will be presented, with opportunities for practice in a clinical setting. Twenty-five hours of observation of clinical procedures in a speech-language-hearing clinic are required. Prerequisites: prior or concurrent enrollment in CDS 111 and medical clearance. D 12 132 1 1220

**Upper-Division Courses**

315. Articulation Disorders: Diagnosis and Clinical Management. (3). Contrast of normal and deviant articulation. Etiology, evaluation and methods of modification are also included. Prerequisites: CDS 214 and 218. D 12 315 0 1220

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. Interviewing procedures with parents, clients, and professional workers and the use of clinical equipment are discussed. Ongoing observation of training programs of two clients in a clinical setting is required. Prerequisites: CDS 220 and junior standing, and medical clearance. D 12 318 1 1220

322. Clinical Management of Speech and Language Disorders. (3). 3R; 3L. Supervised application of techniques with simpler problems; observation of more difficult communicative disorders and an introduction to assessment and language intervention techniques. Forty-five hours of direct observation and practicum are required. Prerequisites: junior standing, CDS 315, and medical clearance. D 12 322 1 1220

397. Clinical Methods in the Public Schools. (3). Organization, administration and professional relationships in public school speech and language management programs on the elementary and secondary school levels. Emphasis is given to procedures and materials for surveying, scheduling, writing IEP's; therapeutic management, 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 1220

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 professor. Prerequisites: CDS major with junior or senior standing who is eligible for the Emory Lindquist Honors Program. D 12 400H 9 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 practicum. Prerequisites: junior or senior standing. CDS 315, CDS 318, prior enrollment in CDS 322, departmental consent one semester prior to enrollment, and medical clearance. D 12 417 2 1220

120
447. Speech and Language Practicum in the Public Schools. (5). Half-time participation in a public school speech and language management program under the guidance of a certified clinician and a college supervisor. Prerequisites: senior standing; CDS 327, 417, 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 or Audiology. (1-3). 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

525. 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 junior standing and CDS 214. D 12 525 0 1220

700. Cleft Palate: Evaluation and Clinical Management. (3). Methods of evaluating and modifying articulation and resonance in cleft palate individuals. The role of 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 and hearing disorders; their identification and treatment; and consideration of the role of health and educational 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, laryngectomy, stuttering, cerebral palsy and hearing impairment. Not open to students majoring in CDS. Credit in both CDS 111 and 705 is not allowed. D 12 705 0 1220

720. Stuttering: Diagnosis and Clinical Management. (3). A review of current theories on the etiology and development of the disorder. Behaviorally based diagnostic procedures for children and adults are covered, as are methods for clinical management and real-life generalization, including procedures for parent and client interviewing and counseling. Opportunities for observation and demonstration therapy are provided. D 12 720 0 1220

725. Language Disabilities in Children. (3). Psycholinguistic and cognitive approaches to language disabilities in children. Practical application of language assessment procedures, interpretation of results and methods of language intervention are covered. Prerequisite: CDS 111 or 705, 220 or departmental consent. D 12 725 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 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

Courses for Graduate Students Only

805. Adult Aphasia: Evaluation and Clinical Management. (3). Review of historical and contemporary literature; standard tests for evaluation of communicative disorders in aphasia and procedures for planning rehabilitation regimes for adults. Prerequisite: prior or concurrent enrollment in CDS 710. D 12 805 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 speech-related 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). Presentation of current techniques of case history taking and interviewing as they apply to speech, language, hearing, learning and behavior disorders in handicapped children and adults. Procedures employed in ongoing and terminal counseling are considered. D 12 815 0 1220

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820. Examination Methods in Speech and Language Pathology. (3). 3R; 3L. Appraisal and differential diagnostic techniques in speech and language pathology. A weekly diagnostic practicum in communicative disorders is held, with experiences in report writing and follow-up procedures provided. Prerequisites: medical clearance and terminal semester 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. Prerequisites: CDS 725 or departmental consent. 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 procedure. D 12 825 9 1220

833. Clinical Process in Speech-Language Pathology. (2). A clinical process approach to developing competence in a supervised practicum setting. Emphasis is given to the objectives of clinical training, development of clinical skills, tools for process analysis, intervention outcome analysis, and an introduction to the supervisory process. Corequisite: must be taken concurrently with CDS 834. D 12 833 0 1220

834. Beginning Graduate Practicum in Communicative Disorders. (1). 1R; 3L. Supervised application of diagnostic and/or clinical management techniques with children and adults presenting communicative disorders. Introduction to supervised practicum at the graduate level. Clinic and practicum procedures are stressed in the lecture portion of the course. Fifty hours of practicum are required. Intended for students in their first semester of full-time graduate studies. Prerequisites: CDS 417 or equivalent, CDS 447 or equivalent, departmental consent, and medical clearance. D 12 834 2 1220

835. Graduate Practicum in Communicative Disorders. (1-3). 3-9L. Supervised application of diagnostic and/or clinical management techniques with children and adults presenting communicative disorders. Fifty hours practicum for each hour of credit is required. Repeatable. Prerequisites: CDS 834 or equivalent, departmental consent and medical clearance. 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 audiological 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 214 and 216. and at least junior standing. D 12 531 1 1220

441. Beginning Practicum in Audimetrics. (1). 1R; 4L. Introduction to supervised practicum and the application of audimetric techniques in clinical situations. Lecture stresses clinical and practicum procedures. Four hours of audimetric 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 audiology program under the guidance of a certified clinician and a college supervisor. Prerequisites: CDS 327, 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 audiology experiences in public schools; demonstration of applied audiology skills; counseling on the elementary and secondary school levels. To be taken concurrently with CDS 457. D 12 458 9 1220

540. Introduction to Audiologic Technique. (3). 3R; 2L. Techniques and procedures for administering the basic audiological test battery and screening tests for various age levels and the interpretation of audimetric results. Calibration and maintenance of audimetric equipment. Prerequisite: CDS 431 and at least junior standing. D 12 740 1 1220

Courses for Graduate/Undergraduate Credit

747. Rehabilitative 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 maximal usage of amplification are discussed. Speech reading and auditory training are studied as methodologies for dealing with speech and language deficits by utilizing auditory and visual cues. Prerequisite: CDS 431. D 12 747 0 1220

875. Supervised Practicum in Rehabilitative and Diagnostic Audiology. (1-3). IR; 3-9L. Supervised experience in the teaching of speech, language, speech reading and listening skills to deaf or hard of hearing children and adults. Supervised experience in the testing of hearing. Three to four hours practicum per week are required for each hour of credit. Repeatable. Prerequisites: CDS 431, prior or concurrent enrollment in CDS 747, departmental consent one semester prior to enrollment, and medical clearance. D 12 785 2 1220

Courses for Graduate Students Only

850. Supervised Practicum in Audiometrics. (1-3). IR; 3-9L. Application of audiometric techniques in clinical situations. Experience is gained in complete patient management, counseling and rehabilitation follow-up, when appropriate. Three to four hours of practicum per week are required for each hour of credit. Repeatable. Prerequisites: medical clearance, departmental consent and CDS 441 and 540. D 12 850 2 1220

855. Auditory Evaluation of Infants and Children. (3). 3R; 1L. Demonstration and practice in assessing auditory functioning of infants and children through 48 months of age. Report writing and parent counseling, as well as a study of appropriate instruments and procedures, are included. Prerequisites: CDS 540 and medical clearance. D 12 855 1 1220

860. Hearing Aids. (3). 3R; 2L. The history and function of hearing aids. The measurement and significance of the electroacoustic characteristics, principles and procedures for the selection and recommendation of specific hearing aids for individual hearing losses, hearing aid orientation and counseling related to various age categories are covered. Prerequisite: CDS 540. D 12 860 1 1220

865. Advanced Clinical Audiology. (3). 3R; 2L. Diagnostic and rehabilitative procedures in the audiology clinic. Techniques and procedures for the administration and interpretation of special audiological tests, including acoustic impedance and evoked auditory response measurements, are included. Prerequisite: CDS 540. D 12 865 1 1220

870. Seminar in Audiology. (2-3). Review of recent developments and research, with attention given to industrial audiology and environmental noise problems. Prerequisite: CDS 540. D 12 870 9 1220

875. Physiologic Measures of the Auditory and Vestibular Systems. (3). 3R; IL. Techniques and procedures for administration and interpretation of physiologic tests of the auditory and vestibular systems, including electrocochleography (ECoG), auditory brain stem response (ABR), electronystagmography (ENG), and acoustic reflex. Test administration practicum is included. Prerequisites: CDS 540, 735 and 710 (may be taken concurrently). D 12 875 1 1220

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 12 561 0 1220

760. 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 parti-
cipate in the Cooperative Education program. D 12 281 2 1220

Upper-Division Courses

481. Cooperative Education. (1-8). A course offered to allow students to participate in the Cooperative Education program. D 12 481 2 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 3 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 is made of research procedures utilized in the fields of communicative science 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 communication 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 3. 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, directed 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

895. Thesis Research. (1-2). Repeatable, but total credit hours counted toward degree requirements must not exceed 2. D 12 895 4 1220

899. Thesis. (1-2). Repeatable, but total credit hours counted toward degree requirements shall not exceed 2. 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 rehabilitation 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). IR; 3-12L. Supervised internship in one or more of the following sections: Advanced Practicum in Client Management, Advanced Practicum in Clinical Supervision, Advanced Practicum in Academic Instruction, Advanced Practicum in Research and Advanced Practicum in Clinical and Program Administration. This course is intended for 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 specialized content areas in speech and language pathology, audiology or speech sciences. Repeatable. Prerequisites: advanced standing and instructor's consent. D 12 990 3 1220


The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R; 2L means 4 hours of lecture and 2 hours of lab.
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 the 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 26-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. 110, Chem. 103, Phys. 111, and Psych. 406. 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.

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 occupationally oriented laboratory activities to reinforce the student’s understanding of how man

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and care 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 rotation, projection of solids, 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 processing methods 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 thereof. 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 products of the metal-working industry; lab experience in sheetmetal, benchmetals, forging, founding, welding and machine tools. D 11 230 1 0839

240. Woodwork I. (3). 2R; 3L. A study of the use and care of hand and power tools, methods of finishing, wood technology and an overall view of the woods 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, thermoforming, 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. 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. 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, and patent drawings—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 sheetmetal industry and an introduction to basic machine tool operations. Prerequisite: Ind. Ed. 320. * 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. The methods of hot working metals, including forging, foundry and arc, acetylene and tungsten inert gas welding are included. 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

351. Power Mechanics II. (3). 2R; 3L. A 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 moldings; 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 building construction, metalworking, cabinetmaking and plastics tooling. The course provides depth of conceptual knowledge and psychomotor skills. Repeatable with advisor's consent. Prerequisites: Ind. Ed. 112, 113 and 170.* D 11 370 3 0839

380. Directed Study in Power and Energy. (1-4). A directed study dealing with content related to trade and occupational titles such as auto mechanics, electronics, electrical wiring and hydraulics. This course provides depth of conceptual knowledge and psychomotor skills. Repeatable with advisor's consent. Prerequisites: Ind. Ed. 112, 113 and 180.* D 11 380 3 0839

381. Electronics I. (3). 2R; 3L. A basic study of electronics, including the function of components, DC and AC theory, vacuum tube characteristics and applications of power supplies. Experimentation and project construction are included. Prerequisite: Ind. Ed. 280.* D 11 381 1 0839

384. Electronics III. (3). 2R; 3L. Course includes the theory, instrumentation and application of semiconductors in electronic circuitry. Emphasis is placed on the utilization of transistors and newly developed semiconductors. Prerequisite: Ind. Ed. 381.* D 11 384 1 0839

390. Directed Study in Visual Communications. (1-4). A directed study dealing with content related to trade and occupational titles in drafting, photography, printing, production illustration and architecture. This course provides depth of conceptual knowledge and psychomotor skills. Repeatable with advisor's consent. Prerequisites: Ind. Ed. 112, 113 and 190.* D 11 390 3 8000

426. Woodwork IV. (3). 2R; 3L. Advanced work for specialists in the woodworking field, with emphasis placed on problems growing from the needs of the student. Prerequisite: Ind. Ed. 341.* D 11 426 1 0839

429. Drafting IV. (3). 2R; 3L. Advanced study for drafting students, with emphasis on problems growing from the needs of students based on past performances and progress. Complete dwelling and machine problems, with special emphasis on industrial practices and procedures, are included. Prerequisite: Ind. Ed. 328.* D 11 429 1 0839

443. Methods of Teaching in the Comprehensive General Shop. (3). 2R; 3L. Preparation for teaching industrial education in the comprehensive general shop. Emphasis is placed upon theory, organization and operation of a comprehensive general shop program. Offered spring semester only. Prerequisite: departmental consent. D 11 443 1 0839

450. Metals IV. (3). 2R; 3L. Fundamentals of bench work and basic operations of lathes, mills, grinders, shapers and drills. Prerequisite: Ind. Ed. 331.* D 11 450 1 0839

457. Power Mechanics IV. (3). 2R; 3L. Advanced study in the power mechanics field, with emphasis placed on problems growing from the needs of the student. Prerequisite: departmental consent. D 11 457 1 0839

463. Plastics IV. (3). 3R; 3L. Advanced problems in production techniques. Extrusion, rotational casting and foaming are included, and recent developments and experimental work are explored. Prerequisite: Ind. Ed. 362.* D 11 463 1 0839

481. Cooperative Education. (1-8). A course offered to allow students to participate in the Cooperative Education program. D 11 481 2 0839

485. Electronics IV. (3). 2R; 3L. Motors and generators; synchros and synchro-control systems; servocontrol devices and systems; industrial measurement and control systems; introduction to microwaves and microwave oscillators; microwave transmitters, microwave duplexers and antennas; amplifiers and microwave mixers; microwave receivers; multiplexing; radar detection and navigation systems. Prerequisite: Ind. Ed. 384.* D 11 485 1 0839

Courses for Graduate/Undergraduate Credit

500. Industrial Field Studies. (1-4). An in-depth analysis of industrial concepts from the perspective of an industrial employee. A comprehensive written paper conceptualizing research and development, finance, marketing, production, and industrial relations is 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 perceptivity. 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 planning 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. (1-8). A course designed to develop knowledge and competence related to curricular and methodological innovations in industrial education. The content is designed to satisfy those 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). Directed reading and research under the supervision of a graduate instructor. 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 instruction. The course includes a study of programmed instruction, systems approach to instruction, instructional television, projected media, motion films, computer-assisted instruction, learning resource centers and other pertinent topics. Students are involved in planning and preparing instructional material using systematic procedures. Prerequisite: departmental consent. D 11 840 0 0839

860. Seminar in Industrial Education. (1-3). Innovations and critical analysis of contemporary problems in industrial arts and vocational education with directed reading and research. Repeatable. D 11 860 9 0839

Instructional Services

The Department of Instructional Services offers a program in the area of training for paraprofessional (teacher aide) positions. Presently, training is offered in the areas of mathematics, early childhood, and reading. The 15-hour program sequence consists of the following courses: IS 100, 101, 102, 103, 104, 105, 106, 107, 108 and 109.

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 higher education and 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 100, 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 0891

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 material 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, are administered the English and mathematics competency 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 what goes on in formal education. Teaching as a profession, the school as an organization, the nature of the curriculum, human relations aspects of education and career options outside of public schools are the major topics studied. Twenty hours of field experience in the schools is 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, 2.0 grade point average, and IS 232. Repeatable for credit. 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 adviser'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 secondary or elementary student teaching. D 21 453 0 0801

456. Multicultural Education. (3). Exami-
nation of concepts of race, racism, culture, social class, oppression, cultural pluralism and their implications for education generally and the classroom specifically. 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, 2.0 grade point average, and IS 232. Repeatable for credit. 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 10 to 14. D 21 620 0 0829

621. Curriculum/Instruction Alternatives for Middle Level Education. (3). An exploration into the development of alternative curricular organizations and instructional strategies for better meeting the needs of preadolescents in grades 5 through 9. 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 in human relations and group dynamics based on involvement in various group activities. D 21 718 0 0829

745. Utilizing the Print Media in Classrooms. (3). Explores various ways the print media may be utilized to teach critical thinking skills, propaganda analysis, communicative skills through word study and writing practice, and improved reading through speed and comprehension practice. Special stress is placed upon the utilization of the daily newspaper as a supplement to other materials in teaching the various school subjects. Preparation of teaching materials for the school classroom is also emphasized. D 21 745 0 0803

746. Introduction to Career Education. (3). An introduction to the philosophical consideration of career education. Participants examine the concepts of career education and explain means whereby the concepts can be infused into the existing curricula. Experience-based activities related to career opportunities in the local business-industrial sector and postsecondary educational programs are offered in addition to the preparation of curricula materials. D 21 746 0 0829

747. Curriculum Development in Career Education. (3). Designed to assist school personnel in the development of a K-14 scope and sequence for a curricular design that considers the principles of 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). See WS 752. Designed for elementary and secondary school teachers. Repeatable with adviser'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 occupa-
tional opportunities and the influence of powered flight on modern society. D 21 755 0 0899

785. Instructional Media. (3). Selection, use and production of educational media. Includes instructional design, media planning skills, visual literacy, slide show production, design and production of transparencies, basic photography, audio recording and mixing, video tape recording, and the operation of instructional audio-visual equipment. Student assignments involve the design and production of materials for teaching. D 21 785 0 0899

789. Values Clarification Education. (3). An introduction to one approach to values education. Students develop competence with values clarification strategies, valuing techniques and the essential skills for valuing. Dealing with value-laden issues in the school curriculum is emphasized. D 21 789 0 0829

Courses for Graduate Students Only

838. Curriculum Alternatives. (3). An examination of curriculum models that are alternatives to the traditional curriculum and the socioeconomic, political and psychological factors that motivate their development. Attention is given to a comparison of historical and contemporary models for the curriculum. D 21 838 0 0829


862. Presentation of Research. (1-2). A project submitted in thesis manuscript form. Repeatable for a maximum total of 2 hours of credit. Prerequisite: IS 860. D 21 862 4 0824

875-876. Master's Thesis. (2-2). Prerequisite: IS 860. D 21 875 4 0824; D 21 876 4 0824

890. Special Problems in Education. (1-4). Directed reading and research under supervision of a graduate instructor. Prerequisite: departmental consent. D 21 890 3 0802

Courses for Graduate/Undergraduate Credit

760. Parent Education for Preschool Teachers. (3). An introduction to ways of working with parents of preschool children and an analysis of formal and informal approaches, with emphasis on the teacher's role in developing these procedures. Prerequisite: IS 761 or instructor's consent. D 21 760 0 0823

761. Early Childhood Education. (3). An introduction to the problems and philosophy of educating children in the preschool years. D 21 761 0 0823

762. Methods and Materials in Preschool Education. (3). The study of teaching methods for the teacher of the preschool child and the preparation of materials to enhance the learning experiences of these children. Prerequisite: IS 761 or instructor's consent. D 21 762 0 0823

763. Teacher/Child Relations. (3). Designed to assist the student in developing the necessary skills for effective communication with children from birth to age nine. Emphasis is placed upon helping the child build a positive self image and a positive relationship with others. D 21 763 0 0823

764. Day-Care Services. (3). Instructional methods and operational procedures for day-care center workers. D 21 764 0 0823

Course for Graduate Students Only

870. Research and Contemporary Influences in Early Childhood Education. (3). Analysis of current early childhood education research with an in-depth study of contemporary programs influencing the education of young children. D 21 870 0 0823

College of Education/Instructional Services 131
INSTRUCTIONAL SERVICES—EDUCATIONAL PSYCHOLOGY

Lower-Division Course

233. 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

Upper-Division Courses

333. 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

433. 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

Courses for Graduate/Undergraduate Credit

534. 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 333. D 21 534 0 0822

700. Understanding Statistics in Research Literature. (1). Designed to increase understanding of statistical information in journal articles and other evaluative documents. Assumes no previous knowledge of statistics. D 21 700 0 0824

704. Introduction to Educational Statistics. (3). An introduction to statistics, including measures of central tendency, measures of variability, correlation, chi square, median test, t test, correlated t test, and one-way and two-way analysis of variance. D 21 704 0 0824

728. Growth and Development I: Infancy and Early Childhood. (3). The growth of the infant and young child from birth to approximately age 5 in the areas of physical, cognitive, psychosocial and moral development. Not open to students who have taken Ed. Psych. 730 (no longer offered). Prerequisite: IS 233 or 333 or instructor's consent. D 21 728 0 0822

729. Growth and Development II: Later Childhood. (3). The growth of the child from age 5 through age 11-12 in the areas of physical, cognitive, psychosocial and moral development. Not open to students who have taken Ed. Psych. 731 (no longer offered). Prerequisite: IS 233 or 333 or instructor's consent. D 21 729 0 0822

730. Growth and Development III: Adolescence. (3). Adolescent growth and development in the areas of physical, cognitive, psychosocial and moral development. Prerequisite: IS 233 or 333 or instructor's consent. D 21 730 0 0822

731. Growth and Development IV: Adults and Aging. (3). Cross-listed as Geron. 731. The process of adult growth and development as well as the process of aging and death in the areas of physical, cognitive, psychosocial and moral development. Prerequisite: IS 233 or 333 or instructor's consent. D 21 731 0 0822

732. Behavior Management. (3). Presentation and utilization of psychological principles and techniques for dealing with developmental behavior and learning patterns. Emphasis is on the preschool and elementary-school age child. Prerequisite: IS 233 or departmental consent. D 21 732 0 0818

Courses for Graduate Students Only

800. Principles and Applications of Educational Psychology. (3). A critical examination of the major topic areas traditionally defined as educational psychology. After examination of basic paradigms and strategies of the discipline, students apply them to such areas as instructional practices and design, classroom management and discipline, etc. Prerequisite: IS 233, or 333, or 433 or instructor's consent. D 21 800 0 0822

801. Introduction to Educational Research. (3). An introduction to research in education. Included in the course content are: (1) a survey of current educational research, (2) the nature of research methodology, (3) the preparation of research reports and (4) criticism of current research. D 21 801 0 0824

measurement and evaluation in the cognitive, affective and psychomotor domains. D 21 811 0 0825

819. Social Psychology of Education. (3). A critical study of the individual in social interaction in a variety of educational settings. Application of theory and research to school-related issues and problems. D 21 819 0 0822

820. Learning Theory for Teachers. (3). Applications of some major learning theories and learning principles. Prerequisite: IS 801 or departmental consent. D 21 820 0 0822

823. Experimental Design in Educational Research. (3). A consideration of sampling theory, design for testing hypotheses about populations from samples, testing correlation coefficients, means and difference between means, simple factorial designs, designs involving matched groups, designs involving repeated measure of the same group and analysis of covariance. Prerequisite: IS 704. D 21 823 0 0824

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 0829

321. Science in Elementary Education. (3). Encompasses the areas 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 292 and 233. D 21 420 0 0830

421. Teaching Methods and Instructional Materials for Elementary Reading. (3). A competency-based course with an independent 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 one free hour two days a week from 4:30 to 5:30 p.m. Prerequisite: 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 learning. Specific attention is given to current curriculum practices, materials and evaluation technique. 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, planning school programs and assuming responsibilities of a teacher. Prerequisites: IS 319, 321, 406, 420 and 444 and concurrent enrollment in IS 447 or 448 and 453. D 21 446 2 0829

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, 321, 406, 420 and 444. Students must also be enrolled in IS 446 and 453. Prerequisites may be waived for equivalent experience with departmental consent.

The student teaching semester is required of all students working toward a degree certificate in elementary education. Every student wishing to receive the certificate must file an application with
the coordinator of laboratory experiences. Application for the fall semester must be filed by February 15 and for spring semester by September 15. Applications may be secured in Room 107, Corbin Education Center. The only exception ever granted to the requirement of 13 semester hours is to the transfer student who has taken student teaching elsewhere, or students who hold other certificates, or who may have taught a number of years. Any deviations from established grade point averages and other regulations must be approved by the College of Education’s Committee on Admissions, Exceptions and Retention. D 21 447 2 0829

448. Student Teaching in the Elementary/Early Childhood School. (13). The student teaching program provides half-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, 321, 406, 420 and 444 and 9 semester hours of early childhood education. Prerequisites may be waived for equivalent experience with departmental consent. Note deadline dates 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 made to the coordinator of laboratory experiences prior to the semester in which the student intends to enroll. The assignment for student teaching begins with the opening of the public schools, and the student is expected to follow the public school calendar for a semester. Prerequisite: IS 231. D 21 449 2 0829


459. Student Teaching in the Elementary School—Art. (3). Prerequisites: art major and IS 231. D 21 459 2 0829

Courses for Graduate Students Only

802. Classroom Reading Diagnosis. (3). Designed to emphasize the understanding and use of reading survey tests, group diagnostic reading tests, criterion referenced assessment programs and appropriate teacher constructed tests. Will include the 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 concern in reading through the examination, review and sharing of pertinent reading research. Prerequisites: IS 705 and any other graduate reading course. D 21 804 9 0830

821. Elementary Reading Practicum. (3). Designed to provide practicum experience in delivering developmental and corrective reading instruction in the classroom setting. Prerequisites: IS 705 and 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 846 or equivalent. D 21 842 2 0830

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 0 0823

705. Introduction to the Reading Process. (3). Designed to acquaint students and teachers with all of the aspects of current reading theory and pertinent reading research to point out the possibilities of applying this theory and research to the actual teaching 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 emphasis is on extending literature and media through the reading environment, language arts, the arts, and creative expression. Prerequisite: junior, senior or graduate standing. D 21 734 0 0802

750. 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 21 750 0 0802
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 as a means of developing desired elementary learner characteristics. D 21 845 0 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 practice is included. Prerequisite: IS 705 or equivalent. D 21 846 2 0830

849. Seminar in Reading. (3). Designed to examine the organization and administration of reading programs. Additional time is spent investigating pertinent research in the area of reading instruction. Prerequisite: IS 705 or equivalent. D 21 849 9 0830

852. Improvement of Instruction in Language Arts. (3). Recent developments in the teaching of language arts in elementary and/or middle school grades; problems, concerns, methods, materials, and research related to listening and to oral, written, and visual communication, including "school" writing and creative writing. Students can select particular concepts and related skills for special attention. Excellent for teachers who want to review and apply developments during the past five years. D 21 852 0 0829

854. Improvement of Instruction in Social Studies. (3). A study of recent changes in social studies curriculum and instruction designed to investigate strengths and limitations of various approaches. Competency in teaching for concept development, dealing with value-laden issues, and teaching for inquiry are stressed. An inquiry-centered learning environment emphasizes personalizing the social studies curriculum for children. Alternative teaching strategies and complementary evaluative techniques are reviewed and practiced. D 21 854 0 0829

856. Improvement of Instruction in Mathematics. (3). For teachers in service. Consideration of recent trends in subject matter content and teaching guides to improve understanding of meanings, vocabulary and mathematical concepts. Instructional methods and materials are included. Prerequisite: IS 444 or departmental consent. D 21 856 0 0833

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 grade eight. Prerequisite: IS 321 or departmental consent. D 21 858 2 0834

859. Seminar in Elementary Education. (3). D 21 859 9 0802

863. Trends in Theories of Instruction. (3). A course using materials from public school work groups and from research journals to examine the development of modern practices in elementary education. D 21 863 0 0829

INSTRUCTIONAL SERVICES—FOUNDATIONS OF EDUCATION

Lower-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 school 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

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R; 2L means 4 hours of lecture and 2 hours of lab.
Courses for Graduate 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: 9 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. Requirements for librarians in the various types of schools are described below.

Elementary Schools. Librarians must have a valid certificate for teaching in the elementary school and a minimum of 24 semester hours of library science and audiovisual courses.

Junior and Senior High Schools. Librarians must have a valid certificate for teaching in the secondary schools and a minimum of 24 semester hours of library science and audiovisual courses.

Courses for Graduate/Undergraduate Credit

707. School Library Media Center Cataloging and Classification. (3). The principles of cataloging and classification are studied, and students will learn how to apply the Dewey Decimal classification system and Sears subject headings. Descriptive cataloging, types of entry, and filing rules are also 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, 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 will stress the organization of non-book materials, introduce the Library of Congress classification system, and survey 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 will 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 2 1601

790. Special Problems in the School Library Media Center. (1-3). Directed reading and research. Prerequisite: departmental consent. D 21 790 0 1601

INSTRUCTIONAL SERVICES—SECONDARY EDUCATION

Lower-Division Courses

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. Prerequisites: 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, 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


F—The Teaching of Foreign Languages. Methods of teaching foreign languages, based on the audiolingual approach and applied linguistics contrasted with traditional methods. Laboratory techniques, transition into reading and writing, 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, and Bus. Ed. 237, Acctg. 210 and 220. D 21 442 2 0829

454. General Methods of Secondary Teaching. (3).

A—Art (may be taken as Art Ed. 516)
D—Speech and Dramatic Art
E—English
J—Social Studies
R—Science and Mathematics

Preparation for teaching in secondary schools. Develops skills in lesson planning, methods of teaching, organizing classroom activities. Some public school classroom teaching will be incorporated into this course. Prerequisites: IS 433, 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
R—Science and Mathematics

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 assignment. 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 semester, and enrollees must arrange to meet from 8 a.m. to 5 p.m. daily and to be available for selected evening programs throughout the semester.

Prerequisites: senior standing, IS 231, 232, 333 and departmental consent.

For specific areas see IS 462 through 472.

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 231. D 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

471. Student Teaching—Science/Mathematics. (7).
Prerequisite: IS 231. D 21 471 2 0829

472. Student Teaching—Business Education. (7).
Prerequisite: IS 231. D 21 472 2 0829

Courses for Graduate/Undergraduate Credit

616. Literature for Adolescents. (3). Extensive reading of literature in all genres consistent with studies of adolescents' reading interests, abilities and responses to literature. Prerequisite: IS 705 or 770, and 802 or equivalent. D 21 771 2 0830

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, review 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 include a variety of management tools and formats. D 21 831 0 0829

832. Secondary School Curriculum. (3). Develops the student's ability to describe, analyze and evaluate curriculum models and programs. Particular attention is paid to the social, psychological and philosophical 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). Focuses 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

INSTRUCTIONAL SERVICES—SPECIAL EDUCATION

Courses for Graduate/Undergraduate Credit

601. Introduction to Exceptional Children. (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 practices are presented. This course fulfills recertification requirements for teachers and serves as an introductory course in exceptionality for special education majors, administrators and school psychologists. Prerequisite: IS 233 or 333. D 21 601 0 0811

602. Introduction to the Gifted. (3). Emphasis on recognition and education of the gifted child. Prerequisite: IS 233 or 333. D 21 602 0 0811

603. Methods for Teaching the Gifted. (3). Planning for a qualitatively differentiated curriculum to meet the unique needs of the gifted learner will be stressed. A variety of suitable program models including grouping, acceleration, guidance and combinations of these will be explored. Prerequisite: IS 602 or instructor's consent. D 21 603 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 techniques and teaching approaches pertinent to students in special education settings, particularly LD and EMR. Prerequisite: instructor's consent. D 21 702 0 0830

742. Learning and Behavior Disorders. (3). A study of the incidence, classification, etiology, intellectual, personal, social and developmental characteristics of the learning disordered child. Current research, parental concerns and historical development of the educational approaches to learning and behavioral disorders are examined. Prerequisite: instructor's consent. D 21 742 0 0818

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 mentally retarded child. D 21 744 0 0810

749. The Emotionally Disturbed. (3). A study of the incidence, classification, etiology, personal, social and developmental characteristics of the emotionally disturbed. Current research, parental concerns and development of educational approaches are examined. D 21 749 0 0810

Courses for Graduate Students Only

805. Seminar for Reading and LD Teachers. (3). Designed to provide a forum for practicing reading and LD teachers in which to explore common interests, concerns, research and teaching techniques related to reading. Prerequisite: certification in reading or LD. D 21 805 9 0830

840. Psychology of Exceptional Children. (3). A study of the conceptual and theoretical formulations, empirical evidence and research concerning behavioral characteristics of exceptional children. D 21 840 0 0808

841. Program Development in Special Education. (3). Examination of factors in classroom organization and 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

847E and F. Practicum and Internship in Education: Learning Disabilities. (3-6). Prerequisite: instructor's consent. D 21 847E and F 2 0808
8471 and J. Practicum and Internship in Education: Mental Retardation. (3-6). Prerequisite: instructor’s consent. D 21 8471 and J 2 0808

847K and L. Practicum and Internship in Education: Emotional Disturbance. (3-6). Full-time participation in a class for emotionally disturbed children/adolescents supervised by a master teacher and university professor. Emphasis is on applied teaching methods for the mildly and severely disturbed, formal-informal psychological assessment devices, curriculum strategies, behavior management and prescriptive remediation for academic deficits. Prerequisites: instructor’s consent, IS 749, and 888. D 21 847K and L 2 0808

847M. Practicum and Internship in Education: Gifted. (3). Supervised teaching experiences with gifted learners. Applied teaching approaches will be stressed. The course will provide opportunities to apply various theoretical, structural and technological methodologies related to the education of the gifted learner. Repeatable for a total of 6 hours. Prerequisites: instructor’s consent and IS 603. D 21 847M 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 in the self-contained and resource classroom. D 21 868 0 0808

885. Curriculum for the Learning Disabled—Secondary. (3). Curriculum appropriate to the learning disabled adolescent in the secondary schools (grades 7-11). Prerequisite: IS 742 or instructor’s consent. D 21 885 0 0808

887. Assessment and Analysis of the Learner. (3). The application of standardized and informal classroom teacher evaluation techniques to learning problems. Emphasis is on the application and practical development of intervention techniques based on the diagnostic profiles provided by standardized psychological and educational evaluation. Prerequisite: instructor’s consent. D 21 887 1 0808

888. Methods for Teaching Learning and Behavior Disorders. (3). Emphasis is on the theoretical and practical aspects of prescriptive instructional techniques and materials for remediation use with children who have disabilities in learning. Prerequisite: IS 742 or instructor’s consent. D 21 888 1 0818

889. Advanced Seminar in Gifted Education. (3). D 21 889 1 0808

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 acquire 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 Wichita State University as special students and thereby qualify for a commission.

Currently, university graduates who are commissioned through United States Army ROTC may serve on active duty in the United States Army for a period of three years. In special cases students may be permitted to delay entry into active duty for a period of up to three years in order to pursue graduate-level studies.

Students enrolled in ROTC may compete for scholarships which pay tuition, fees, books, supplies, as well as $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**

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. Freshmen and sophomores attend 1 conference hour each week, plus an additional 16 hours of leadership laboratory each semester (scheduled by arrangement). Enrollment in the basic course does not obligate students to enter the advanced course or for any period of military service.

The advanced course requires juniors to attend 2 conference hours per week in the fall and 3 conference hours per week in the spring; seniors attend 3 hours per week in the fall and 2 conference hours per week in the spring. Juniors and seniors must also attend the equivalent of 16 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.

Students are furnished a uniform (advanced course only) and military science texts. In addition, 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 Orienteering Team, intramural athletics, Ranger Platoon, Pershing Rifles, and Rifle Team. Participation in these activities may be applied toward leadership laboratory requirements in both basic and advanced courses.

**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 advanced course.

**Lower-Division Courses**

101. Introduction to Marksmanship. (1). IR; 1 Marksmanship Laboratory. 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). IR; 1 Leadership Laboratory. An introduction to national security policy and the use of force, governmental structure and decision making, and issues in contemporary American military affairs. D 15 113 5 1801

114. Introduction to Leadership and Management. (1). IR; 1 Leadership Laboratory. 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 included are organization of 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). IR; 1 Leadership Laboratory. 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). IR; 1 Leadership Laboratory. The mission, organization and capabilities of small units. Offensive and defensive operations, patrolling, and leader functions and responsibilities are included. D 15 224 5 1801

**Upper-Division Courses**

333. Advanced Military Tactics. (2). IR; 1 Leadership Laboratory. Military instructional techniques. Decision making at the small-unit level, problem solving within the military framework, and organization and capabilities of military units and advanced military tactics are also included. Prerequisites: basic military science course (all), or basic summer camp or military service credit and departmental consent. D 15 333 5 1801

334. Advanced Leadership Development. (3). IR; 1 Leadership Laboratory. An interdisciplinary approach to leadership theory. Provides a degree of sophistication in terminology, heightened awareness of the issues and improved understanding of the crucial factors involved in the influence act. Utilizes an action model based on the study of the individual, the individual's relationship with organizations and culminates with the interface of organizations and society. 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 included are signal communications, land navigation, tactics, weapons, Leaders 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 or departmental consent. D 15 400 5 1801

443. Theory and Dynamics of the Military Team. (3). IR; 1 Leadership Laboratory. The organization and role of divisional units, the study of company tactics and military law. Prerequisites: MS 333 and 334 or departmental consent. D 15 443 5 1801

444. Seminar in Leadership and Management. (2). IR; 1 Leadership Laboratory. Staff operations and procedures. Preparation for active duty to include roles and responsibilities of the junior officer and a leadership seminar. Prerequisite: MS 443 or 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

EDUCATIONAL ADMINISTRATION AND SUPERVISION

Courses for Graduate/Undergraduate Credit

704. 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 16 704 0 0827

715. Administration of the Community College. (3). Administration and supervision in the community college coupled with improvement of educational services in the community through continued education. Control, methods of finance, facilities, focus on individual students and evaluation of the entire process are stressed. D 16 715 0 0827

750. Experienced Administrator's Workshop. (1-2). Offers a variety of administrative topics. D 16 750 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 16 752 0 0827

Courses for Graduate Students Only

801. Introduction to Administration and Supervision. (3). An examination of the major theories of administration and their 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 16 801 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 projected work level. Prerequisite: EAS 801. D 16 810 0 0827

826. Planning, Implementation, and Evaluation of School Programs. (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 of program evaluation. Prerequisite: EAS 704. D 16 826 0 0828

828. Management and Evaluation of Alternative Programs. (3). A study of the management of organizational patterns appropriate to continuous learning, non-gradedness, individualized instruction, flexible scheduling, team teaching, large group instruction, independent study and other current trends in education. Includes evaluation of children's learning progress and evaluation of and accountability for school administrators, supervisors and teachers. Prerequisite: graduate standing. D 16 828 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 16 836 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 16 842 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 16 843 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 16 852 0 0827

854. Financial Support of Education. (3). Concepts of the financial support of education at local, state and national levels. Emphasis is on methods of taxation, budget preparation and efficient expenditures. Prerequisite: EAS 801. D 16 854 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 16 860 9 0824

862. Presentation of Research. (1-2). A project submitted in thesis manuscript form. Repeatable for a maximum of 2 hours of credit. Prerequisite: EAS 860. D 16 862 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 a group setting and activities. 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 16 871 0 0828

875-876. Master’s Thesis. (2-2). D 16 875 4 0827; D 16 876 4 0827

878. Organizational Behavior and Development. (3). An examination of applied behavioral science principles as related to the assessment, diagnosis and contemplated change in the role behavior of individuals or groups within an organizational setting. Prerequisite: departmental consent. D 16 878 0 0827

884. School Plant Design and Operation. (3). Planning new educational facilities based upon educational 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

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

946, 947, 948, 949. The Internship. (2, 3, 4, 5). Administrative assignment in educational institutions. Prerequisites: 9 semester hours of post-master’s graduate courses in educational administration and supervision and 3.0 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

954. School Business Management. (3). School budgeting processes, salary scheduling, cost accounting and purchasing procedures, and IBM programming of record systems. Prerequisites: EAS 854 and instructor’s consent. D 16 954 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. 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. Arranged on an individual basis. D 16 960 9 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 nonstudents 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 specialist 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 recertification in Kansas. The course will be individually designed by an EAS faculty member with the student and his/her school district supervisor. The course will address the needs of the student and of the district. The thrust will be to assist the student to extend basic skills relevant to a particular administrative assignment. The student must register for 3 hours of credit in EAS 991 to meet recertification requirements. Prerequisites: completion of master’s degree and departmental consent. D 16 991 2 0827

STUDENT PERSONNEL AND GUIDANCE

Lower Division Courses

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

Courses for Graduate/Undergraduate Credit

652. Student Development. (3). Training for students involved as small-group leaders. Prerequisite: DARE student leader. D 18 652 9 0826

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: SPG 652 (former 752H) 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 paraprofessional counseling. The course involves training and periodic seminars. May be repeated for a maximum of 6 hours credit. Prerequisite: departmental consent. D 18 655 9 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 personnel and guidance interests. Different preselected areas may be emphasized during a semester. Repeatable with adviser’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: SPG majors and instructor’s consent. To be taken concurrently with SPG 801. This course may not be taken concurrently with SPG 825. D 18 802 2 0826

803. Counseling Theory. (3). A study of selected theories of counseling. Prerequisite: SPG 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 delinquent 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. Guidance Services for the Elementary School. (2). Examination of the role of

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the guidance counselor and techniques appropriate to guidance services in an elementary school setting. Prerequisite: SPG 801. Recommended: SPG 805 or SPG 806. D 18 810 0 0826

820. Occupational Information. (2). The classification, collection, evaluation and use of informational materials in a guidance program. Also studied are current occupational trends and developments and theories of occupational choice. Prerequisite: SPG 801 or concurrent enrollment.* 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: SPG 801, IS 801 or concurrent enrollment.* D 18 823 0 0825

824. Techniques of Counseling. (3). Through simulated counseling situations and extensive examination of counseling case studies, techniques of counseling are examined and practiced. Prerequisite: SPG 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: SPG 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: SPG 803 or departmental consent. D 18 830 0 0826

833. Administration of Guidance Services. (3). Administration theory, with emphasis for the SPG major on relating theory to the problem of administration of guidance services. Prerequisite: 15 hours of SPG 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 SPG 870 is recommended. Prerequisites: SPG 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. Prerequisites: SPG 824, admission to the SPG program and instructor’s consent. D 18 856 2 0826

857. Seminar in Guidance. (2). Prerequisite: 15 hours in SPG sequence. D 18 857 9 0826

858. Diagnostic Testing. (2). Use of individual tests, rating procedures and behavioral techniques for the appraisal of perceptual development, 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 SPG 870 is recommended. Prerequisites: SPG 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 2 hours of credit. Prerequisite: IS 860. D 18 862 4 0826

864. Personality Assessment. (2). An introduction to projective techniques in which both clinical theory and current research are considered in relation to data from other sources, such as direct behavioral observations, rating scales, case histories and personality inventories. Concurrent enrollment in SPG 870 is recommended. Prerequisites: SPG 823 and instructor’s consent. D 18 864 0 0825

866. Practicum in Guidance Services. (2-3). Supervised practice in administration, test interpretation, group counseling and other activities of the guidance department. Prerequisites: SPG 833 and instructor’s consent. D 18 866 2 0826

867. Practicum in Group Guidance and Counseling Methods. (3). Supervised practice in group guidance and group counseling. Repeatable for 3 hours of additional credit. The second practicum must be in a different area or have a different focus from that of the first. Prerequisites: SPG 825, 856 and instructor’s consent. D 18 867 2 0826

870. Assessment Practicum. (2). Supervised experience in the administration.
scoring and interpretation of individual assessment techniques in a school, agency or institutional setting. Report writing and case consultation also are considered in terms of the information needs of the referral agent. Repeatable to a maximum of 6 hours credit if students have completed appropriate courses from the lecture-discussion portion of the assessment sequence. Prerequisites: SPG 823; concurrent enrollment in SPG 855, or 858, or 864; or successful completion of one or more of these courses or their equivalent; and instructor's consent. 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 in related areas such as special education, general education and professional psychology. Repeatable to a maximum of 4 hours. Prerequisite: SPG 801 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 creating macro- and micro-learning experience 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 8 hours. Prerequisite: 15 hours of related graduate coursework. D 18 926 9 0826

928. Seminar: Postsecondary Student Services. (2). Intensive study of issues, theories, approaches, research in topics related to postsecondary student services. Repeatable for different topics for a maximum of 8 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: SPG 803, SPG 830, 30 graduate hours, or permission of instructor. D 18 839 9 0826

946. Practicum: School Psychological Services. (3). Supervised practice in providing psychological services to children in school, clinical and community agency settings. Course requirements include at least 200 hours applied experience. Repeatable for a maximum of 6 hours. Prerequisite: 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 intervention 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: SPG 930, graduate-student status, or departmental consent. D 18 948 2 0826

977. Internship: School Psychology. (3-6). The internship is normally a part-time placement in a setting within an agency, institution or school providing psychological services to children. Course requirements include at least 120 hours applied experience. Prerequisites: SPG 946 and departmental consent. D 18 977 2 0826

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Physical Education, Health, and Recreation

Physical education majors may select the elementary, secondary, or field option specialization. They may select both the elementary and secondary specializations by completing the required hours in both specializations and by student teaching in both areas.

**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, 105A, 107A, 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 IS 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 2 hours within the area of rhythmic activities (PE 515, aerobics, ballroom dance, or folk dance of many countries).

**Field Option Specialization.** Candidates may select one of the four approved options: fitness, sport business management, safety, and athletic training. All candidates must maintain a 2.5 GPA in their major and a 2.25 overall. All candidates must have 42 hours in general education and 40 hours upper division courses.

**Fitness:** Required courses are PE 105A, 106E, 106F, 107A, 111, 115, 117, 229, 270, 328, 331, 360, 530, 533, 544, 481, 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, 530, 533, 544, 481, and 547, plus at least 31 hours of approved electives.

**Safety:** Required courses are PE 111, 117, 206, 210, 229, 270, 300, 301, 328, 331, 360, 530, 533, 544, 481, and 547, plus at least 29 hours of approved electives.

**Athletic Training A (Non-Teaching Option):** Required courses are Psych. 111, PE 111, 117, 229, 270, 328, 331, 360, 430, 432, 530, 570, 481, 547, Phys. 116, Biol. 225, 226 and HS 331, plus at least 7 hours approved electives and 1,800 clock hours under direct supervision of a Certified Athletic Trainer.

**Athletic Training B (Teaching Option):** If the candidate is not a physical education major, the following courses are required: Psych. 111, PE 111, 115, 117, 229, 270, 328, 331, 360, 430, 431, 432, 530, 570, 481, 547, HS 331, Phys. 116, Biol. 225 and 226, plus 7 hours of approved electives. If the candidate is a physical education major the following courses are required in addition to those required for the physical education major: PE 331, 430, 432, 570, Chem. 103, Phys. 111, Biol. 225, 226, 470.

**RECREATION**

Students majoring in recreation must fulfill the following requirements:
1. Completion of the following courses: PE 112, 126, 226, 302, 426, and 427.
2. Completion of 6 hours approved by the recreation coordinator in two of the following areas:
A. Physical education  
B. Music  
C. Art  
D. Dance  
E. Theater

3. Completion of 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.

AREA OF CERTIFICATION

Driver’s Education (state certification). (18 hours.) Required are Psych. 111 and PE 210, 300 and 301. Electives consist of 6 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.

SERVICE PROGRAM

Physical education activity courses carry 1 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

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 health, 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 provides the theoretical and historical background to allow students to gauge 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 0837
106. Fitness Activities. (1). D 13 106 5 0835
107. Aquatics. (1). D 13 107 5 0835
108. Combined Activities. (1). D 13 108 5 0835
110. Varsity Activities. (1). D 13 110 5 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. (2). The central objective of this course will be to take a systematic look at the phenomenon of leisure and its changing concepts, leisure behavior patterns, leisure delivery systems, and leisure’s relationship to other community support systems. 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 preselected 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 fencing. 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 5 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). IR; 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 implications, psychological considerations, concepts safety instruction and safety program development. Culminates 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). Theory, rules and mechanics of officiating major sports common to the 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 modern recreation programs. D 13 226 0 0835

229. Applied Human Anatomy. (3). IR; 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). IR; 2L. The whys and hows behind activities designed to develop and maintain the muscular and cardio-respiratory systems of the human body. Two days per week will be spent in a laboratory situation to assess fitness components and participate in an individually designed fitness program. One day per week will be 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 view. The course will investigate the historical relationship of urban recreation to the recreation movement in America. The inner city and its recreational characteristics will be examined in light of trend, recreational planning, programming, 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, fencing, golf, bowling, archery, and combatives. Prerequisites: PE 201B, PE 270, IS 442P, or departmental consent. D 13 311 1 0835

312. Methods and Techniques II. (3). Emphasis upon methods, techniques, teaching progression, analysis, and skill development. Activities covered include softball, volleyball, handball, racquetball, table tennis, soccer, basketball, and fitness activities. Prerequisites: PE 201C, PE 201D, PE 270, IS 442P, or departmental consent. D 13 313 1 0835

325. Preschool Physical Education. (3). 3R; 2L. The first of a three-course series designed for a major in physical education with an emphasis in elementary school physical education. The course content
focuses on the development of preschool children. Emphasis is placed on designing learning activities that will enhance the development of their movement awareness, motor patterns and perceptual-motor skills. The course includes 15 hours of laboratory experiences in day care centers. D 13 325 1 0835

326. Physical Education in the Primary Grades. (3). 3R; 2L. The second in the series designed for an emphasis in elementary school physical education. It focuses on developmental movement activities for children in grades K-3. The course includes 15 hours of laboratory experiences with primary school children. D 13 326 0 0835

327. Physical Education in the Intermediate Grades. (3). 3R; 2L. The final course in the series designed for an emphasis in elementary school physical education. The course assists students in developing the necessary skills to teach physical education in grades 4, 5 and 6. The course includes 15 hours in laboratory experiences with intermediate grade school children. D 13 327 1 0835

328. Kinesiology and Biomechanics. (3). The understanding of the kinesthetics and mechanics of human motion, with respect to performance of sport activities. Prerequisite: Phys. 116. D 13 328 0 0835

331. Athletic Injuries and Training Techniques. (2). 2R; 1L. Injuries common to athletic activities, emphasizing prevention, first aid, treatment and care as prescribed by the team physician. D 13 331 1 0835

336. Theory and Organization of Basketball. (2). The theory, organization, responsibilities and techniques of coaching basketball. D 13 336 0 0835

337. Theory and Organization of Track and Field. (2). The theory, organization, responsibilities and techniques of coaching track and field. D 13 337 0 0835

345. Theory and Organization of Football. (2). The theory, organization, responsibilities and techniques of coaching football. D 13 345 0 0835

360. Adaptive Physical Education. (3). Designed to assist the students in developing the necessary skills for the implementation of enjoyable physical activity into the lives of persons impaired, disabled or handicapped. In addition to classroom work, the students will participate in at least 2 hours per week in observations and physical activity with persons impaired, disabled or handicapped. Prerequisite: PE 229 or departmental consent. D 13 360 0 0818
426. Development of Recreation Delivery Systems. (3). Concepts and principles of administration and management, including planning, organization, supervision, and evaluation for a variety of recreation delivery systems. Prerequisite: senior standing. D 13 426 2 0835

427. Internship in Recreation. (8). Students are assigned to approved field experience agencies as supervisory personnel for a minimum of 40 hours per week for a 16-week session. Both the agency and the University will provide guidance and/or supervision. Prerequisite: PE 426. D 13 427 2 0835

430. Advanced Athletic Training Techniques I. (3). A study of professional relationships, pharmacology, injuries specific to the upper and lower extremities, and related training problems. D 13 430 0 0835

431. Advanced Athletic Training Techniques II. (3). A course emphasizing athletic injuries of the head, neck and trunk. Special problems, nutrition and exercise programs are also studied. Development of advanced athletic training skills. D 13 431 0 0835

432. Athletic Training Lab I, II, III, IV. (1). IL. A laboratory course designed to provide practical learning experiences in the prevention, first aid and care of athletic injuries. May be repeated. D 13 432 1 0835

481. Cooperative Education. (1-8). A course designed to allow students to participate in the Cooperative Education program. D 13 481 2 0835

Courses for Graduate/Undergraduate Credit

500. Health Education. (2-3). Health problems and organization of materials for health instruction. Individual projects are required for graduate students. D 13 500 2 0837

502. Applied Health I. (2). Introduction to public health problems and practices. Field excursions are arranged. Prerequisite: departmental consent. D 13 502 2 0837

504. Applied Health II. (2). Intensive study of selected health problems with regard to illness prevention and the present state of world health. Prerequisite: PE 502 or departmental consent. D 13 504 2 0837

515. Rhythmic Activities in the Elementary School. (2). This course is designed to teach methodology and curricular content of rhythmic activities appropriate for elementary school children. D 13 515 2 0835

530. Physiology of Exercise. (3). 3R; 1L. To provide the student with a working knowledge of human physiology as it relates to exercise. D 13 530 1 0835

533. Measurement and Evaluation in Physical Education. (3). A study of the modern practices utilized in the total evaluation of physical education programs; included in the course content: (1) basic statistical procedures, (2) evaluating students, (3) evaluating teaching and (4) a survey of measurement tools. D 13 533 0 0835

544. Organization and Administration of Physical Education Programs. (3). The organizational and administrative problems of physical education programs and the management of the physical plant. D 13 544 2 0835

547. Field Option Internship. (8). Culminating activity for students in fitness, sports business, safety or athletic training. Students will spend the equivalent of full-time employment in the appropriate agency for one full semester. Prerequisite: senior standing and departmental consent, PE 481, 2.25 overall GPA, 2.5 major GPA. D 13 547 2 0835

570. Psychology of Sport. (3). An in-depth analysis of the psychology of motor learning and its implications for the teacher-coach. D 13 570 0 0835

590. Independent Study. (1-3). Prerequisite: departmental consent. D 13 590 0 0835

750. Workshop in Education. (1-4). D 13 750 2 0835

752. Special Studies in Health, Physical Education, and Recreation. (1-3). Group study in a preselected area of health, physical education or recreation. Repeatable for credit with departmental consent. Prerequisite: departmental consent. D 13 752 0 0835

Courses for Graduate Students Only

800. Recent Literature in Health, Physical Education, and Recreation. (3). Survey and critical analysis of research and other pertinent materials in the field. D 13 800 0 0835

801. Seminar in Sports Administration. (3). This course is designed to provide the
student with a comprehensive over-view of problems relating to sports administration programs. A sample of topics covered follows: public relations, promotion, personnel management, finance, accounting contest management and travel. D 13 801 9 0837

810. Adapted Physical Education. (3). Philosophy, principles and methods of adapting physical education and recreational activities to the needs of the handicapped and the exceptional individual. Laboratory experience is provided. Prerequisite: PE 328 or departmental consent. D 13 810 1 0839

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

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 area of specialization of the sports administration program. 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 majority of WSU's engineering graduates practice in Kansas.

Faculty research has brought about new knowledge in aerodynamics, more efficient airplane design, and effective use of microcomputers in education.

The college established an engineering cooperative education program to provide students direct working experience in their fields.
Modern technological developments in engineering have brought about considerable change in the College of Engineering's curriculum at Wichita State University. The curriculum provides a vigorous, challenging experience through a broad spectrum of fundamental technical knowledge as well as courses in humanities, social sciences, communications, mathematics, and physical sciences. This balance in the curriculum prepares students for professional positions in the scientific-industrial community after the bachelor's degree or allows them to continue in graduate studies for a more active participation in research and advanced study.

The 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 curricula of the aeronautical, electrical, industrial, and mechanical engineering departments are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology. The curricula of the electrical, mechanical, and manufacturing options of the engineering technology program are accredited by the Technology 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. A program leading to the Bachelor of Engineering Technology (BET) is offered students who seek an application-oriented curriculum and plan to enter engineering support occupations.

**GRADUATE**

A Master of Science (MS) is offered in aeronautical, electrical, and mechanical engineering, and a Master of Science in Engineering Management Science (MSEMS) is offered by the industrial engineering department. A Master of Science (MS) option in industrial engineering is available under the mechanical engineering department for students interested in classical industrial engineering application.

A Doctor of Philosophy (PhD) in engineering is offered with emphasis on and applications to aircraft. Fields of specialization are aerodynamics/fluid mechanics, structures/structural dynamics, control systems, avionics, and propulsion/propulsion science. See the *Wichita State University Graduate School Bulletin* for more information about the graduate program.
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 or engineering technology option.
4. Completion of each of the following courses with a grade of C or better: (a) English 101; (b) English 102 or Speech 111 or Speech 112; (c) the mathematics course which satisfies the first mathematics requirement for the declared major or option; (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. 313 if the mathematics prerequisite has been fulfilled. Since most students in Phys. 313 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. 213. These students are then required to take Phys. 314 when they have fulfilled prerequisites for this course, which are: Math. 243 with a grade of C or better and Phys. 213 with consent of the physics department.

PROBATION AND DISMISSAL

Students are placed on probation for the next term in which they enroll if their cumulative grade point average or WSU grade point average falls below 2.00 and if they have attempted 12 hours at Wichita State University. (See Academic Information section of the Catalog for a definition of terms used.) Even though they earn a 2.00 grade point average in the term during which they are on probation, probation is not removed until their cumulative grade point average or WSU grade point average reaches 2.00.

Students are also placed on probation for the next term in which they enroll if their engineering major grade point average falls below 2.00 (the engineering major consists of the courses required by a student’s engineering department, including the core courses). Students remain on probation even though they earn at least a 2.00 engineering major grade point average in the term during which they are on probation if their cumulative engineering major grade point average does not yet meet the minimum standards. Probation is removed when the engineering major grade point average reaches the required level. Students may not be placed on probation until they have attempted 12 or more hours in their major at Wichita State.

Students on probation for not meeting either the required cumulative, WSU cumulative or the required engineering major grade point average may not enroll for more than 12 semester hours. Exceptions to this limitation may be made on the recommendation of the student’s adviser, with the approval of the student’s dean. Such exception is to be recorded by the University’s Committee on Admissions and Exceptions.

Students are subject to academic dismissal from the College of Engineering when they are on probation because their cumulative grade point average is below 2.00 as noted below. Students on probation because of a deficient cumulative grade point average may not be placed on academic dismissal for
failure to raise their average until they accumulate 12 or more attempted hours after being placed on probation. Students who fail to receive a 2.00 grade point average in these 12 or more attempted hours taken after being placed on probation will be dismissed. Students are not academically dismissed at the end of a semester unless they began that semester on academic probation.

Students are also subject to dismissal when they are on probation because their cumulative engineering major grade point average and their engineering major grade point average for the term during which they are on probation are below 2.00. Students on probation because of a deficient engineering major grade point average may not be subject to academic dismissal for failure to raise this average until they attempt three or more engineering major courses. At that time, the cumulative engineering major grade point average, including the hours for the last three or more attempted engineering major courses, is used to determine whether or not they should be academically dismissed.

Students who have failed to meet the necessary scholastic requirements and have been academically dismissed may apply to the College of Engineering Exceptions Committee for readmission consideration. It is the student's responsibility to supply the committee with sufficient reason for readmission consideration.

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 5 hours for each four week session or 10 hours during the eight week session. Students who have completed at least 24 hours at WSU with a WSU grade point average of 3.00 or higher may petition their department chairperson for permission to enroll in excess hours.

Students who are employed full or part time should, in consultation with their academic 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 on an as-available basis with departmental consent. A student may petition the chairperson of the engineering department where the course is taught for an exception to this rule.

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 non-engineering 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 students 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>
<tr>
<td>Elective distribution courses</td>
<td>Satisfied by college requirements</td>
</tr>
</tbody>
</table>

To qualify for graduation, all engineering and engineering technology students must complete each of the following courses with a grade of C 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.

At least 9 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.

* Courses must be taken in at least three departments.
** Courses must be taken in at least two departments.

General Engineering Requirements

Except for BET students, 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 ½ year of mathematics beyond trigonometry, ½ year of basic sciences, 1 year of engineering sciences, and ½ year of engineering design.

2. The equivalent of ½ 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, introductory language, and ROTC 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 engineering 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 6 hours is required in the social and behavioral sciences, and a
minimum of 9 hours in humanities and fine arts. At least 9 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 adviser.

**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>
<tr>
<td>AE 323, Engineering Mechanics: Statics</td>
<td>3</td>
</tr>
<tr>
<td>AE 373, Engineering Mechanics: Dynamics I</td>
<td>3</td>
</tr>
<tr>
<td>EE 382, Electrical Dynamics</td>
<td>4</td>
</tr>
<tr>
<td>ME 400, Fluid and Heat Flow</td>
<td>4</td>
</tr>
<tr>
<td>ME 398, Thermodynamics I</td>
<td>3</td>
</tr>
</tbody>
</table>

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 25 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.

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, C, or D 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

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* All courses in the *Wichita State University Catalog* sequence of courses (courses required for graduation
designated by a course number) are considered as required courses for a student's major. In technical elective
courses, a course will be considered a major if taken in the department in which the student is majoring.
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 providing 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/computer engineering, 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 adviser 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 cosponsored by an engineering adviser and an adviser from the student's specialty 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) or the Bachelor of Arts (BA) in Fairmount 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 adviser.

**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 work and study periods between the freshman and senior years. The two most typical plans are illustrated in the table below.

<table>
<thead>
<tr>
<th>Year</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester</td>
<td>F</td>
<td>S</td>
<td>Su</td>
<td>F</td>
<td>S</td>
</tr>
<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>

C indicates in college  W indicates at work

The above 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 2.5 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: the basic requirements for admission include successful completion of 30 hours toward an engineering degree and approval by the appropriate faculty sponsor. May be repeated. Grade is credit/no credit. E 10 281 A 2 0901

281P. 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. Students enrolling in Engr. 281P must enroll concurrently in a minimum of 6 hours of course work including this course in addition to a minimum of 20 hours per week at their co-op assignment. Prerequisites: the basic requirements for admission include successful completion of 30 hours toward an engineering degree and approval by the appropriate faculty sponsor. May be repeated. Grade is credit/no credit. E 10 281 P 2 0901

481A. Co-op Education. (1). This course provides the student the opportunity to obtain practice in application of engineering principles by employment in an engineering-related job integrating course work with a planned and supervised professional experience. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and Cooperative Education coordinators. 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 at least two units of Engr. 281A and approval by the appropriate faculty sponsor. E 10 481 A 2 0901

481P. Co-op Education. (1). This course provides the student the opportunity to obtain practice in application of engineering principles by employment in an engineering-related job integrating course work with a planned and supervised professional experience. Individualized programs must be formulated in consultation with, and approved by, appropriate faculty sponsors and Cooperative Education coordinators. Students enrolling in Engr. 481P must enroll concurrently in a minimum of 20 hours per week at their co-op assignment. Prerequisites: successful completion of at least two units of Engr. 281P 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 Courses

101. Introduction to Computing Methods. (1). Introduction to computing methods and FORTRAN programming, utilization of Digital Computing Center facilities, application of computers to technological problems and familiarization with engineering laboratories offered for Cr/NCr only. E 10 101 1 0901

College of Engineering 161
125. Introduction to Engineering Concepts. (2). 4L. An introduction to the orderly approach to problem solving used in engineering by guiding the student through a comprehensive design project. Emphasis is put on problem formulation and solution techniques as they are required in the design project. Prerequisites: freshman standing with 1½ units of high school algebra. 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 non-technologists 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 non-engineering majors; no credit is given toward any major in engineering. Prerequisite: upper-division standing. E 10 300G 0 0901

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

410. Professional Development I. (3). A course to review engineering fundamentals in conjunction with the topics covered in the Engineer-in-Training Examination and does not satisfy credit requirements for engineering degree. Prerequisite: engineering degree or instructor’s consent. Offered for credit/no credit only. E 10 410 0 0901

Course 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, projective and the hidden line problem. Animated movies, computer-aided design and instruction are included as well as applications. Prerequisites: Math. 344, EE 199 or equivalent or AE 327, or equivalent. E 10 565 1 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 up to a maximum of 36 hours. Prerequisite: admission to doctoral aspirant status. E 10 976 4 0901

990. Advanced Independent Study in Engineering. (1-3). Arranged individual, independent study in specialized content areas in engineering under the supervision of a faculty adviser; repeatable toward the PhD degree. Prerequisites: advanced standing and departmental consent. E 10 990 4 0901

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, light-weight 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 aeronautical 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

### 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. 111, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 242 and 243, Calculus I and II</td>
<td>10</td>
</tr>
<tr>
<td>Phys. 313 and 315, University Physics I</td>
<td>5</td>
</tr>
<tr>
<td>Engr. 125, Introduction to Engineering Concepts *</td>
<td>2</td>
</tr>
<tr>
<td>IE 110 and 213, Engineering Graphics I * and II *</td>
<td>4</td>
</tr>
</tbody>
</table>

### Sophomore

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speech 111, Basic Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Math. 311, Introduction to Linear Algebra</td>
<td>1</td>
</tr>
<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. 314, University Physics II</td>
<td>4</td>
</tr>
<tr>
<td>AE 323, Engineering Mechanics: Statics</td>
<td>3</td>
</tr>
<tr>
<td>AE 324, Introduction to Aeronautical Engineering</td>
<td>2</td>
</tr>
<tr>
<td>AE 327, Engineering Digital Computation</td>
<td>2</td>
</tr>
<tr>
<td>AE 333, Mechanics of Deformable Solids I</td>
<td>3</td>
</tr>
<tr>
<td>AE 373, Engineering Mechanics: Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>ME 398, Thermodynamics I *</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and fine arts or social and behavioral sciences electives†</td>
<td>3</td>
</tr>
</tbody>
</table>

### Junior

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME 350, Materials Engineering *</td>
<td>4</td>
</tr>
<tr>
<td>ME 400, Fluid and Heat Flow *</td>
<td>4</td>
</tr>
<tr>
<td>AE 424, Aerodynamic Theory</td>
<td>4</td>
</tr>
<tr>
<td>AE 532, Propulsion</td>
<td>3</td>
</tr>
<tr>
<td>Engr. 565, Computer Graphics *</td>
<td>3</td>
</tr>
<tr>
<td>EE 382, Electrical Dynamics *</td>
<td>4</td>
</tr>
<tr>
<td>Natural sciences electives</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and fine arts or social and behavioral sciences electives †</td>
<td>8</td>
</tr>
</tbody>
</table>

College of Engineering/Aeronautical 163
### Upper-Division Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>AE 512, Experimental Methods in Aerodynamics</td>
<td>2</td>
</tr>
<tr>
<td>AE 514, Flight Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>AE 525 and 625, Flight Structures I and II</td>
<td>6</td>
</tr>
<tr>
<td>AE 608, Systems Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>AE 628, Airplane Design</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and fine arts or social and behavioral sciences electives</td>
<td>6</td>
</tr>
<tr>
<td>Technical electives</td>
<td>12</td>
</tr>
</tbody>
</table>


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 controls, centers of gravity, and moments of inertia. Prerequisites: Math. 243 and Phys. 313, or equivalent, which may be taken concurrently. E 11 323 0 0921

#### 324. Introduction to Aeronautical Engineering. (2). IR; 2L.

Introductory course in Aeronautical Engineering. The study of atmosphere, historical development of science of aeronautics, aircraft and aerodynamic nomenclature, non-dimensional 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 light plane flight demonstrations. Prerequisites: AE 323 and 327. E 11 324 0 0902


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

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* Out-of-department engineering courses.

† Nine hours of General Studies courses must be included.

‡ A minimum of 7 credit hours must be in engineering courses selected from other than the aeronautical engineering department with the approval of the student's adviser.
unaccelerated flight, for take-off and for climb. Weight/power/altitude relations. Ceiling determination and the time-to-climb. Range/endurance trade off. Not acceptable as a technical elective for the BS in aeronautical engineering. Prerequisite: AE 420C or departmental consent. E 11 420D 0 0902


Courses for Graduate/Undergraduate Credit


525. Flight Structures I. (3). Stress analysis of flight vehicle components. Prerequisites: AE 324, AE 333, Math. 550 and ME 350, both of which may be taken concurrently. E 11 525 0 0902.


532. Propulsion. (3). Theory and performance of propellers and reciprocating, turbojet, turboshaft, ramjet and rocket engines. Prerequisite: ME 400. E 11 532 0 0902.

560. Selected Topics in Aeronautical Engineering. (1-3). Prerequisite: departmental consent. E 11 560 0 0902.


625. Flight Structures II. (3). 2R; 3L. Strength analysis and design of flight vehicle components. Special projects in structural analysis and design. Prerequisite: AE 525. E 11 625 0 0902.


633. Mechanics of Deformable Solids II. (3). The course is an extension of AE 333. Typical topics studied are transformation of stress and strain in three dimensions, noncircular 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 11 633 0 0921.

664. Field Analysis. (3). Potential theory: applications of the equations of Poisson and Helmholtz and of the diffusion and wave equations to various field and flow phenomena. Analysis of representative problems is also made. Prerequisite: ME 400. E 11 664 0 0921.

675. Selected Topics in Aeronautical Engineering. (1-3). Prerequisite: departmental consent. E 11 675 0 0902.

676. Selected Topics in Engineering Mechanics. (1-3). Prerequisite: departmental consent. E 11 676 0 0921.

677. 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.


702. Jet Propulsion. (3). Analysis of jet propulsion devices; study of cycles; effect of operating variables; presentation of problems of installation, operation and instrumentation. Prerequisite: AE 532 or equivalent. E 11 702 0 0902.

709. Flight Stability and Control. (3). Comprehensive analysis of flight dynamic stability and control and an introduction to the analysis of closed-loop flight sys-
711. Aerodynamics of Nonviscous Fluids. (3). A study of equations of motion, potential flow, conformal transformations, finite wing theory and nonsteady airfoil theory. Prerequisite: AE 424 or 420 or ME 621. E 11 711 0 0902

716. Aerodynamics of Compressible Fluids I. (3). Analysis of compressible fluid flow for one- and two-dimensional cases, moving shock waves, one-dimensional flow with friction and heat addition, linearized potential functions, method of characteristics, conical shocks and subsonic similarity laws. Prerequisite: AE 424 or AE 420 or ME 621 or equivalent. E 11 716 0 0902

731. 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 typical topics are: analysis of isotropic or 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

760. Selected Topics in Engineering Mechanics. (1-3). New or special courses are presented under this listing on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent. E 11 760 0 0921

761. Selected Topics in Aerodynamics and Fluid Mechanics. (1-3). New or special courses are presented under this listing on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent. E 11 761 0 0921

762. Selected Topics in Propulsion. (1-3). New or special courses are presented under this listing on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent. E 11 762 0 0902

773. Engineering Mechanics: Dynamics II. (3). A study of kinematics and kinetics 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 0921

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 11 801 0 0921

812. Aerodynamics of Viscous Fluids. (3). Viscous fluids flow theory and boundary layers. Prerequisite: AE 424 or 420 or ME 621. E 11 812 0 0902

822. Finite Element Analysis of Structures. (3). Analysis of structures by the direct stiffness method and comparison of methods and selected topics in 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

838. 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

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 2 hours. Prerequisite: graduate standing. E 11 878 4 0902

913. Aerodynamics of Aeroelasticity. (3). A study of thin airfoils and finite wings in steady flow and thin airfoils oscillating in incompressible flow. Extension to compressible and three-dimensional airfoils and modern methods for low aspect ratio lifting surfaces are included. 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 flows past bodies of revolution. Also included are axisymmetric method of
characteristics, hypersonic and transonic similarity, Newtonian theory, high temperature gases in equilibrium, and frozen flows and one- and two-dimensional moving shock waves. An introduction is made to separated flows and jet mixing. Prerequisite: AE 716. E 11916 0 0902

936. Theory of Plasticity. (3). Includes criteria of yielding, including plastic stress-strain relationships, and stress and deformation in thick-walled shells, rotating discs and cylinders; bending and torsion of prismatic bars for ideally plastic and strain-hardening materials. Two-dimension and axially symmetric problems of finite deformation and variational and extremum principles are included. Prerequisite: AE 731. E 11936 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 interconnection of 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 specialize in communication systems, modern control theory, computers, energy conversion, network and system theory, biomedical engineering, and general electronics.

BACHELOR OF SCIENCE DEGREE IN ELECTRICAL ENGINEERING

Sequence of Courses

Electrical engineering students must have a strong interest in mathematics and physics. As a 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 analysis or 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>Freshman</td>
<td></td>
</tr>
<tr>
<td>Eng. 101 and 102, College English I and II</td>
<td>6</td>
</tr>
<tr>
<td>Chem. 111, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 242 and 243, Calculus I and II</td>
<td>10</td>
</tr>
<tr>
<td>Phys. 313, Classical College Physics Lectures I*</td>
<td>4 or 5</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>2</td>
</tr>
<tr>
<td>Humanities and fine arts electives ‡</td>
<td>3</td>
</tr>
</tbody>
</table>

<p>| Sophomore | |</p>
<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math. 311, Introduction to Linear Algebra §</td>
<td>1</td>
</tr>
<tr>
<td>Math. 344, Calculus III</td>
<td>3</td>
</tr>
<tr>
<td>Course</td>
<td>Hrs.</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Math. 550, Ordinary Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>Phys. 314, Classical College Physics Lectures II *</td>
<td>4 or 5</td>
</tr>
<tr>
<td>AE 323, Engineering Mechanics: Statics †</td>
<td>3</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 I †</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>

**Senior**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE 585 and 595, Electrical Design Project I and II</td>
<td>2</td>
</tr>
<tr>
<td>EE 681, Electronic Circuits II</td>
<td>4</td>
</tr>
<tr>
<td>EE 682, Energy and Information Transmission</td>
<td>2</td>
</tr>
<tr>
<td>EE 686, Information Processing</td>
<td>4</td>
</tr>
<tr>
<td>EE 689, Electrical Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>Social and behavioral sciences electives ‡</td>
<td>5</td>
</tr>
<tr>
<td>Technical electives **</td>
<td>5</td>
</tr>
</tbody>
</table>

**Lower-Division Courses**

199. Engineering Computing Fundamentals. (3). 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 12 228 1 0909

228. Assembly Language Programming for Engineers. (3). An introduction to basic concepts of computer organization and operation. A study is made of machine and assembly language programming concepts that illustrate basic principles and techniques. Prerequisite: EE 199 or equivalent. E 12 228 1 0909

**Upper-Division Courses**


* One of the following must be taken: Phys. 315 or 316, or a 4-hour course from the basic science elective list.
† Out-of-department engineering courses.
‡ Nine hours of General Studies courses must be included.
§ Or any calculus-based mathematics course approved by the electrical engineering department.
** The following requirements concern technical electives:
1. In every case the program of engineering courses selected must include 33 hours of engineering science: 17 hours of design, synthesis, and systems; and 25 hours outside of the electrical engineering department. The student is responsible for seeing that these requirements are met.
2. A minimum of 9 credit hours must be within the electrical engineering department. These courses must be selected with the approval of an electrical engineering adviser.
594. Logic Design and Switching Theory. (3). 3R. An introduction to the function and application of digital integrated circuits. Combinational and sequential design techniques are covered in detail. Prerequisite: junior standing or departmental consent. May not be counted for credit toward a graduate electrical major. E 12 594 1 0909

595. Electrical Design Project II. (1). 3L. May not be counted toward a graduate electrical major. Prerequisite: EE 585 or departmental consent. E 12 595 3 0909

598. Electric Energy Systems. (3). 3R. 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 12 598 0 0909

683. Electromagnetic Field Theory II. (3). A study of radiation and transmission of electromagnetic waves. Topics include plane wave propagation in various media, normal and oblique reflections, dielectric windows, transmission through waveguides, and introduction to antennas. Prerequisite: EE 363. E 12 663 0 0909
682. Energy and Information Transmission. (2). 2R. 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 terminations, and resonant lines and stubs. Prerequisites: EE 363 and 686 or concurrent enrollment. May not be counted for credit toward a graduate electrical major. E 12 682 0 0909


686. Information Processing. (4). 3R; 3L. Properties of signals and noise; introduction to information theory; and AM, FM and pulse modulation and detection. Principles of sampling, coding and multiplexing and the organization of analog and digital systems for information processing are included. May not be counted toward a graduate electrical major. Prerequisite: EE 580. E 12 686 1 0909

689. Electrical Laboratory. (2). 4L. This course provides training in laboratory methods and in experimental design methods. It consists of selected experiments related to EE 682 and several of the other prerequisites, depending on the background of the students enrolled. Prerequisites: any two of EE 594, 588, 663, and 684. May not be counted for credit toward a graduate electrical major. Prerequisite or corequisite: EE 682. E 12 689 1 0909

694. Digital Computer Design Fundamentals. (3). An introductory but reasonably detailed study of stored program 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 systems integration. Prerequisite: EE 594 or departmental consent. E 12 694 0 0909

782. Methods of Discrete Systems Analysis. (3). A study of methods of analysis of discrete-time signals and systems. Time-domain techniques include difference equations and discrete convolution. Z-transform methods, frequency response of discrete 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 12 782 0 0909

786. 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 and pulsed and steady state sinusoidal signals are treated. Topics include line parameters and equations, signal propagation, effects of terminations, and resonant lines and stubs. Prerequisites: EE 363 and 686 or concurrent enrollment. May not be counted for credit toward a graduate electrical major. E 12 682 0 0909

790. Independent Study in Electrical Engineering. (1-3). Arranged individually, independent study in specialized content areas in electrical engineering under the supervision of a faculty member. Repeatable for credit. Prerequisite: departmental consent. E 12 790 4 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, source coding, base characteristics of microprogrammable architecture are covered, and the techniques of microprogramming are presented. The techniques are applied on the department's microprogrammable minicomputer. Prerequisites: EE 694 and 288 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 noises; linear estimation and optimal filtering; design 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 6 hours. Prerequisite: prior consent of MS thesis adviser. E 12 876 4 0909

877. Special Topics in Electrical Engineering. (3). New or special courses are presented under this listing on sufficient
878. Directed Studies in Electrical Engineering. (1-4). Repeatable toward the MS directed study option for up to 4 hours. The student must write a paper and give an oral 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, passive and active analog 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; inequality-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. Prerequisite: 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 multiloop 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

892. 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. Adjoint systems are studied in addition to Liapunov and Lagrange stability and computational approximation techniques. Prerequisite: EE 782 or departmental consent. E 12 892 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 892 or departmental consent. E 12 893 0 0909

898. Advanced Energy Systems. (3). A continuation of EE 598 with the topics treated in greater depth. Computer applications are stressed. Prerequisite: EE 598 or departmental consent. E 12 898 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; low-sensitivity design strategies; state and output feedback design; sensitivity function approach, singular perturbation and model reduction techniques; adaptive systems and near-optimal control. Prerequisites: EE 893. E 12 993 0 0909

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 3R; 1L means 3 hours of lecture and 1 hour of lab. Other courses are designated with the symbols R and D, R standing for lecture and D for demonstration. For example, 3R; 3D means 3 hours of lecture and 3 hours of demonstration.
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 select 21 hours of industrial engineering 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 133 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

<table>
<thead>
<tr>
<th>Freshman</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. 111, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 242 and 243, Calculus I and II</td>
<td>10</td>
</tr>
<tr>
<td>Phys. 311, Classical College Physics I</td>
<td>5</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>2</td>
</tr>
<tr>
<td>IE 110, Engineering Graphics I</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Math. 311, Introduction to Linear Algebra ‡</td>
<td>1</td>
</tr>
<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. 314, Classical College Physics Lectures II</td>
<td>4</td>
</tr>
<tr>
<td>AE 323, Engineering Mechanics: Statics *</td>
<td>3</td>
</tr>
<tr>
<td>AE 327, Engineering Digital Computation</td>
<td>2</td>
</tr>
<tr>
<td>AE 373, Engineering Mechanics: Dynamics I *</td>
<td>3</td>
</tr>
<tr>
<td>EE 382, Electrical Dynamics *</td>
<td>4</td>
</tr>
<tr>
<td>IE 213, Engineering Graphics II</td>
<td>2</td>
</tr>
<tr>
<td>ME 398, Thermodynamics I *</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and fine arts elective ‡</td>
<td>7</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>AE 333, Mechanics of Deformable Solids I *</td>
<td>3</td>
</tr>
<tr>
<td>IE 452, Work Measurement</td>
<td>3</td>
</tr>
</tbody>
</table>
**Course** | **Hrs.**
--- | ---
IE 556, Introduction to Information Systems | 3
IE 590, Senior Projects in Industrial Engineering | 2
Free electives | 3
Social and behavioral sciences electives § | 8
Technical electives § | 18

### 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

357. Safety Engineering. (3). Environmental aspects of accident prevention, industrial compensation and safety legislation. Fundamental concepts of occupational health and hygiene. Prerequisite: IE 354 and 355. E 13 357 0 0913

452. Work Measurement. (3). Work measurement, motion and time study, methods simplification, work sampling, predetermined time standards and time formula derivation. Prerequisite: IE 354 and 355. E 13 452 1 0913


480. Selected Topics in Industrial Engineering. (1-4). New or special course material is presented under this listing based upon sufficient student demand. Repeatable for credit. Prerequisite: departmental consent. E 13 480 0 0913

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* Out-of-department engineering courses.
† Or any calculus-based mathematics course approved by the industrial engineering department.
‡ Nine hours of General Studies courses must be included.
§ The following requirements concern technical electives:
1. A minimum of 12 credit hours of technical electives must be taken within the department.
2. A minimum of 6 credit hours of technical electives must be taken outside of the College of Engineering.
3. Technical electives must contain a minimum of 1 credit hour of engineering design.
4. Technical electives must contain a minimum of 1 credit hour of engineering science.
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 13 654 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


590. Senior Projects in Industrial Engineering. (1-3). Selection and research of a specific industrial engineering topic. Prerequisites or corequisites: IE 452 and 550. E 13 590 3 0913


654. Engineering Probability and Statistics II. (3). A study of hypothesis testing, regression analysis, analysis of variance, correlation analysis and non-parametric 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: AE 327 and IE 354. E 13 665 1 0913


720. Urban Systems. (3). Cross-listed as UA 720. 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 formulation of realistic models and solutions. Computer techniques are developed in class as necessary. Prerequisite: instructor's consent. E 13 720 0 0913

722. Simulation of Social and Administrative Systems. (3). Designed primarily for nonquantitatively trained persons working in the social and administrative areas who desire a working knowledge of simulation. No programming experience is necessary. Case studies are used extensively, and facility in one simulation language is developed. Not for graduate credit for engineering majors. 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. Queueing and Inventory Systems. (3). An analysis of the behavior of queueing and inventory systems and their interrelationships. Poisson, non-Poisson and imbedded Markov chain queueing 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 fore-
casting and scheduling by time series and probability models, smoothing techniques and error analysis. Prerequisite: IE 654 or Econ. 631. 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, computer 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. (2). The organization, design and control of production and associated staff functions. The formulation of manufacturing policies and case studies in production design are included. E 13 745 0 0913

750. Industrial Engineering Workshops. (1-4). Various topics in industrial engineering. Prerequisite: departmental consent. E 13 750 2 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 1 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


876. Thesis. (1-3). Prerequisite: consent of thesis adviser. E 13 876 4 0913

879. Seminar in Management Science. (3). Application of management science methods and models to real problems. A special project, including original case research, supervised internships or field research is assigned. Prerequisite: consent of graduate adviser. E 13 879 9 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 engineering 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.

### Model Program

#### Freshman

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<thead>
<tr>
<th>Course</th>
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<tbody>
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<tr>
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<td>2</td>
</tr>
<tr>
<td>Humanities and fine arts or social and behavioral sciences electives</td>
<td>3</td>
</tr>
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</table>

#### Sophomore

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<td>Math. 311, Introduction to Linear Algebra</td>
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<tr>
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<td>3</td>
</tr>
<tr>
<td>AE 327, Engineering Digital Computations</td>
<td>2</td>
</tr>
<tr>
<td>AE 373, Engineering Mechanics: Dynamics I</td>
<td>3</td>
</tr>
<tr>
<td>IE 213, Engineering Graphics II</td>
<td>2</td>
</tr>
<tr>
<td>ME 339, Elements of Mechanical Engineering Design</td>
<td>3</td>
</tr>
<tr>
<td>ME 398, Thermodynamics I</td>
<td>3</td>
</tr>
<tr>
<td>Science elective</td>
<td>4</td>
</tr>
</tbody>
</table>

#### Junior

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>AE 333, Mechanics of Deformable Solids I</td>
<td>3</td>
</tr>
<tr>
<td>EE 382, Electrical Dynamics</td>
<td>4</td>
</tr>
<tr>
<td>ME 350, Materials Engineering</td>
<td>4</td>
</tr>
<tr>
<td>ME 400, Fluid and Heat Flow</td>
<td>4</td>
</tr>
<tr>
<td>ME 402, Mechanical Engineering Measurements</td>
<td>3</td>
</tr>
<tr>
<td>ME 439, Mechanical Engineering Design I</td>
<td>3</td>
</tr>
<tr>
<td>ME 502, Thermodynamics II</td>
<td>3</td>
</tr>
<tr>
<td>ME 621, Fluid Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and fine arts or social and behavioral sciences electives</td>
<td>7</td>
</tr>
</tbody>
</table>

#### Senior

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>ME 503, Mechanical Engineering Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>ME 541, Mechanical Engineering Design II</td>
<td>3</td>
</tr>
<tr>
<td>ME 622, Heat Transfer</td>
<td>3</td>
</tr>
<tr>
<td>ME 641, Thermal Systems Design</td>
<td>2</td>
</tr>
<tr>
<td>ME 659, Mechanical Control</td>
<td>3</td>
</tr>
</tbody>
</table>

* Nine hours of General Studies must be included.
** Or any calculus-based mathematics course approved by the mechanical engineering department.
Upper-Division Courses

339. Elements of Mechanical Engineering Design. (3). Introduction to engineering design process; design, analysis and optimization. Basic kinematics; motion and force analysis in mechanisms such as plane linkages, gears and cams. Synthesis of plane linkages and simple cam systems. Computer applications. Prerequisites: IE 213 and AE 327 with a grade of 'C' or better, and AE 373 which may be taken concurrently. E 14 339 0 0910

350. Materials Engineering. (4). Study of important structural materials used in engineering, including metals, polymers and composites, primarily from a phenomenological viewpoint. Prerequisites: AE 333 and Chem 111, both with 'C' or better grade. E 14 350 0 0910

398. Thermodynamics I. (3). A study of the first and second laws. Thermodynamic analysis is explored as it is applied to thermal, mechanical and fluid systems. Prerequisites: Math. 243 and Phys. 313, both with 'C' or better grade, and AE 327 or EE 199, which may be taken concurrently. E 14 398 0 0910

400. Fluid and Heat Flow. (4). A study of pressure and velocity fields; kinematics of perfect and real fluids; similarity; temperature fields and heat transfer, conduction, convection and radiation, as well as an introduction to gas dynamics. Prerequisites: Phys. 314, ME 398, both with 'C' or better grades, and Math. 550, which may be taken concurrently. E 14 400 1 0910

402. Mechanical Engineering Measurements. (3). An introduction to modern measurement techniques in mechanical engineering. Prerequisites: ME 339, 400 and EE 382, all with 'C' or better grades. E 14 402 1 0910

439. Mechanical Engineering Design I. (3). Principles of mechanical design, emphasis on practice in the application of many mechanical design elements—shafts, bearings, gears, brakes, clutches, thread fasteners, etc. Topics include machine elements design, material selection, fatigue, stress concentration, statistical concepts and cost standardization. Innovative practical applications demanding integration of machine elements into a practical device. Prerequisites: ME 339, AE 333 and Math. 550. E 14 439 0 0910

450. Topics in Mechanical Engineering. (1-3). An investigation of selected phases of mechanical engineering. Prerequisite: departmental consent. E 14 450 0 0910

469. Energy Conversion. (3). Energy conversion principles and their implementation in engineering devices including thermal-mechanical, nuclear and direct energy conversion processes. Prerequisite: ME 398. E 14 469 0 0910

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 experiments 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

Qualified students may substitute ME 670 and 671.

* The following requirements concern engineering electives (12 hours required):
1. A minimum of 12 hours must be selected from the following courses: E 563, AE 508, 633, 677, 773; EE 488, 492; IE 354, 355, 558.
2. A minimum of 6 hours must be selected from the following courses: ME 450, 504, 544, 630, 705, 741, 744, 749, 751, 755, 758.
544. Environmental Engineering. (3). Theory, analysis and design of heating, ventilating and air-conditioning systems based on psychometrics, 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

548. Mechanical Engineering Projects. (1). A design, analysis or research project under faculty supervision. Problems are selected according to student interest. Prerequisites: ME 301 and senior standing. E 14 548 3 0910

621. Fluid Mechanics. (3). Continuation of fluid mechanics stem of ME 400. Analysis of steady and unsteady, incompressible and compressible, multi-dimensional flow fields with emphasis on continuity, momentum, and energy equations. Included are potential flow, boundary layer theory, and fluid machinery. Prerequisites: ME 400. E 14 521 0 0910

622. Heat Transfer. (3). A continuation of heat transfer stem of ME 400; steady and transient multi-dimensional conduction, free and forced convection, radiation, and combined heat transfer. Various analytical methods, analogies, numerical methods, and approximate solutions are discussed. Prerequisites: ME 400, and 621 (may be taken concurrently). E 14 622 0 0910

630. Biochemical Engineering. (3). Study of the physiology and biophysics of the living body from the viewpoint of basic mechanical engineering principles. Various artificial organs and life support systems are introduced and discussed. Prerequisites: ME 400 and Math. 550. E 14 630 0 1910

641. Thermal Systems Design. (2). Application of the preliminary design process for thermal systems such as building environmental systems and stationary and transportation power plants. Design projects include thermal, mechanical and economical aspects. Prerequisites: ME 400 and 502. E 14 641 0 0910

648. Mechanical Engineering Projects. (1). A design, analysis or research project under faculty supervision. Problems are selected according to student interest. Prerequisite: ME 548. E 14 648 3 0910

659. Mechanical Control. (3). Modeling and simulation of dynamic systems. Theory and analysis of the dynamic behavior of control systems, based upon the laws of physics and linear mathematics. Concern is with classical methods of feedback control systems and design. Prerequisites: ME 339 and 400. E 14 659 0 0910

662. Mechanical Engineering Practice. (2). An exercise in the practice of mechanical engineering in which students engage in a comprehensive design project requiring the integration of knowledge gained in prerequisite engineering science and design courses. Open only to mechanical engineering students in their last semester of study. Prerequisite: ME 541 and 641. E 14 662 1 0910

670. Senior Thesis I. (1). A design, analysis or research project performed under faculty direction. Enrollment is limited to mechanical engineering students who are in the last two semesters of their studies and requires recommendation by a member of the department faculty and approval of the department chairman. Prerequisites: ME 541 and 641, which may be taken concurrently, and departmental consent. E 14 670 3 0910

671. Senior Thesis II. (1). A continuation of ME 670. Prerequisite: ME 670. E 14 671 3 0910

705. Design of Engineering Experiments. (3). Study of theoretical, analytical and statistical aspects of basic engineering experiments. Theories of test planning, data checking, analysis and synthesis, and evaluation are considered. Prerequisite: departmental consent. E 14 705 1 0910

741. Nuclear Engineering. (3). Study of the fundamental aspects of nuclear physics and its application in energy production, including nuclear reaction, neutron interaction, reactor core physics, nuclear heat transfer and nuclear reactors. Prerequisites: ME 400 and Math. 550. E 14 741 0 0910
844. Advanced Environmental Engineering. (3). A continuation of ME 544, with an emphasis on building energy systems related to the design and selection of heating, ventilating and air-conditioning equipment and distribution sub-systems. Prerequisite: ME 544 or departmental consent. E 14 744 0 0910

749. Kinematics and Dynamics of Machines. (3). Analysis and synthesis of mechanisms; force analysis of machines. Prerequisite: ME 439. E 14 749 0 0910

751. Special Topics in Mechanical Engineering. (1-3). New or special courses are presented under this listing. This course may be repeated for credit when subject material warrants. Prerequisite: departmental consent. E 14 751 0 0910

755. Intermediate Thermodynamics. (3). Laws of thermodynamics, introduction to statistical concepts of thermodynamics, thermodynamic properties, chemical thermodynamics, Maxwell's relations. Prerequisite: ME 502 or departmental consent. E 14 755 0 0910

758. Computational Heat Transfer and Fluid Dynamics. (3). Numerical solutions of steady and transient heat conduction, convection, potential flow and viscous flow problems. Prerequisite: ME 621 and 622. E 14 758 0 0910

767. Theory of Rational Design. (3). Design decision techniques, including frequency, axiomatic and Bayesian formulation, statistical inference techniques, Jaynes' maximum entropy principle and error analysis. Prerequisite: departmental consent. E 14 767 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. Prerequisite: ME 622, Math. 651, or departmental consent. E 14 851 0 0910

852. Heat Transfer-Convection. (3). Free and forced convection in laminar and turbulent flow. Analysis and synthesis of heat transfer equipment are included. Prerequisite: ME 622 or departmental consent. E 14 852 0 0910

853. Heat Transfer-Radiation. (2). Analysis and synthesis of radiant heat transmission systems and components; analogous and approximate methods of solutions. Prerequisite: ME 622 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 659 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 on sufficient demand. Repeatable for credit when subject material warrants. Prerequisite: departmental consent. E 14 870 0 0910

876. Thesis. (1-4). E 14 876 4 0910

878. Directed Studies. (1-4). Repeatable as approved in the graduate school plan of study. The student must write a paper and take an oral examination on the study made. Prerequisite: departmental consent. E 14 878 4 0910

Engineering Technology Program

The program has four options: fire science technology, electrical engineering technology, mechanical engineering technology, and manufacturing engineering technology. The general academic structure of the program is as follows:

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nontechnical, University requirements</td>
<td>25</td>
</tr>
<tr>
<td>Technical courses outside the major designation</td>
<td>30</td>
</tr>
<tr>
<td>Technology courses</td>
<td>69</td>
</tr>
<tr>
<td>Technology core</td>
<td>25</td>
</tr>
<tr>
<td>Technology specialty</td>
<td>21-28</td>
</tr>
<tr>
<td>Technology electives</td>
<td>16-23</td>
</tr>
<tr>
<td>Total hours</td>
<td>124</td>
</tr>
</tbody>
</table>

Engineering technology programs are designed to prepare individuals to work at jobs that require technical competence, knowledge, and skills that are greater than those required of the craftsman or skilled tradesman but less theoretical and academic than those of the engineer. The requirements are closer to those of the engineer, since engineering technology involves the application of scientific and engineering principles in support of engineering activities.

The technology program at Wichita State is a four-year Bachelor of Engineering Technology (BET) program. The BET program requires a common technology core with courses in mechanics, thermal science, electricity and electronics, and drafting and design. Additional common course requirements are found in chemistry, physics, and mathematics (algebra, trigonometry, and calculus).

The differences between the engineering and the engineering technology programs center primarily around the mathematics content of the programs. Mathematics for the BET program begins with technical algebra and trigonometry, whereas mathematics for the engineering program begins with calculus. This significant difference is reflected throughout the required basic science, technical science, and technical specialty courses in the engineering technology program.

The design courses of the engineering technology program are concerned with the application of established design concepts developed by engineering, with prime emphasis on standard design procedures and practices.

The options are structured primarily for students who enter the program with no prior college-level study. The options, however, also allow individuals who have earned an associate degree from another institution to receive a BET degree with less than four years of additional study. The amount of credit allowed toward the BET degree for courses taken at other institutions depends upon the academic emphasis and the level of technical difficulty of the students' previous programs.

Credit earned in an ABET-accredited associate degree program should be applicable toward the BET degree in the same option area. These programs normally constitute the first two years of the four-year option. However, transfer students may have to take a second-year course that is a prerequisite for a course that is normally scheduled in the third or fourth year.

Transfer of credit earned in a program that is not ABET accredited is determined on an individual basis, with emphasis on: (1) the proportion and rigor of the mathematics, science, and technical specialty courses; (2) the
engineering and science backgrounds of the instructors who taught the transfer courses; and (3) the objectives of the program. After evaluation based upon these elements, students start in the engineering technology program at the level that is most compatible with their previously studied courses. This level can be determined by identifying through oral or written examination the student’s depth of understanding of the basic principles within the specialty option selected.

Specific requirements of the BET options are given in the following descriptions of the options.

**ENGINEERING TECHNOLOGY—GENERAL**

**Lower-Division Courses**

100. Introduction to Electricity and Electronics. (4). 3R; 3L. An introduction to electrical fundamentals, basic AC and DC circuits, motors and generators, instruments, and diode and transistor fundamentals and applications in linear and digital circuits. Linear approximate models are used in the study of the diode and transistor. Laboratory experiments are utilized to reinforce and to verify concepts discussed in the classroom. Prerequisite: Math. 110 or equivalent. E 16 100 1 0925

200. Statics, Dynamics, and Strength of Materials. (4). 3R; 3L. Introduction to the basic concepts of mechanics emphasizing the action of forces on rigid bodies and the response of those bodies to the applied forces. The first portion is devoted to the study of static or stationary bodies followed by a study of forces acting on bodies in motion (dynamics). A study of the principles of applied design. Laboratory experiments are performed to demonstrate and reinforce the basic concepts considered in the classroom. Prerequisites: Math. 110 and Phys. 213 or equivalent. E 16 200 1 0925

**Upper-Division Courses**


455. Industrial Supervision. (3). A discussion of the techniques utilized in the supervision of employees in the industrial environment. Concepts of communication and control of industrial employees are discussed in detail. Concepts of employee motivation also are discussed. Problems and techniques utilized to meet production requirements through the utilization of human resources are dealt with in detail. Prerequisite: departmental consent. E 16 455 0 0925

**ELECTRICAL ENGINEERING TECHNOLOGY OPTION**

**Sequence of Courses**

A total of 124 hours is required for a degree. A total of 40 semester credit hours must be in courses numbered 300 and above. In no case will work done in a two-year college be credited against this 40-hour requirement.

**Model Program**

<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>
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</tr>
<tr>
<td>Math. 110, Technical Algebra and Trigonometry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 251, Technical Calculus I</td>
<td>3</td>
</tr>
<tr>
<td>Engr. 125, Introduction to Engineering Concepts</td>
<td>2</td>
</tr>
</tbody>
</table>

College of Engineering/Technology 181
<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Math. 252, Technical Calculus II</td>
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</tr>
<tr>
<td>Phys. 214, General College Physics II</td>
<td>10</td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>EET 210, Electrical Circuit Analysis</td>
<td>4</td>
</tr>
<tr>
<td>EET 211, Linear Electronic Circuits</td>
<td>4</td>
</tr>
<tr>
<td>EET 214, Digital Electronic Circuits</td>
<td>4</td>
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<tr>
<td>EET 320, Electric Power and Machines</td>
<td>4</td>
</tr>
<tr>
<td>Humanities and fine arts electives *</td>
<td>3</td>
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Junior

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<tbody>
<tr>
<td>Chem. 111, General Chemistry</td>
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<tr>
<td>Eng. 210, Composition: Business, Professional, and Technical Writing</td>
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</tr>
<tr>
<td>ET 200, Statics, Dynamics, and Strength of Materials</td>
<td>4</td>
</tr>
<tr>
<td>ET 300, Thermodynamics, Heat Transfer, and Fluids</td>
<td>4</td>
</tr>
<tr>
<td>EET 330, Advanced Electrical Networks</td>
<td>3</td>
</tr>
<tr>
<td>EET electives</td>
<td>6</td>
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<tr>
<td>Social and behavioral sciences electives *</td>
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Senior

<table>
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<th>Course</th>
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<tbody>
<tr>
<td>ET 455, Industrial Supervision</td>
<td>3</td>
</tr>
<tr>
<td>EET 400 and 450, Senior Design Project I and II</td>
<td>3</td>
</tr>
<tr>
<td>EET electives</td>
<td>8</td>
</tr>
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<td>Non-EET technical electives †</td>
<td>6</td>
</tr>
<tr>
<td>Free electives</td>
<td>4</td>
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<tr>
<td>Humanities and fine arts electives *</td>
<td>3</td>
</tr>
<tr>
<td>Social and behavioral sciences electives *</td>
<td>4</td>
</tr>
</tbody>
</table>

Lower-Division Courses

101. Electrical Drafting. (2). 1R; 3L. The study and application of electrical and electronic symbols, wiring diagrams, block diagrams, electrical power diagrams, component layout, etc., with emphasis on industry standards. Prerequisites: IE 110, or equivalent, and ET 100, or equivalent, or concurrent enrollment. E 16 101 1 0925

210. Electrical Circuit Analysis. (4). 3R; 3L. The study of the various theorems and techniques used to analyze DC and AC electrical circuits. Basic computer analy-
sis techniques are introduced. Laboratory experiments are utilized to verify analysis concepts. Prerequisites: ET 100 and Math. 251 or equivalent. E 16 210 1 0925

211. Linear Electronic Circuits. (4). 3R; 3L. A study of the characteristics and applications of transistors, integrated circuits, and other solid-state devices, with emphasis on their linear operating modes. Prerequisites: ET 100 and Math. 251 or equivalent. E 16 211 1 0925

214. Digital Electronic Circuits. (4). 3R; 3L. A study of nonlinear applications, including transient, wave-shaping, switching and logic circuits utilizing solid-state components and integrated circuits. An introduction to binary arithmetic and Boolean algebra. Prerequisite: ET 100 or equivalent. E 16 214 1 0925

**Upper-Division Courses**

320. Electric Power and Machines. (4). 3R; 3L. A study of single phase and polyphase power circuits, transformers and machines, and DC machines. Prerequisite: EET 210 or equivalent. E 16 320 1 0925

330. Advanced Electrical Networks. (3). An advanced course in network analysis that stresses network theorems and the solution of time and frequency domain problems by means of transform methods. Computer analysis techniques also are utilized. Prerequisites: EET 210, or equivalent, and Math. 252, or equivalent. E 16 330 0 0925

400. Senior Design Project I. (1). The first phase of an extensive individual design and/or analytical project performed in consultation with one or more faculty advisers. This phase includes the determination of project objectives, initial research, preliminary design and parts procurement. Prerequisite: senior standing or departmental consent. E 16 400 3 0925

411. Selected Topics in Electrical Engineering Technology. (1-4). New or special courses are presented under this listing on sufficient demand. Repeatable for credit. Prerequisite: departmental consent. E 16 411 1 0925

412. Communications Systems I. (4). 3R; 3L. Fundamental concepts in electrical communications. Properties of signals and noise are introduced. Topics include amplifiers, oscillators, AM, FM, SSB, PM, transmission lines, cables, waveguides, antennas. Prerequisites: EET 211 or equivalent. E 16 412 1 0925

413. Integrated Circuits Applications. (4). 3R; 3L. Analysis, design and application of linear and digital ICs made with both bipolar and MOS technologies. Topics include operational amplifiers, comparators, D/A, A/D, phase-locked loop circuits. Prerequisites: EET 211 and 214 or equivalents. E 16 413 1 0925

414. Microprocessors. (4). 3R; 3L. A course designed to give an in-depth knowledge of microprocessor software and hardware. Exercises in designing and writing microprocessor programs, entering, executing and debugging programs are assigned. The Intel 8080 series microprocessor is the emphasized system. Prerequisite: EET 214 or equivalent. E 16 414 1 0925

415. Industrial Electronics and Controls. (4). 3R; 3L. A study of electronic components and systems found in modern industry. The concepts and components associated with open loop and closed loop control systems are emphasized. Prerequisites: EET 211, EET 214 and EET 320 or equivalents. E 16 415 1 0925

416. Electric Power Generation and Transmission. (4). 3R; 3L. A study of the components of electric power generation and transmission systems with an emphasis on the methods used in modern electric utilities. Field trips are used to enable students to observe actual installations and facilities in the vicinity. Prerequisites: EET 320 or equivalent. E 16 416 1 0925

450. Senior Design Project II. (2). The second phase of an extensive individual design and/or analytical project performed in consultation with one or more faculty advisers. This phase includes the completion and evaluation of the project. The results of the project are demonstrated and reported in oral and formal written form. Prerequisite: EET 400. E 16 450 3 0925

452. Data Communications. (3). 2R; 3L. A course designed to cover practical aspects of the electronic transmission of encoded information or data. Topics include components of data communications systems, error detection techniques, network protocols and line procedures, communication carrier facilities. Prerequisites: EET 211 and 214 or equivalents. E 16 452 1 0925

454. Microprocessor Applications. (3). 2R; 3L. A continuation of the study of microprocessors. Advanced topics include interfacing techniques, programmable peripheral chips, controllers, protocols for IEEE-488 bus, serial and parallel I/O. Prerequisite: EET 414 or equivalent. E 16 454 1 0925

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FIRE SCIENCE TECHNOLOGY OPTION

Sequence of Courses
A total of 124 hours is needed for a degree. A total of 40 semester credit hours must be in courses numbered 300 and above. In no case will work done in a two-year college be credited against this 40-hour requirement.

Model Program

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td></td>
</tr>
<tr>
<td>Eng. 101 and 102, College English I and II</td>
<td>6</td>
</tr>
<tr>
<td>Math. 110, Technical Algebra and Trigonometry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 251, Technical Calculus I</td>
<td>3</td>
</tr>
<tr>
<td>Phys. 213, General College Physics</td>
<td>5</td>
</tr>
<tr>
<td>Engr. 125, Introduction to Engineering Concepts</td>
<td>2</td>
</tr>
<tr>
<td>Engr. 127, Introduction to Digital Computing</td>
<td>3</td>
</tr>
<tr>
<td>IE 110, Engineering Graphics I</td>
<td>2</td>
</tr>
<tr>
<td>FST 133, Construction Methods and Materials</td>
<td>3</td>
</tr>
<tr>
<td>FST 135, Fundamentals of Fire Protection</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Sophomore</td>
<td></td>
</tr>
<tr>
<td>Eng. 210, Composition: Business, Professional, and Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 111, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 112, General and Inorganic Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>FST 134, Fire Detection and Suppression Systems</td>
<td>3</td>
</tr>
<tr>
<td>FST 301, Fire Hydraulics</td>
<td>3</td>
</tr>
<tr>
<td>FST 303, Water Supplied Fire Protection Systems</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and fine arts electives *</td>
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<tr>
<td>Social and behavioral sciences electives *</td>
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</tbody>
</table>

<table>
<thead>
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<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior</td>
<td></td>
</tr>
<tr>
<td>ET 100, Introduction to Electricity and Electronics</td>
<td>4</td>
</tr>
<tr>
<td>ET 200, Statics, Dynamics, and Strength of Materials</td>
<td>4</td>
</tr>
<tr>
<td>MFT 257, Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>FST 310, Hazardous Materials</td>
<td>3</td>
</tr>
<tr>
<td>FST electives</td>
<td>6</td>
</tr>
<tr>
<td>Non-FST technical electives †</td>
<td>4</td>
</tr>
<tr>
<td>Social and behavioral sciences electives *</td>
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<td>Humanities and fine arts electives *</td>
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<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior</td>
<td></td>
</tr>
<tr>
<td>ET 455, Industrial Supervision</td>
<td>3</td>
</tr>
<tr>
<td>ET 300, Thermodynamics, Heat Transfer, and Fluid Mechanics</td>
<td>4</td>
</tr>
<tr>
<td>FST electives</td>
<td>9</td>
</tr>
<tr>
<td>Non-FST technical electives †</td>
<td>7</td>
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<tr>
<td>Free electives</td>
<td>4</td>
</tr>
<tr>
<td>Humanities and fine arts or social and behavioral sciences electives *</td>
<td>4</td>
</tr>
</tbody>
</table>
Lower-Division Courses

133. Construction Methods and Materials. (3). 2R; 3L. The analysis of various building materials relative to their physical properties and their reaction to fire. The course includes the study of various building configurations and their applicability to specific hazardous industrial operations. Concepts of fire-resistant enclosures, partitions, fire walls or cutoffs are discussed as they pertain to the degree of the fire hazards present. Laboratory reports are a regular portion of the course. Prerequisite: departmental consent. E 16 133 1 0925

134. Fire Detection and Suppression Systems. (3). 2R; 3L. An introduction to detection and suppression systems used in private and public fire protection. Characteristics, economics, and applications of various systems will be discussed and the operation and maintenance will be practiced under lab conditions for selected representative systems. E 16 134 1 0925

135. Fundamentals of Fire Prevention. (3). 2R; 3L. Fire department organizations; inspections, public cooperation and image; recognition of fire hazards and development and implementation of a systematic and deliberate inspection program; survey of local, state and national codes pertaining to fire prevention and related technology. E 16 135 1 0925

Upper-Division Courses

301. Fire Hydraulics. (3). 2R; 3L. Application of the laws of mathematics and physics to properties of fluid states, force, pressure and flow velocities. Emphasis is on applying principles of hydraulics to fire-fighting problems. Prerequisites: Chem. 111 or Phys. 213 or departmental consent. E 16 301 1 0925

302. Fire-Fighting Tactics and Strategy. (3). Efficient and effective utilization of manpower, equipment and apparatus. Emphasis is placed on planning, fireground organization problem solving related to fireground decision making, and attack tactics and strategy. E 16 302 0 0925

303. Water Supplied Fire Protection Systems. (3). 2R; 3L. An in-depth analysis of water supplied fire protection systems. Specific topics of study will include (1) automatic sprinkler protection, (2) deluge systems, (3) pre-action systems, (4) fire hydrant operating criteria, (5) fire pumps and (6) stand pipes using laboratory settings. Prerequisites: FST 301 or departmental consent. E 16 303 1 0925

310. Hazardous Materials. (3). 2R; 3L. A review of basic chemical properties, storage requirements, handling precautions, laws, standards and fire-fighting practices related to hazardous materials. Prerequisite: departmental consent. E 16 310 0 0925

311. Fire Investigation. (3). 2R; 3L. Introduction to the methods and procedures which may be used to determine the point of origin and probable cause of fires. When evidence indicates incendiary origin the procedures which must be followed to obtain legal evidence, how to take, present and process such evidence and present same to a prosecutor and court. The procedures to use in interviewing witnesses in an investigation. Prerequisites: departmental consent. E 16 311 1 0925

350. Emergency Rescue Problems and Procedures. (3). A discussion of the rescue procedures required by emergency personnel to perform their job. Also covered are the specific hazards associated with natural and man-made disasters that are the results of modern, technical society. Particular emphasis is given to the application of current hardware and procedural developments in the area of emergency rescue. E 16 350 0 0925

422. Selected Topics in Fire Science Technology. (1-4). New or special courses are presented under this listing on sufficient demand. Repeatable for credit. Prerequisite: departmental consent. E 16 422 1 0925

482. Urban Fire Protection as Related to City Planning. (3). Engineering analysis and design of urban fire facilities, including water supply, fire alarm systems and the development of fire departments. So-
cioeconomic and management factors as related to city fire protection planning. Prerequisite: junior standing. E 16 492 0 0925

492. Fire Risk and Loss Management. (3). An analysis of business uncertainty; recognition of risks and their related loss potential; fire loss reduction through management control and protection systems. Assumption of risks through insurance programs. A study of security and liability as associated with condition of uncertainty. E 16 492 0 0925

498. Fire Science Research Projects. (1-3). Selection and research of current topics in the field of fire science. Presentation of results of the research in the defending of any hypotheses advanced. Prerequisite: senior standing. E 16 498 3 0925

MANUFACTURING ENGINEERING TECHNOLOGY OPTION

Sequence of Courses

A total of 124 hours is required for a degree. A total of 40 semester credit hours must be in courses numbered 300 and above. In no case will work done in a two-year college be credited against this 40-hour requirement.

Model Program

<table>
<thead>
<tr>
<th>Course</th>
<th>Freshman Hrs.</th>
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<td>Eng. 101 and 102, College English I and II</td>
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<tr>
<td>Math. 110, Technical Algebra and Trigonometry</td>
<td>5</td>
</tr>
<tr>
<td>Math. 251, Technical Calculus I</td>
<td>3</td>
</tr>
<tr>
<td>Engr. 125, Introduction to Engineering Concepts</td>
<td>2</td>
</tr>
<tr>
<td>Engr. 127, Introduction to Digital Computing</td>
<td>3</td>
</tr>
<tr>
<td>IE 110, and 213, Engineering Graphics I and II</td>
<td>4</td>
</tr>
<tr>
<td>MFT 120, Manufacturing Practices</td>
<td>3</td>
</tr>
<tr>
<td>Phys. 213, General College Physics I</td>
<td>5</td>
</tr>
<tr>
<td>Speech I, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>Social and behavioral sciences electives *</td>
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<tr>
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<td>Phys. 214, General College Physics II</td>
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<tr>
<td>Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>ET 100, Introduction to Electricity and Electronics</td>
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</tr>
<tr>
<td>ET 200, Statics, Dynamics, and Strength of Materials</td>
<td>4</td>
</tr>
<tr>
<td>MFT 240, Manufacturing Processes and Materials</td>
<td>4</td>
</tr>
<tr>
<td>MFT 257, Industrial Safety</td>
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</tr>
<tr>
<td>Social and behavioral sciences electives *</td>
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</tr>
<tr>
<td>ET 300, Thermodynamics, Heat Transfer, and Fluids</td>
<td>4</td>
</tr>
<tr>
<td>MFT 313, Production and Quality Control</td>
<td>3</td>
</tr>
<tr>
<td>MFT 352, Work Measurement and Management</td>
<td>3</td>
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<tr>
<td>MFT 355, Manufacturing Economic Analysis</td>
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<tr>
<td>Free electives</td>
<td>4</td>
</tr>
<tr>
<td>Humanities and fine arts or social and behavioral sciences electives *</td>
<td>4</td>
</tr>
<tr>
<td>Non-MFT technical electives †</td>
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</tbody>
</table>
Senior

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ET 455, Industrial Supervision</td>
<td>3</td>
</tr>
<tr>
<td>MFT 469, Technology Projects</td>
<td>4</td>
</tr>
<tr>
<td>MFT electives</td>
<td>13</td>
</tr>
<tr>
<td>Non-MFT technical electives †</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and fine arts electives *</td>
<td>6</td>
</tr>
<tr>
<td>Social and behavioral sciences electives *</td>
<td>3</td>
</tr>
</tbody>
</table>

* Not fewer than 6 hours may be taken in each division. No more than 9 hours may be taken in any one department in these divisions. In each division, courses must be taken in at least two departments. At least 9 hours of General Studies courses must be taken in these divisions. Six credit hours must be taken in 300-level courses and above.

† Electives must be selected from the following in consultation with an academic adviser in order to assure that the total group of courses taken is consistent with the goals of the student:

1. Courses from the other options for which the prerequisite requirements are met, and/or
2. Additional mathematics, computer science, or natural sciences courses for which the prerequisite requirements are satisfied, and/or
3. Stat. 360 or 370, and/or
4. Approved courses from the College of Business Administration, including Acctg. 210; Admin. 101G, 300, 360, 366, and 664; Econ. 200G, 201, 202, and 360.

Lower-Division Courses

120. Manufacturing Practices. (4). 3R; 3L.
A general survey of the manufacturing and fabricating techniques utilized in industry. Special emphasis is placed on the latest manufacturing processes utilized in American industry. Laboratory activities give the student practice in some of the basic fabrication methods. Prerequisite: Math. 110 or equivalent and IE 110 or equivalent. E 16 120 1 0925

233. Special Topics in Manufacturing Engineering Technology. (1-4). Special course offerings are presented under this listing on sufficient demand. Repeatable for credit. Prerequisite: departmental consent. E 16 233 0 0925

A technical study of the processes and materials used in manufacturing, including metal and nonmetal cutting, casting, forming, welding, testing techniques, etc. Theory, technical aspects, application and cost analysis are stressed, with laboratory experience in applications using machines. Prerequisite: MFT 120 or equivalent. E 16 240 1 0925

257. Industrial Safety. (3).
A study of safety fundamentals and their relationship to the economics of accident prevention. The requirements of industrial compensation and safety legislation are emphasized. Prerequisite: departmental consent. E 16 257 1 0925

Upper-Division Courses

313. Production and Quality Control. (3).
Application of fundamental statistics to the quality control problem emphasizing discussion of acceptance sampling and statistical control charts. Aspects of inventory control and of programmatic production planning are developed. Prerequisite: Math. 110 or equivalent. E 16 313 1 0925

315. Advanced Manufacturing Methods. (3). 2R; 3L.
A study of state-of-the-art techniques as applied to manufacturing processes such as chipless machining, advanced welding, ultrasonic processes and other new and exotic methods. Laboratory activity includes field trips to area industrial plants to observe and study actual processes in operation. Prerequisite: departmental consent. E 16 315 1 0925

352. Work Measurement and Management. (3). 2R; 3L.
The equipment and techniques of work measurement, time standardization and method simplification are developed. The organization and management of production is presented, working from the individual worker to larger organizational groups. Prerequisite: Math. 110 or equivalent. E 16 352 1 0925

355. Manufacturing Economic Analysis. (3).
A study of the effects of economic conditions and principles on the technical aspects of industrial operations. The economic influence on alternative approaches to technical problems are considered. Prerequisite: departmental consent. E 16 355 0 0925

358. Numerical Control Part Programming. (3). 2R; 2L.
Study and application of part programming methods. Manuscript programming for milling machines and lathes is included. Particular emphasis is placed on APT part programming for milling machines. Prerequisites: E 127 College of Engineering/Technology 187
433. Selected Topics in Manufacturing Engineering Technology. (1-4). New or special courses are presented under this listing on sufficient demand. Repeatable for credit. Prerequisite: departmental consent. E 16 433 1 0925

463. Production and Operation Management. (3). A study of applied methods of capacity planning, forecasting, inventory management and production scheduling. Computerized methods are covered through project assignments. Prerequisites: MFT 352 and 355 or equivalent. E 16 463 0 0925

469. Technology Projects. (4). IR; 6L. An individual project performed by a student or group of students in the area of manufacturing and/or industrial technology. On-the-job type project activity under the direction and control of a faculty adviser. Prerequisites: senior standing and departmental consent. E 16 469 1 0925

MECHANICAL ENGINEERING TECHNOLOGY OPTION

Sequence of Courses

A total of 124 hours is required for a degree. A total of 40 semester credit hours must be in courses numbered 300 and above. In no case will work done in a two-year college be credited against this 4-hour requirement.

Model Program

Course | Freshman | Hrs.
-------|----------|------
Eng. 101 and 102, College English I and II | 6
Math. 110, Technical Algebra and Trigonometry | 5
Math. 251, Technical Calculus I | 3
Engr. 125, Introduction to Engineering Concepts | 2
Engr. 127, Introduction to Digital Computing | 3
IE 110 and 213, Engineering Graphics I and II | 4
MFT 240, Manufacturing Processes | 3
Phys. 213, General College Physics I | 5

Course | Sophomore | Hrs.
-------|-----------|------
Eng. 210, Composition: Business, Professional, and Technical Writing | 3
Math. 252, Technical Calculus III | 3
Phys. 214, General College Physics II | 10
Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication | 3
ET 100, Introduction to Electricity and Electronics | 4
ET 200, Statics, Dynamics, and Strength of Materials | 4
MFT 240, Manufacturing Processes and Materials | 4
Social and behavioral sciences electives* | 3

Course | Junior | Hrs.
-------|--------|------
Chem. 111, General Chemistry | 5
ET 300, Thermodynamics, Heat Transfer, and Fluids | 4
MET 340, Machine Design | 4
MET 342, Instrumentation | 3
MET 344, Mechanical Design I | 4
MET electives | 3
Non-MET technical electives † | 3
Humanities and fine arts electives | 3
Social and behavioral sciences electives* | 3
Senior

**Course**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>ET 455, Industrial Supervision</td>
<td>3</td>
</tr>
<tr>
<td>MET 409 and 410, Mechanical Design II and III</td>
<td>8</td>
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<tr>
<td>MET electives</td>
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</tr>
<tr>
<td>Non-MET technical electives †</td>
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</tr>
<tr>
<td>Free electives</td>
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</tr>
<tr>
<td>Humanities and fine arts electives *</td>
<td>3</td>
</tr>
<tr>
<td>Social and behavioral sciences or humanities and fine arts electives *</td>
<td>4</td>
</tr>
</tbody>
</table>

* Not fewer than 6 hours may be taken in each division. No more than 9 hours may be taken in any one department in these divisions. In each division, courses must be taken in at least two departments. At least 9 hours of General Studies courses must be taken in these divisions. Six credit hours must be taken in 300-level courses and above.

**Upper-Division Courses**

340. Machine Design. (4). 3R; 3L. The application of the principles of mechanics and strength of materials to the design of shafts, cams, gears, belts, clutches, brakes and their assemblies as used in machines. Prerequisites: ET 200, or equivalent, and IE 110, or equivalent. E 16 340 1 0925

342. Instrumentation. (3). 2R; 3L. A practical course dealing with the selection, care, installation, and calibration of pneumatic, mechanical and electronic elements and systems used to sense, indicate, control and/or record such things as pressure, temperature and flow in industrial processes. Prerequisites: Phys. 214, or equivalent, and ET 100, or equivalent. E 16 342 1 0925

344. Mechanical Design I. (4). 3R; 3L. The first of three mechanical design project courses which presents proper methods of applying technical science principles to design of equipment and systems. Heating, ventilating and air conditioning equipment and fluid power components and systems are emphasized. Prerequisites: ET 200, or equivalent, ET 300, or equivalent, and IE 110, or equivalent. E 16 344 1 0925

346. Nondestructive Testing. (4). 3R; 3L. An initial course in the employment of liquid penetrant, magnetic particle, eddy current, ultrasonic and radiographic testing to locate flaws in parts and assemblies. Applications in the aerospace, chemical and petroleum industries are addressed. Prerequisites or co-requisites: MFT 240 or equivalent. Prerequisite: ET 200 or equivalent. E 16 346 1 0925

401. Kinematics and Mechanics. (4). 3R; 3L. Applied methods of velocity, acceleration and force analysis are related to the design of mechanisms. Prerequisite: MET 340 or equivalent. E 16 401 1 0925

403. Power Systems. (3). A consideration of the technology of fossil-fuel fired steam electric power plants. Prerequisites: Chem. 111 and ET 300 or equivalent. E 16 403 0 0925

409. Mechanical Design II. (4). 2R; 6L. A project course in which the student applies the proper design principles and techniques to the solution of practical design problems. Elements of structural design and of pressure vessel and piping design are presented with emphasis on adherence to applicable codes and standards. Laboratory activity may include design, modeling, fabrication and/or testing. Prerequisites: MET 340, or equivalent, and MET 344, or equivalent. E 16 409 1 0925

410. Mechanical Design III. (4). 1R; 6L. A project course in which the student applies the proper design principles and techniques to solution of practical design problems involving different areas from those chosen in MET 409. Power transmission and machinery are emphasized. Laboratory activity may include design, modeling, fabrication and/or testing. Prerequisite: MET 409. E 16 410 1 0925

444. Selected Topics in Mechanical Engineering Technology. (1-4). New or special courses are presented under this listing on sufficient demand. Repeatable for credit. Prerequisite: departmental consent. E 16 444 1 0925
— Wichita State supplies more music teachers to Kansas public schools than does any other institution
— Graphic design students participate in an intern program in which they work under the supervision of design professionals in the community
— Outstanding dance students may participate in a professional dance troupe, the Mid-America Dance Theatre
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. The long-range objectives for dance parallel those for music and art.

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*.

**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 that 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
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 2.25 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 Henrion 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, located 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 1 credit hour per semester of nonresidential studio work (such as extension or correspondence courses from accredited institutions), totaling no more than 6 hours of the last 30 or 10 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

In addition to the University's scholastic and residence requirements for graduation, candidates for the BFA in painting, printmaking, ceramics, sculpture, or graphic design must complete a total of 124 semester hours, with 43 hours from the General Education Program (given in the Academic Information—Requirements for Graduation section in the beginning of the Catalog) and 81 hours from the art curriculum. Students majoring in art history must complete a total of 124 semester hours, with 45 hours from the General Education Program and 79 from art history and elective curriculum hours. Specific programs for each of these areas are described under the appropriate department's heading on the following pages. Students must consult with their adviser before selecting electives.

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 128 semester hours, with 45 hours in the General Education Program, 61 in the art curriculum, and 22 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 adviser.

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 arts, graphic design, or art history program.
OUTLINE OF PROGRAM

A total of 128 hours is required, as distributed below.

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Curriculum</td>
<td>61</td>
</tr>
<tr>
<td>Two-dimensional, introductory</td>
<td>15</td>
</tr>
<tr>
<td>Three-dimensional, introductory</td>
<td>12</td>
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<tr>
<td>Art education</td>
<td>19</td>
</tr>
<tr>
<td>Art specialization</td>
<td>15</td>
</tr>
<tr>
<td>Education (Instructional Services)</td>
<td>22</td>
</tr>
<tr>
<td>General Education Program</td>
<td>45</td>
</tr>
</tbody>
</table>

STUDENT TEACHING

Admission into the student teaching semester requires senior standing (90 hours or 200 credit points); a minimum cumulative grade point average of 2.25 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 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. Students must apply for student teaching by midterm of the semester prior to student teaching. The semester prior to student teaching must include combined Art Ed. 516 and IS 433.

A survey course about exceptional children and a multicultural course are included in the teacher certification requirements.

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. 110, 210, and 313, one elected studio course, and 3 hours of Art Hist. 121G or 122G.

Lower-Division Courses

110. Visual Arts. (3). A general orientation to the visual arts including the visual organization of our environment. Lecture and experiential modes of learning will be employed. F 14 110 0 0831

210. Visual Arts for the Child. (3). For students without previous art background who plan to teach in the elementary school classroom. Fundamental methods, materials and concepts used to develop art knowledge and skills in the elementary-age levels are studied. F 14 210 0 0831

211. Art Education in the Elementary School. (3). A study of philosophy, psychology and sensory growth of the elementary-age student, with emphasis on the development of the art program for this level. Prerequisite: art education major, or Art Ed. 210, or instructor's consent. F 14 211 0 0831

212. Jewelry Design/Construction. (3). Jewelry design and construction with an emphasis on metal working processes (forging, forming, casting, sawing, cutting, fusing, soldering) with subordinate emphasis on soft jewelry and ceramic processes applicable to jewelry. F 14 212 1 0831

281. Cooperative Education. (1-8). A course that allows students to participate in the Cooperative Education program. F 14 281 2 0831

Upper-Division Courses

311. Art Education Curriculum in the Elementary School. (3). A study of developmental characteristics of the elementary-age student and the development of the art program with respect to materials,
313. Fiber Exploration for the Classroom. (3). The course will focus on fiber experiences appropriate for the classroom on the intermediate or secondary level. Weaving, braiding, twisting techniques that result in a fabric or web will be explored on various kinds of looms. F 14 313 1 0831

413. Independent Study. (1-4). Directed independent study in art education not normally covered in other course work. Prerequisite: instructor's consent. F 14 413 0 0831

414. Art Education in the Secondary School. (3). A study in the philosophy, objectives and classroom procedures related to the teaching of art at the secondary level. F 14 414 0 0831

481. Cooperative Education. (1-8). A course that allows students to participate in the Cooperative Education program. F 14 481 2 0831

Courses for Graduate/Undergraduate Credit

510. Creativity. (3). The development of theories of creativity will be examined with special emphasis given to processes for eliciting creative responses and implications for art education. Various instruments used in evaluating creativity will be examined. Instructional strategies will include role playing, informal lecture, discussion, simulations, and discovery or inquiry techniques. F 14 510 0 0831

512. Metal Processes for Jewelry Construction. (3). The emphasis will be on fabrication techniques, design analysis and function of jewelry designed and produced by students and acknowledged craftsmen. Prerequisite: Art Ed. 212 or instructor's consent. F 14 512 0 0831

514. Aesthetic Inquiry. (3). The course will focus on contemporary trends in aesthetics relative to the visual arts. Students will be expected to write critical observations and interpretations in response to art work. Prerequisite: upper division art major. F 14 514 9 0831

515. Developing Visual Materials for Art Education. (3). A production laboratory that concentrates on the use of technological equipment for making multimedia experiences (films, slides, tapes, projector, etc.) for art education students. Students engage in constructing units of visual learning. F 14 515 1 0831

516. Art Education Practicum. (3). The development of art curriculum materials for secondary levels. Students will enroll in this course the semester before student teaching. Prerequisite: concurrent enrollment in IS 433. F 14 516 0 0831

517. Student Teaching Seminar in Art. (1). The objective is to analyze problems encountered in the art classroom during student teaching. Concurrent enrollment in 7 hours of student teaching courses is required. Prerequisites: Art Ed. 516 and departmental approval for student teaching. F 14 517 9 0831

711. Seminar in Art Education. (3). Supervised study and research. Weekly consultation and reports are required. Repeatable once for credit. Prerequisite: instructor's consent. F 14 711 9 0831

712. Development of Art Understanding in the Educational Program. (3). Readings, observation and evaluative techniques in the development of concepts and materials for art understanding. Repeatable once for credit. Prerequisite: instructor's consent. F 14 712 0 0831

713. Fiber and Fabric Processes. (3). Fiber processing and structuring in traditional and experimental processes in woven forms and other structural techniques using natural and man-made fibers. Prerequisite: instructor's consent. F 14 713 0 0831

715. 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. F 14 715 0 0831

750. Art Workshop. (1-3). Repeatable for credit. (The area to be covered is determined at the time the course is offered.) F 14 750 2 0831

Courses for Graduate Students Only

815. Individual Research Problems in Art Education. (1-4). Directed independent study in art education not normally covered in other graduate course work. Repeatable for credit. Prerequisite: instructor's consent. F 14 815 4 0831

816-817. Thesis—Art Education. (1-3; 1-3). F 14 816 4 0831; F 14 817 4 0831

818-819. Terminal Project—Art Education. (1-3; 1-3). F 14 818 3 0831; F 14 819 3 0831

College of Fine Arts/Art Education 195
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, 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>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Curriculum</td>
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<tr>
<td>Art history</td>
<td>33</td>
</tr>
<tr>
<td>Foreign language</td>
<td>13</td>
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<tr>
<td>Elective</td>
<td>37</td>
</tr>
<tr>
<td>General Education Program</td>
<td>41</td>
</tr>
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</table>

**Model Program**

### Freshman

<table>
<thead>
<tr>
<th>Course</th>
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<tr>
<td>Eng. 101 and 102, College English I and II</td>
<td>6</td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or 112, Basic Interpersonal Communication</td>
<td>3</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>General education</td>
<td>12</td>
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<tr>
<td>Electives</td>
<td>3</td>
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### Sophomore

<table>
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<tbody>
<tr>
<td>Art Hist. 124, Survey of Western Art: Modern</td>
<td>3</td>
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<tr>
<td>Art history elective</td>
<td>6</td>
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<tr>
<td>Major foreign language</td>
<td>10</td>
</tr>
<tr>
<td>General education</td>
<td>12</td>
</tr>
<tr>
<td>Electives</td>
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### Junior

<table>
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<th>Course</th>
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<tbody>
<tr>
<td>Art history electives</td>
<td>6</td>
</tr>
<tr>
<td>Major foreign language</td>
<td>3</td>
</tr>
<tr>
<td>General education</td>
<td>13</td>
</tr>
<tr>
<td>Electives</td>
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### Senior

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>Art Hist. 426 Seminar: Techniques of Art History</td>
<td>3</td>
</tr>
<tr>
<td>Art history electives</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>21</td>
</tr>
</tbody>
</table>

Students from the Fairmount College of Liberal Arts and Sciences who wish to major in art history must complete 30 hours of art history, including Art Hist. 121G, 122G, and 426. A minimum of 13 hours in one language
(German, French, or Italian) is also required. Liberal arts students wishing to minor in art history must complete 15 hours of art history, including Art Hist. 121G, 122G, and 9 hours elected from other art history offerings.

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: Modern. (3). An introduction to art through the study of a selected group of art objects produced in Europe and America from the 18th century to the present. F 15 124 0 1003

221. Greek Art. (3). An introductory study of Greek art from the Archaic to Hellenistic periods. The course covers architecture, sculpture and vase painting, with emphasis on the art of Pericles' Athens. F 15 221 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 French, Flemish and German painting from Parisian illumination in the 14th century to Durer. F 15 223 0 1003

224. 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 a great many artists, the discussion culminates in an extensive study of the two dominant figures, Peter Paul Rubens and Rembrandt van Rijn. F 15 224 0 1003

281. Cooperative Education. (1-8). A course that allows students to participate in the Cooperative Education program. F 15 281 2 1003

Upper-Division Courses

324. Art of the Ancient Near East. (3). Survey of the arts of ancient Egypt and Mesopotamia, concluding with a consideration of the interaction between Near Eastern art and classical art. F 15 324 0 1003

327. Art of Africa, Oceania and the Americas. (3). A broad survey of art produced by cultures of sub-Saharan Africa, Melanesia, Micronesia, Polynesia and pre-Colombian Americas. F 15 327 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. 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: 3 hours of art history or departmental consent. F 15 520 9 1003

521. 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 Siena and late developments in Rome. F 15 521 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

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the first half of the 20th century. F 15 525 0 1003

526. Art Since 1945. (3). A study of the history of art in the United States from 1945 to the present, stressing the relationship between contemporary trends in criticism and artistic practice. F 15 526 0 1003

528. Museum Techniques I. (3). Designed primarily for the graduate student interested in museum work. Included is specialized research related to administrative responsibilities of a museum: collection, exhibition, recording, preservation and financial activities. F 15 528 0 1003

529. Modern Architecture. (3). A course designed to offer an overall view 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 painting, sculpture and architecture of Greece during the 5th and 4th 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 the 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. 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: 9 hours in art history. F 15 626 0 1003

Courses for Graduate Students Only

828. Thesis. (2). F 15 828 4 1003
829. Thesis. (2). F 15 829 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. Prerequisites: suitable preparation for graduate work in art history (e.g. BA or BFA in art history) and instructor’s consent. F 15 832 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 125 hours is required for a major as distributed below.

Students with junior standing participate in a Junior Portfolio Review prior to counseling for their senior year.

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Curriculum (minimum)</td>
<td>84</td>
</tr>
<tr>
<td>Graphic design core</td>
<td>48</td>
</tr>
<tr>
<td>Art electives (100-200 level)</td>
<td>9</td>
</tr>
<tr>
<td>Graphic design electives (300-level)</td>
<td>12</td>
</tr>
<tr>
<td>Graphic design electives (400-500 level)</td>
<td>6</td>
</tr>
<tr>
<td>Graphic design related electives (300-400-500 level)</td>
<td>9</td>
</tr>
<tr>
<td>General Education Program</td>
<td>41</td>
</tr>
</tbody>
</table>
The following are the specific requirements for the art curriculum section.

1. Students must elect 6 hours of lower-division art electives from the following courses (substitutions must be approved by the graphic design chairperson): SA (Drawing) 240, Life Drawing (repeat); SA (Painting) 251, Watercolor Painting; SA (Printmaking) 160, Printmaking I; and SA 185, Basic 3-D Studio. Students are required to take Art Hist. 124, Survey of Western Art: Modern.

2. Students should elect 12 hours of upper-division graphic design (300-level) courses from the following courses: GD 300, Advanced Typography; GD 330, Design Media Studio (may be repeated twice); GD 333, Fashion Illustration; GD 337, Advertising Illustration (may be repeated twice); and GD 339, Exhibition Design (may be repeated twice).

3. Students should elect 9 hours of upper-division art electives (300-400 level) from the following courses: SA (Drawing) 340, Life Drawing Studio; SA (Drawing) 345, Intermediate Drawing; Art Hist. 525, 20th Century Art Before 1945; Art Hist. 526, Art Since 1945; Eng. 307, Narrative in Literature and Film; or other as approved by the department chairperson.

4. Students should elect 6 hours of upper-division graphic design courses (400-500 level) from the following courses: CD 434, Graphic Design Intern; GD 437, Advanced Advertising Illustration (may be repeated twice); GD 438, Advanced Color and Design; GD 730, Seminar in Graphic Design; GD 493, Book Design and Production; and GD 281 or 481, Cooperative Education.

5. Upper-division art requirements, totaling 45 hours, are distributed as follows: 12 hours in graphic design core, 21 hours in graphic design selected electives (300-400-500 level) and 9 hours in art electives (300-400-500 level).

6. Students must participate in a Junior Portfolio Review during the second semester of their junior year.

7. Students must participate in the Senior Terminal Project during their final two semesters.

**Model Program**

<table>
<thead>
<tr>
<th>Course</th>
<th>Freshman</th>
</tr>
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<tbody>
<tr>
<td>Eng. 101 and 102, College English I and II</td>
<td>6</td>
</tr>
<tr>
<td>Speech (GEC)</td>
<td>3</td>
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<tr>
<td>General education</td>
<td>3</td>
</tr>
<tr>
<td>Art Hist. 121G, Survey of Western Art: Paleolithic Through Early Christian (GSC)</td>
<td>3</td>
</tr>
<tr>
<td>Art Hist. 122G, Survey of Western Art: Renaissance and Baroque (GSC)</td>
<td>3</td>
</tr>
<tr>
<td>GD 135 and 139, Design I and II (C)</td>
<td>6</td>
</tr>
<tr>
<td>GD 138, Color (C)</td>
<td>3</td>
</tr>
<tr>
<td>SA (Drawing) 145, Drawing I (C)</td>
<td>3</td>
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<table>
<thead>
<tr>
<th>Course</th>
<th>Sophomore</th>
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<tbody>
<tr>
<td>Art Hist. 124, Survey of Western Art: Modern (GEC)</td>
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<tr>
<td>General education</td>
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<tr>
<td>General studies</td>
<td>3</td>
</tr>
<tr>
<td>GD 230, Basic Photography (Still) (C)</td>
<td>3</td>
</tr>
<tr>
<td>GD 231, Basic Photography (Motion Picture) (C)</td>
<td>3</td>
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</table>
## Lower-Division Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>GD 233, Basic Typography (C)</td>
<td>3</td>
</tr>
<tr>
<td>GD 234, Layout and Production Techniques (C)</td>
<td>3</td>
</tr>
<tr>
<td>GD 236 and 237, Drawing for Commercial Art I and II (C)</td>
<td>6</td>
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<tr>
<td>Lower-division art electives</td>
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### Junior Course

<table>
<thead>
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<tbody>
<tr>
<td>General education</td>
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</tr>
<tr>
<td>GD 334, Graphic Design II—Production (C)</td>
<td>3</td>
</tr>
<tr>
<td>GD 335, Graphic Design I—Theory (C)</td>
<td>3</td>
</tr>
<tr>
<td>GD electives</td>
<td>12</td>
</tr>
<tr>
<td>Art elective</td>
<td>3</td>
</tr>
<tr>
<td>Junior Portfolio Review</td>
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</tr>
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</table>

### Senior Course

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>General education</td>
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</tr>
<tr>
<td>GD 430, Graphic Design III—Media (C)</td>
<td>3</td>
</tr>
<tr>
<td>GD 435, Graphic Design IV—Design Programs (C)</td>
<td>3</td>
</tr>
<tr>
<td>GD 445, Senior Terminal Project</td>
<td>3</td>
</tr>
<tr>
<td>Graphic design related electives</td>
<td>9</td>
</tr>
</tbody>
</table>

*The following abbreviations are used in the Model Program:

GEC = General education curriculum

GSC = General studies course

C = Graphic design core

GD = Graphic design course

## Upper-Division Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA (Drawing) 145 and GD 135</td>
<td>F 17 233 1 1009</td>
</tr>
<tr>
<td>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. Prerequisite: GD 233. F 17 234 1 1009</td>
<td></td>
</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>237. Drawing for Commercial Art II. (3). Directed practice in drawing the figure for editorial and fashion illustration. Prerequisite: GD 236. F 17 237 1 1009</td>
<td></td>
</tr>
<tr>
<td>281. Cooperative Education. (1-8). A course that allows students to participate in the Cooperative Education program. Graded Cr/NCr only. F 17 281 2 1009</td>
<td></td>
</tr>
</tbody>
</table>

### 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: GD 230, 233, and 234. F 17 300 1 1009

330. Design Media Studio. (3). Advanced study of photography, cinematography or television. Lab fee. Repeatable for credit. Prerequisites: GD 230, 231 and instructor’s consent. F 17 330 1 1009

333. Fashion Illustration. (3). Fashion drawings of costumed models for newspaper and magazine layouts. Merchandising and fashion elements are analyzed for black and white reproduction. Repeatable for credit. Prerequisite: GD 237. F 17 333 1 1009

334. Graphic Design II—Production. (3). Introduction to printing processes: letterpress and offset printing. Prerequisite: GD 335. F 17 334 1 1009

335. Graphic Design I—Theory. (3). Experiments with visual phenomena and their use in the communication of ideas through visual means. Studio practice is coordinated with the discussion of art theory, philosophy and history of design. Prerequisite: GD 234. 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: GD 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: GD 139 and instructor’s consent. F 17 339 1 1009

430. Graphic Design III—Media. (3). Application of design media in the applied arts. Repeatable for credit. Prerequisites: GD 231, 334 and 335. F 17 430 1 1009

434. Graphic Design Intern. (3). On-the-job internship in an art studio or advertising agency. Instruction time is divided between arranged location, observation and/or apprenticeship and weekly seminar period. Written reports of individual research are required in addition to a portfolio of samples produced as an intern. Repeatable for credit. Grade for the course is Cr/NCr. Prerequisites: interview, portfolio and junior status. F 17 434 2 1009

435. Graphic Design IV—Design Programs. (3). A comprehensive study of the corporate image. The development, coordination and execution of a corporate design program are included. This course emphasizes conceptual aspects of graphic design. Repeatable for credit. Prerequisites: GD 334 and 430. F 17 435 1 1009

437. Advanced Advertising Illustration. (3). Continuation of GD 337. Color media are included. Repeatable for credit. Prerequisite: GD 337. F 17 437 1 1009

438. Color and Design. (3). The psychology and optics of color perception and expression in design. Color theory is applied to film making, exhibition design and advertising. Prerequisites: GD 138 and 335. F 17 438 1 1009

445. Senior Terminal Project. (1-3). Supervised independent study. Students in their final two semesters must present a plan of study for and complete a design project. Project and plan of study must be approved by the graphic design faculty. Repeatable for credit. Prerequisite: senior standing in graphic design. F 17 445 3 1009

481. Cooperative Education. (1-8). A course that allows students to participate in the Cooperative Education program. Grade for the course is Cr/NCr. F 17 481 2 1009

493. Book Design and Production. (3). A laboratory course encompassing all facets of the book. Topics of study will include: design, type composition, proofreading, illustration, manufacturing, binding materials (cloths, leather, paper, and boards), distribution, copyright, royalties, and remaining. Students will be responsible for the development and publication of a limited edition book. Prerequisites: GD 334, GD 337, or consent of instructor. F 17 439 1 1009

Course for 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 9 1009

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The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R 2L means 4 hours of lecture and 2 hours of lab.
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, 9 hours elected from art 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.

Area                      Hrs.
Art Curriculum................... 81
Art history elective.............. 3
Ceramics......................... 24
Drawing............................. 12
Sculpture......................... 6
Painting......................... 3
Printmaking....................... 3
Art electives.................... 30
General Education Program...... 43

Model Program

Freshman

Course                      Hrs.
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................. 3
SA (Drawing) 145, Drawing ........... 3
SA (Printmaking) 160 or 262, Printmaking I or II .......... 3
SA (Sculpture) 180, Sculpture I ......................... 3
SA (Ceramics) 170, Ceramics I .......... 3

Sophomore

Course                      Hrs.
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

Junior

Course                      Hrs.
General education............... 8
SA (Ceramics) 275 or 575, Study of Ceramic Materials I or II ..... 3
SA (Ceramics) 276 or 576, Study of Ceramic Glazes I or II .......................... 3
SA (Drawing) 340, Life Drawing Studio .......................................................... 3
SA (Ceramics) 370, Ceramics Studio ................................................................. 3
Art history electives ......................................................................................... 3
Art electives ....................................................................................................... 9

Senior

Course
Advanced ceramics studio .............................................................................. 6
Art electives ...................................................................................................... 21

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

272. Handbuilding Techniques. (3). Lab fee. Special studio emphasis on handbuilding that involves form and surface techniques. Research of materials used for special surfaces and written evaluation is included. F 16 272 1 1009

275. 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

276. Study of Ceramic Glazes I. (3). The study of glaze formulation and the color and crystalline effects of oxides on glazes. Notebook and laboratory work required. F 16 276 1 1009

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. Prerequisites: SA (Ceramics) 270 and SA (Sculpture) 185. F 16 370 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

572. Advanced Handbuilding Techniques. (3). Lab fee. Advanced study with emphasis on handbuilding that involves form and surface techniques. Research of materials used for special surfaces and written evaluations are included. Prerequisite: SA (Ceramics) 272. F 16 572 1 1009

574. Advanced Study of Kiln Methods. (3). Advanced study of 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 II. (3). Lab fee. Lectures and research covering clays, glazes and refractory materials. Writing assignments are made concerning physical and chemical characteristics of pottery materials. F 16 575 0 1009

576. Study of Ceramic Glazes II. (3). Lab fee. The study of glaze formulation and the color and crystalline effects of oxides on base glazes. Notebook, formulation records and laboratory work required. Prerequisite: SA (Ceramics) 575. F 16 576 1 1009

578. Independent Study in Ceramics. (1-3). A professional emphasis on technical or aesthetic research in the ceramics field. Available only for the advanced ceramics student with consent of instructor. Statement of intent must be submitted for faculty approval before registration. Prerequisite: departmental consent. F 16 578 0 1009

College of Fine Arts/Studio Arts 203
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

870. Special Problems in Ceramics. (1-5). Research in advanced problems in ceramics. Repeatable for credit. F 16 870 3 1009

875. Advanced Research in Ceramic Materials. (3). Lectures and advanced research covering clays, glazes and refractory materials. Reading assignments are made concerning physical and chemical characteristics of pottery materials. Notebook and outside lab work are required. F 16 875 4 1009

876. Advanced Study of Ceramic Glazes. (3). The study of glaze formulation and the color and crystalline effects of oxides on base glazes. Notebook, advanced formulation records and laboratory work required. Prerequisite: SA (Ceramics) 875. F 16 876 4 1009

878-879. Terminal Project—Ceramics. (2 or 3 or 5; 3 or 5). F 16 878 4 1009; F 16 879 4 1009

PAINTING

The painting program gives students a thorough preparation in painting and then allows them to progress through a structured regimen, which leads to the development of their own personal style. 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>81</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>21</td>
</tr>
<tr>
<td>Printmaking</td>
<td>6</td>
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<tr>
<td>Ceramics</td>
<td>3</td>
</tr>
<tr>
<td>Sculpture</td>
<td>3</td>
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<tr>
<td>Art electives</td>
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</tr>
<tr>
<td>General Education Program</td>
<td>43</td>
</tr>
</tbody>
</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>Speech 111, Basic Public Speaking, or 112, Basic Interpersonal Com-</td>
<td>3</td>
</tr>
<tr>
<td>munication</td>
<td></td>
</tr>
<tr>
<td>General education: Art Hist. 121G, 122G, or 124</td>
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<tr>
<td>General education</td>
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<td>SA (Drawing) 145, Drawing I</td>
<td>3</td>
</tr>
<tr>
<td>SA (Printmaking) 160, Printmaking I</td>
<td>3</td>
</tr>
<tr>
<td>SA (Ceramics) 170, Ceramics I</td>
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<tr>
<td>SA (Sculpture) 180, Sculpture I</td>
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Sophomore

<table>
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<th>Course</th>
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<tbody>
<tr>
<td>General education</td>
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<tr>
<td>SA (Drawing) 240, Life Drawing</td>
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</tbody>
</table>
SA (Painting) 250, Oil Painting ................................. 3
SA (Painting) 251 or 252, Watercolor Painting or Acrylic Painting 3
SA (Printmaking) 364, Printmaking III—Lithography .......... 3
Art electives .................................................. 3

Junior

Course Hrs.
General education ................................................. 9
SA (Drawing) 340, Life Drawing Studio ...................... 3
SA (Painting) 350, Painting Studio ......................... 6
Art history electives .......................................... 3
Drawing electives .............................................. 3
Art electives .................................................. 9

Senior

Course Hrs.
SA (Drawing) 545, Advanced Drawing Studio .............. 6
SA (Painting) 550, Advanced Painting Studio ............ 6
Art electives .................................................. 9
Painting electives ............................................. 6

Drawing
Drawing serves the four major areas of the studio arts department—painting, printmaking, sculpture, and ceramics—as well as the departments of graphic design and art education.

Lower-Division Courses

145. Drawing I. (3). Introduction for beginners in drawing to a broad range of art making principles and elements relative to compositional practice. Course will serve as a foundation to two-dimensional studio offerings. Still life and landscape will be main sources for practice and theory. Sketchbooks required. F 16 145 1 1002

240. Life Drawing. (3). Lab fee. Drawing from life with emphasis on figure construction. Anatomy sketchbooks and/or portfolios are required. Repeatable once for credit. Prerequisite: SA (Drawing) 145. F 16 240 1 1002

Upper-Division Courses

340. Life Drawing Studio. (3). Lab fee. Emphasis on individual development, figurative observation and interpretation. Repeatable for credit. Prerequisite: two semesters of life drawing. F 16 340 1 1002

345. Intermediate Drawing. (3). Drawing projects, nonfigurative. Included are problems of style, suites of related works, and history of drawing techniques and materials. Repeatable once for credit. Prerequisite: one semester of life drawing. F 16 345 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

840. Special Problems in Life Drawing. (1 or 3). Drawing from life. Sketchbooks
and/or portfolio are required. Repeatable for credit. F 16 840 3 1002

845. Special Problems in Drawing. (1-3). Advanced drawing in various media, with emphasis on independent work and the development of personal expression. Repeatable for credit. F 16 845 3 1002

Painting
Lower-Division Courses

250. Oil Painting. (3). An introduction to oil painting, emphasizing studio practices, fundamental principles and techniques. Prerequisite: SA (Drawing) 145. F 16 250 1 1002

251. Watercolor Painting. (3). An introduction to transparent watercolor painting. Sketchbooks and/or portfolio required. Prerequisite: SA (Drawing) 145. F 16 251 1 1002

252. Acrylic Painting. (3). An introduction to acrylic painting on various supports, such as canvas, masonite and paper. Prerequisite: SA (Drawing) 145. F 16 252 1 1002

255. Introduction to Methods and Media of Painting. (3). Survey of painting methods from the 12th century to the 20th. History and nature of materials are examined, including encaustic, tempera, oil, oil-resin, synthetic media, grounds, supports and surface protection. Prerequisite: prior or concurrent enrollment in painting or art history major. F 16 255 0 1002

Upper-Division Course

350. Painting Studio. (3). Emphasis on individual development, personal interpretation and creativity. Repeatable for credit. Prerequisites: SA (Painting) 250 and 251 or 252. F 16 350 1 1002

Courses for Graduate/Undergraduate Credit

550. Advanced Painting Studio. (1-3-6). Designed for the professionally oriented student. Emphasis is on independent achievement and preparation for graduate study. Repeatable for credit. Prerequisites: two semesters of SA (Painting) 350 and interview with instructor. F 16 550 1 1002

551. Advanced Watercolor Studio. (3). Sketchbooks and/or portfolio required. Prerequisites: SA (Painting) 251 and instructor's consent. F 16 551 1 1002

553. Independent Study in Painting. (3). A professional emphasis on technical or aesthetic research in the painting area. Available only for the advanced painting student with consent of instructor. Statement of intent must be submitted for faculty approval before registration. Prerequisite: departmental consent. F 16 553 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 synthetic media. Repeatable for credit with the consent of the drawing/painting 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, oil-resin, synthetic media, grounds, supports and surface protection. Prerequisite: instructor's consent. F 16 855 0 1002

858-859. Terminal Project—Painting. (3 or 5, 3 or 5). F 16 858 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 and lithographic techniques. Supplementing these areas are relief, collagraph, serigraph, 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 distributed below:

206
### Area

**Art Curriculum**
- Art history electives .................................................. 6
- Printmaking ............................................................... 24
- Drawing ........................................................................... 15
- Painting ........................................................................... 6
- Ceramics ........................................................................... 3
- Sculpture ........................................................................... 3
- Art electives ................................................................. 24

**General Education Program** ........................................... 43

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### 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 ........................... 3
- General education .................................................................. 6
- SA (Drawing) 145, Drawing I .................................................. 3
- SA (Printmaking) 160, Printmaking I ......................................... 3
- SA (Ceramics) 170, Ceramics I ............................................... 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

#### Junior

**Course**
- General education .................................................................. 10
- SA (Drawing) 340, Life Drawing Studio ..................................... 3
- Art history electives .............................................................. 3
- Printmaking electives ............................................................. 6
- Art electives ......................................................................... 9

#### Senior

**Course**
- SA (Drawing) 545, Advanced Drawing Studio ............................ 3
- SA (Printmaking) 560, Advanced Printmaking Studio .................. 6
- Art history electives .............................................................. 3
- Art electives ......................................................................... 18

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### Lower-Division Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>160. Printmaking I. (3). An introduction to printmaking. Exploratory work is done in intaglio, collagraph, woodcut or relief techniques. F 16 160 1 1002</td>
<td>262. Printmaking II. (1-3). Basic intaglio methods (etching, engraving, soft ground, aquatint and mixed techniques). Second semester includes color printing in intag-</td>
</tr>
</tbody>
</table>
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 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 electives</td>
<td>6</td>
</tr>
<tr>
<td>Sculpture</td>
<td>24</td>
</tr>
</tbody>
</table>

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 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 electives</td>
<td>6</td>
</tr>
<tr>
<td>Sculpture</td>
<td>24</td>
</tr>
</tbody>
</table>
Model Program

Freshman

Course
Eng. 101 and 102, College English I and I .......................... 6
Speech 111, Basic Public Speaking, or 112, Basic Interpersonal Communication .......... 3
General education: Art Hist. 121G, 122G, or 124 ......................... 6
General education .................................................................... 4
SA (Drawing) 145, Drawing I ................................................. 3
SA (Printmaking) 160 or 262, Printmaking I or II ...................... 3
SA (Ceramics) 170, Ceramics I .............................................. 3
SA (Sculpture) 180, Sculpture I ............................................ 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 II ............................................ 3
SA (Sculpture) 380, Sculpture Studio .................................... 3
Art electives ........................................................................... 3

Junior

Course
General education .................................................................... 9
SA (Drawing) 340, Life Drawing Studio .................................. 3
SA (Sculpture) 380, Sculpture Studio .................................... 3
Sculpture studio ...................................................................... 3
Art history electives ............................................................. 3
Art electives ........................................................................... 3

Senior

Course
SA (Drawing) 545, Advanced Drawing Studio ......................... 3
SA (Sculpture) 580, Advanced Sculpture Studio ...................... 6
Sculpture electives .................................................................. 3
Art history electives ............................................................. 3
Art electives ........................................................................... 3

Lower-Division Courses

185. Basic 3-D Studio. (3). A studio approach to basic 3-dimensional concepts. Various materials will be used in projects designed to develop a basic understanding of 3-dimensional forms and spatial concepts. F 16 185 1 1002

280. Sculpture. (3). An introduction to sculptural techniques in welded steel, assemblage, kinetics and optics. Prerequisite: SA (Sculpture) 185. F 16 280 1 1002

Upper-Division Courses

380. Sculpture Studio. (1-3). Special emphasis on the main approaches to sculpture. Stress is placed on the form, concept and construction of sculpture. Carving techniques in wood, stone and/or plastic
are included, as are construction and assemblage techniques selected from wood, plastic, metal (welded, brazed, riveted, etc.) and/or combined materials. Repeatable once for credit. Prerequisites: SA (Sculpture) 185 and 280. F 16 380 1 1002

381. Sculpture Studio. (3). Casting techniques for bronze and aluminum sculpture. Plaster investment, CO₂ set sand, foam vaporization and vitrified shell molds are used to develop individual and unique approaches to cast sculpture. Prerequisite: SA (Sculpture) 280. F 16 381 1 1002

Course for Graduate/Undergraduate Credit

580. Advanced Sculpture Studio. (1-3). Sculpture in any medium, with an emphasis on individual development and creativity. Repeatable for credit. Prerequisite: SA (Sculpture) 380. F 16 580 1 1002

585. Independent Study in Sculpture. (3). A professional emphasis on technical or aesthetic research in the sculpture area. Available only for the advanced sculpture student with consent of instructor. Statement of intent must be submitted for faculty approval before registration. 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

880. Special Problems in Sculpture. (3 or 5). Advanced sculpture, with emphasis on experimentation and high quality work on an individual basis. Special projects in casting, architectural sculpture, mixed media or new materials and techniques are stressed. Repeatable for credit. F 16 880 3 1002

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, costuming, methods of teaching, and practice teaching. Additional courses are offered in jazz, tap, dance for music theatre, 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. Wichita State University students accepted into the company enroll in Dance 735 and receive 3 credit hours toward a dance degree. Auditions are also open to talented dancers in the community.

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 will 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, makeup, 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.

Courses

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.)</td>
<td>24</td>
</tr>
<tr>
<td>Dance 210, Ballet I; Dance 310, Ballet II; Dance 410, Ballet III. (Placement and advancement by audition and/or faculty consent only.)</td>
<td>18</td>
</tr>
<tr>
<td>Dance 305, Choreography I; Dance 405, Choreography II</td>
<td>8</td>
</tr>
<tr>
<td>Dance 325, Dance History I; Dance 425, Dance History II</td>
<td>6</td>
</tr>
<tr>
<td>Dance 315, Music for Dance</td>
<td>3</td>
</tr>
<tr>
<td>Dance 505, Dance Performance and Production; Dance 605, Advanced Dance Performance and Production</td>
<td>6</td>
</tr>
<tr>
<td>Dance 625, Repertory or Dance 735, Mid-America Dance Theatre</td>
<td>6</td>
</tr>
<tr>
<td>Dance 545, Methods of Teaching Dance</td>
<td>3</td>
</tr>
<tr>
<td>Dance 645, Practice in Teaching Dance</td>
<td>3</td>
</tr>
<tr>
<td>Speech 253, Costuming for the Stage</td>
<td>3</td>
</tr>
<tr>
<td>Speech 254, Stage Makeup</td>
<td>1</td>
</tr>
<tr>
<td>Speech 645, Stage Lighting</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>84</td>
</tr>
</tbody>
</table>

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:

Courses

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speech 143G, The Art of the Theatre or Speech 243, Acting I or Speech 623, Development of the Theater I or Speech 624, Development of the Theater II (select one of the previous courses)</td>
<td>3</td>
</tr>
<tr>
<td>Mus.-Comp. 160G, The Heritage of Western Music or Mus.-Comp. 161, Music Appreciation or Mus.-Comp. 315, Music of the 20th Century or Mus.-Comp. 346, Styles of Jazz or Mus.-Comp. 493G, American Music or Mus. Perf. 627, Music Theatre Directing (select two of the previous courses)</td>
<td>5</td>
</tr>
<tr>
<td>Art Hist. 122G, Survey of Western Art: Renaissance and Baroque or Art Hist. 124, Survey of Western Art: Modern or Art Hist. 525, 20th Century Art Before 1945 or Art Hist. 526, Art Since 1945 or GD 135, Design I (select one of the previous courses)</td>
<td>3</td>
</tr>
</tbody>
</table>

The remaining hours should be selected to fulfill General Education Program requirements.
Lower-Division Courses

120. Jazz I. (1-2). Introduction to jazz technique, emphasizing work in body isolations, rhythmic patterns and directions, basic steps, and history and development of jazz dance in America. Repeatable for credit. 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 accompaniment for dance. 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

325. Dance History I. (3). The development of dance up to the 20th century. Study of national origins and period dance movement styles. F 25 325 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. Prerequisite: Dance 305. Concurrent enrollment in appropriate-level modern dance or ballet technique class required. 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

425. Dance History II. (3). Twentieth century dance emphasizing the emergence of ballet and later, modern dance. Study of major choreographers, performers and dance companies. F 25 425 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). Preparation and production of a concert held near end of semester. Coordination of dancers, choreographers, lighting and costume design, and publicity. May work as dancer and/or choreographer. Prerequisite: Dance 405. Concurrent enrollment in appropriate-level modern dance or ballet technique class required. 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, recreation centers, private and professional schools and universities, through lesson planning and in-class teaching practice. Prerequisite: Dance 401 or 410. F 25 545 5 1008

505. Advanced Dance Performance and Production. (3). Further work in preparing and producing end-of-semester concert. Students must choreograph a work for the concert. In addition, they may also perform. Dance majors may prepare works for their senior concert. Prerequisite: Dance 505. Concurrent enrollment in appropriate-level modern dance or ballet technique class required. F 25 605 5 1008

605. Advanced Dance Performance and Production. (3). Further work in preparing and producing end-of-semester concert. Students must choreograph a work for the concert. In addition, they may also perform. Dance majors may prepare works for their senior concert. Prerequisite: Dance 505. Concurrent enrollment in appropriate-level modern dance or ballet technique class required. F 25 605 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. Prerequisite: instructor's consent or by audition. Concurrent enrollment in appropriate-level modern dance or ballet technique class required. 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 company performs on campus and in the community and tours as the occasion arises, repeatable for credit. Prerequisite: members accepted by audition only. Auditions are open to dancers in the community and University. Concurrent enrollment in appropriate-level modern dance and ballet class. Credit hours determined by instructor. 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.

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 nonpiano music majors must pass a piano proficiency examination. Entering students majoring in music, but not in piano, 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 or private 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 1 semester hour of credit, students receive a ½ hour lesson each week, with a minimum of 5 hours of practice required per week.

For 2 semester hours of credit, (majors and special music students only), students receive either (1) a ½ hour private lesson each week and a 1 hour class each week or (2) a 1 hour lesson per week, or other equivalent arrangements at the option of the instructor. Students are expected to practice a minimum of 10 hours each week.

For 4 semester hours of credit, (majors and special music students only), students receive two ½ hour lessons and a 1 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 Recital, Mus. Perf. 050, 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.

No graduating senior may prepare or perform the graduation recital without the guidance of a Division of Music faculty member. In the event the required applied music credit hours have been earned prior to the recital presentation, students are expected to continue to elect the applied major through the preparation for and the performance of the recital.

**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**

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td></td>
</tr>
<tr>
<td>Chief performing medium (piano, organ)</td>
<td>16</td>
</tr>
<tr>
<td>Other performing media</td>
<td>4</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>Chief performing medium (nonkeyboard)</td>
<td>8</td>
</tr>
<tr>
<td>Keyboard performing medium</td>
<td>8</td>
</tr>
<tr>
<td>Other performing media</td>
<td>4</td>
</tr>
<tr>
<td>Theory and Composition</td>
<td>40</td>
</tr>
<tr>
<td>Mus.-Comp. 127-128, 129-130, 227-228, 229-230, 259-260, 523, 559, 560, 561, 641, 659, 660, 661, 671, and 672</td>
<td></td>
</tr>
<tr>
<td>History and Literature of Music</td>
<td>10</td>
</tr>
<tr>
<td>Mus.-Comp. 113 and 8 hours from Mus.-Comp. 331, 332, 333, or other approved music literature courses (6 hours must be taken in Mus.-Comp. 331, 332, or 333)</td>
<td></td>
</tr>
<tr>
<td>Conducting</td>
<td>4</td>
</tr>
<tr>
<td>Mus. Perf. 217 or 218; 651 or 691</td>
<td></td>
</tr>
<tr>
<td>Ensembles</td>
<td>10</td>
</tr>
<tr>
<td>Electives (music or nonmusic courses)</td>
<td>8</td>
</tr>
<tr>
<td>Recital Attendance (four semesters plus senior recital)</td>
<td></td>
</tr>
</tbody>
</table>

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**

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>28</td>
</tr>
</tbody>
</table>

*College of Fine Arts/Division of Music 215*
### Bachelor of Music in Performance—Keyboard Major

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Applied Music</strong></td>
<td></td>
</tr>
<tr>
<td>Chief performing medium</td>
<td>24</td>
</tr>
<tr>
<td>Second performing medium (four semesters)</td>
<td>4</td>
</tr>
<tr>
<td>Mus. Perf. 250 and 251, Applied Piano Concerto, (For piano performance majors) (2 semesters)</td>
<td>4</td>
</tr>
<tr>
<td>Piano Accompanying Majors: Piano</td>
<td>16</td>
</tr>
<tr>
<td>Applied accompanying</td>
<td>12</td>
</tr>
<tr>
<td>(Mus. Perf. 223, 224, 423, and 424)</td>
<td></td>
</tr>
<tr>
<td><strong>Theory</strong></td>
<td>22-26</td>
</tr>
<tr>
<td>Mus.-Comp. 127-129, 128-130, 227-229, 228-230, 523, 561 or 661, 641, and for piano accompanying majors only, Mus. Perf. 121, 122, 221, 222</td>
<td>10</td>
</tr>
<tr>
<td><strong>History and Literature of Music</strong></td>
<td></td>
</tr>
<tr>
<td>Mus.-Comp. 113 and 8 hours from Mus.-Comp. 331, 332, 333, or other approved music literature courses (6 hours must be taken in Mus.-Comp. 331, 332, or 333)</td>
<td>4</td>
</tr>
<tr>
<td><strong>Conducting</strong></td>
<td></td>
</tr>
<tr>
<td>Mus. Perf. 217 or 218, and 651 or 691</td>
<td>11</td>
</tr>
<tr>
<td><strong>Ensembles</strong></td>
<td></td>
</tr>
<tr>
<td>Organ Majors</td>
<td>10</td>
</tr>
<tr>
<td>Piano Majors</td>
<td>8</td>
</tr>
<tr>
<td>Piano Accompanying</td>
<td></td>
</tr>
<tr>
<td>(Six semesters of accompanying required for all Bachelor of Music piano majors. Keyboard scholarship recipients are required to enroll in accompanying each semester they hold a scholarship.)</td>
<td></td>
</tr>
<tr>
<td>Organ Majors (Electives)</td>
<td>11</td>
</tr>
<tr>
<td>(Must include Mus.-Comp. 597-598 and 4 hours of music electives)</td>
<td></td>
</tr>
<tr>
<td><strong>Piano Majors</strong></td>
<td></td>
</tr>
<tr>
<td>Performance Majors: Mus.-Perf. 107-407, Piano Repertoire</td>
<td>6</td>
</tr>
<tr>
<td>Mus.-Perf. 580, Piano Pedagogy or Mus.-Perf. 581, Piano Teaching Materials</td>
<td>2</td>
</tr>
<tr>
<td>Mus.-Comp. 582 and 583, Piano Literature</td>
<td>4</td>
</tr>
<tr>
<td>Pedagogy Majors: Mus.-Perf. 107-407, Piano Repertoire</td>
<td>6</td>
</tr>
<tr>
<td>Mus.-Perf. 580, Piano Pedagogy</td>
<td>2</td>
</tr>
</tbody>
</table>
Bachelor of Music in Performance—Vocal Major

Area

Foreign Languages (5 hours in each of three languages or 10 hours in one of three languages and 5 hours in one of the other two) 15

Fr. 111-112
Ger. 111-112
Ital. 111-112

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. 127-128, 129-130, 227-228, 229-230, and 523

History and Literature of Music 10

Mus.-Comp. 113 and 8 hours from 331, 332, 333, or other approved music literature courses (6 hours must be taken in Mus.-Comp. 331, 332, or 333). These courses count as humanities.

Conducting 2

Mus. Perf. 218

Voice Pedagogy and Repertoire 5

Mus. Perf. 625 and Mus.-Comp. 626

Ensembles (see degree checksheets for specified ensembles) 10

Electives (in upper-division theory, conducting, or choral materials) 9

Senior Recital (Mus. Perf. 400) 1

Recital attendance (specified number of recitals per semester for four semesters)

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.

College of Fine Arts/Music Education  217
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); 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 Department of Music Education and receive their approval. Students must file applications with the chairperson of the music education department by midterm of the spring semester prior to the academic year in which they plan to student teach.

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 Requirements**

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics and Natural Sciences</td>
<td>12</td>
</tr>
<tr>
<td>Oral and Written Communication, Literature, and Foreign Languages</td>
<td>12</td>
</tr>
<tr>
<td>Required:</td>
<td></td>
</tr>
<tr>
<td>Eng. 101 and 102, or equivalent</td>
<td></td>
</tr>
<tr>
<td>Speech 111 or 112</td>
<td></td>
</tr>
<tr>
<td>Social and Behavioral Sciences and History</td>
<td>12</td>
</tr>
<tr>
<td>Required:</td>
<td></td>
</tr>
<tr>
<td>Psych. 111 and Min. Stud. 100, 210, or 210G</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td>14</td>
</tr>
<tr>
<td>Required:</td>
<td></td>
</tr>
<tr>
<td>Mus.-Comp. 113 and 6 hours from Mus.-Comp. 331, 332, or 333. Also 3 hours in special education class: IS 601, Mus. Ed. 309 or 611. Any course in humanities, social sciences, mathematics, or natural sciences.</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>18</td>
</tr>
<tr>
<td>IS 233 or 333 and 433</td>
<td></td>
</tr>
<tr>
<td>IS 232, 234, and 428</td>
<td></td>
</tr>
<tr>
<td>IS 451 *</td>
<td></td>
</tr>
<tr>
<td>IS 469 *</td>
<td></td>
</tr>
</tbody>
</table>

* These courses must be taken during the student teaching semester.
Additional Courses Required for Instrumental Emphasis

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>16-18</td>
</tr>
<tr>
<td>Chief Performing Medium</td>
<td>12-14</td>
</tr>
<tr>
<td>Second performing medium (voice)</td>
<td>2</td>
</tr>
<tr>
<td>Third performing medium (piano)</td>
<td>2</td>
</tr>
</tbody>
</table>

The requirements include completion of keyboard proficiency and must include one semester of applied voice, or Mus. Ed. 341, and one semester of Mus. Ed. 342.

Keyboard majors with an instrumental background who elect the instrumental emphasis program must include two semesters of one orchestral or band instrument as the third performing medium.

Theory .......................................................... 20
Mus.-Comp. 127-128, 129-130, 227-228, 229-230, 561, and either 641, 643, or 645

Conducting ..................................................... 4
Mus. Perf. 217 or 218, and 651 or 691

Ensembles (see degree checksheets for specified ensembles) ........ 10

Piano majors ................................................... 8

Keyboard majors following the instrumental emphasis program are required to take a minimum of 4 hours of instrumental ensembles and 2 hours in piano accompaniment. The ensemble requirement for BME piano majors (secondary or elementary emphasis) is 8 hours, and 4 hours of piano repertoire (Mus. Perf. 107-407) are also required.

Recital Attendance (four semesters plus senior recital)
Music Education .................................................. 13
Elementary instrumental emphasis (field-based curriculum) ....... 7
Mus. Ed. 202, 302, and 402 *
   or
Secondary instrumental emphasis ................................ 7
Mus. Ed. 204, 304, and 404 *
Mus. Ed. 235, 236, 237, 238, 239, and 240 ........................ 6

Additional Courses Required for Vocal Emphasis

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music</td>
<td>16</td>
</tr>
<tr>
<td>Chief Performing medium</td>
<td>14</td>
</tr>
<tr>
<td>Second performing medium</td>
<td>2</td>
</tr>
</tbody>
</table>

Keyboard majors must elect one semester of applied voice, or Mus. Ed. 341, and one semester of Mus. Ed. 342 and complete the keyboard proficiency examination.

Theory .......................................................... 20
Mus.-Comp. 127-128, 129-130, 227-228, 229-230, 661, and either 641, 643, or 645

Conducting ..................................................... 4
Mus. Perf. 217 or 218 and 651 or 691

Ensembles (see degree checksheets for specified ensembles) ........ 10

Piano Majors .................................................... 8

Keyboard majors—required to enroll for 4 hours of vocal ensemble; 2 of the remaining hours must be in piano accompaniment.

Music Electives (may not be in applied music)—Mus. Ed. 341 or 342 counts .............................................. 5

Piano majors in vocal emphasis program must elect Mus. Perf. 581 and 4 hours of piano repertoire (Mus. Perf. 107-407)
Recital Attendance (four semesters plus senior recital)
Music Education
Elementary vocal emphasis—Mus. Ed. 201, 301, 402 *
Secondary emphasis—Mus. Ed. 203, 303, 404 *
Piano pedagogy majors—Mus. Comp. 580, Mus. Perf. 690 (special topics—4 hours)

*These courses must be taken during the student teaching semester.

BACHELOR OF MUSIC EDUCATION—SPECIAL MUSIC EDUCATION (Vocal or Instrumental Emphasis)
The following courses and areas are required for the Bachelor of Music Education (BME) in special music education. In completing the BME program in special education, the student must meet the General Education Program requirements given in the Academic Information—Requirements for Graduation section of the Catalog.

General Requirements

Area Hrs.
Mathematics and Natural Sciences 12
   Special music education majors may take CDS 214 to fulfill 3 hours in this area.
Oral and Written Communication, Literature, and Foreign Languages 12
   Required:
   Eng. 101 and 102, or equivalent
   Speech 111 or 112
History, Social Sciences, and Behavioral Sciences 12
   Required:
   Psych. 111 and Min. Stud. 100, 210, or 210G
   It is recommended that special music education majors take Psych. 361 or 375 to fulfill 3 hours in this area.
Electives 14
   Required:
   Mus.-Comp. 113 and 6 hours from 331, 332, or 333 and CDS 111 or IS 601
Education 18
   IS 233 or 333 and 433
   IS 232, 234, and 428
   IS 451 *
   IS 469 *

Music Requirements

Area Hrs.
Applied Music 12-16
Chief Performing Medium 10-14
   Second performing medium 2
      All special music education majors must take Mus. Ed. 341 and 342. 2
      The above must include completion of the keyboard proficiency examination.
      It is recommended that students enroll in a course or courses in guitar.
Theory 20
   Mus.-Comp. 127-128, 129-130, 227-228, 229-230, 561 or 661, and 641, 643, or 645
Conducting 4
   Mus.-Perf. 217 or 218, and 651 or 691
Music Electives for Vocal Majors (may not be in applied music)—Mus. Ed. 341 and 342 count ........................................... 6
Required for piano majors
4 hours of piano repertoire (Mus. Perf. 107-407) and 2 hours of Mus. Perf. 581 are required for piano majors.
Recital Attendance (four semesters plus senior recital)
Ensembles (see degree checksheets for specified ensembles) .................................................. 10
Piano majors .............................................................................................................................. 8
Keyboard majors—required to enroll for 4 hours of vocal ensembles and 2 hours in piano accompaniment.
Music Education
Elementary vocal emphasis ................................................. 9
Mus. Ed. 201, 301, 309, and 402 *
Secondary vocal emphasis ................................................ 9
Mus. Ed. 203, 303, 309, and 404 *
Elementary instrumental emphasis ................................... 16
Mus. Ed. 202, 235, 236, 237, 238, 239, 240, 302, 309, and 402 *
Secondary instrumental emphasis ................................... 16
Mus. Ed. 204, 235, 236, 237, 238, 239, 240, 304, 309, and 404 *
* These courses must be taken during the student teaching semester.

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.

<table>
<thead>
<tr>
<th>Area</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group I</td>
<td></td>
</tr>
<tr>
<td>Music Literature and History</td>
<td>8</td>
</tr>
<tr>
<td>Mus.-Comp. 113 and 6 hours from Mus.-Comp. 331, 332, or 333</td>
<td></td>
</tr>
<tr>
<td>Group II</td>
<td></td>
</tr>
<tr>
<td>Music Theory</td>
<td>16</td>
</tr>
<tr>
<td>Mus.-Comp. 127-128, 129-130, 227-228, 229, and 523</td>
<td></td>
</tr>
<tr>
<td>Group III</td>
<td></td>
</tr>
<tr>
<td>Counterpoint</td>
<td>2</td>
</tr>
<tr>
<td>Mus.-Comp. 561</td>
<td></td>
</tr>
<tr>
<td>Group IV</td>
<td></td>
</tr>
<tr>
<td>Conducting, Orchestration, and Choral Arranging</td>
<td>4</td>
</tr>
<tr>
<td>Mus. Perf. 217 or 218, and Mus.-Comp. 641 or 645</td>
<td></td>
</tr>
<tr>
<td>Group V</td>
<td></td>
</tr>
<tr>
<td>Applied Music (4 semesters)</td>
<td>4</td>
</tr>
<tr>
<td>Voice, piano, organ, or orchestral instrument</td>
<td></td>
</tr>
<tr>
<td>Group VI</td>
<td></td>
</tr>
<tr>
<td>Ensemble</td>
<td>3</td>
</tr>
<tr>
<td>Select in consultation with adviser</td>
<td></td>
</tr>
<tr>
<td>Group VII</td>
<td></td>
</tr>
<tr>
<td>Electives from the areas of music, literature, music theory, counterpoint, conducting, orchestration, and choral literature</td>
<td>4</td>
</tr>
</tbody>
</table>

MUSIC MINOR IN FAIRMOUNT COLLEGE OF LIBERAL ARTS AND SCIENCES

A music minor in Fairmount College of Liberal Arts and Sciences consists of
Music Education

Noncredit Course

080. Topics in Music. (1-3). Topics exploring events, conditions, relationships, styles, etc. in music. See semester schedule of courses for current listing. Not applicable to degree. Offered Cr/NCr only. Repeatable. F 11 080 2 0832

Lower-Division Courses


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 instruction in music for exceptional children and youth, choreographing for the choral ensemble, and music theater for the public schools. Prerequisite: music education major or instructor’s consent. F 11 201 0 0832

202. Fundamentals of Instrumental Music for Elementary School. (3). An introductory course with primary emphasis placed upon a general examination of the instrumental music program in the elementary school. Coverage includes a 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 instruction in music for exceptional children and youth, and teaching techniques for marching band and jazz ensemble. Prerequisite: music education major or instructor’s consent. 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 instruction in music for exceptional children and youth, choreographing for the choral ensemble, and music theater for the public schools. Prerequisite: music education major or instructor’s consent. F 11 203 0 0832

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 instrumental organization and administration, pedagogical practices, laboratory experiences, guiding student behavior, evaluation and professional responsibilities. For students primarily interested in teaching instrumental music in the secondary schools. Includes instruction in music for exceptional children and youth, and teaching techniques for marching band and jazz ensemble. Prerequisite: music education major or instructor’s consent. 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. 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. 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, care and minor repair, instructional materials, reed selection and adjustment, 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.) 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 of instrument, instrumental 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.) 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. F 11 239 0 0832

240. Methods of Teaching Band and Orchestral Instruments (Percussion). (1). Procedures and materials for class and private instruction. Application of snare drum fundamentals and a study of basic techniques for all percussion instruments are included. F 11 240 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 students' 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, enroll 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. F 11 281 0 0832

Upper-Division Courses

301. Survey of Vocal Music for Secondary School. (3). An overview of activities in secondary vocal and general music programs. Included are a study of objectives for secondary classes and consideration of materials and methods. The course is for students primarily interested in teaching music in the elementary schools. Prerequisite: Mus. Ed. 201. F 11 301 0 0832

302. Survey of Secondary School Music. (1-3). Primarily concerned with the organization, methods, activities and materials involved in the teaching of instrumental music in the secondary schools. Also included is an examination of classroom vocal teaching techniques and an opportunity for elementary instrumental music education majors to teach junior high school instrumental students in a laboratory school setting. Prerequisite: Mus. Ed. 202. 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. The course is for students primarily interested in teaching music in the secondary schools. Prerequisite: Mus. Ed. 203. F 11 303 0 0832

304. Survey of Elementary School Music. (3). A survey of activities in the elementary school, including consideration of the general music program and instrumental instruction. The course is for students primarily interested in teaching instrumental music in the secondary schools. Prerequisite: Mus. Ed. 204. F 11 304 0 0832

309. Survey of Music for Special Education. (3). Consideration of methods and problems in preparation for student teaching of music with special education students at early childhood, elementary and secondary school levels in public schools. Included are: musical settings (self-contained and mainstreamed) in regular and alternative schools and classes, identification, objectives, appropriate activities, materials, and planning and implementation techniques. Also included are observation, 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 certification and re-certification of music teachers only. Prerequisites: Mus. Ed. 201 or 202, 203 or 204, with instructor's consent. F 11 309 0 0832

341. Survey of Singing Techniques and Literature. (1). A study of basic techniques of singing and an examination of literature for the solo voice. Reconc-
mended for instrumental music education majors and keyboard majors on the vocal music program as an alternate to 1 hour of applied voice. Required for special music education majors. F 11 341 0 0832

342. Survey of Choral Techniques and Literature. (1). A study of basic techniques of ensembles and examination of literature for large and small ensembles. Required for instrumental, keyboard and special music education majors. Prerequisite: 1 hour of applied voice or Mus. Ed. 341 and Mus. Perf. 217 or 218. F 11 342 0 0832

351. Music Fundamentals for the Classroom Teacher. (3). For students planning to teach in the elementary school classroom. Basic fundamentals of music are included, with emphasis upon development of student's music ability in singing, playing the piano and classroom instruments. F 11 351 1 0832

352. Music Methods for the Classroom Teacher. (3). For the elementary classroom teacher. The development of children's musical growth through singing, listening, rhythmic and creative activities is emphasized. Prerequisite: Mus. Ed. 351 or instructor's consent. F 11 352 0 0832

402. Advanced Techniques of Elementary 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 instruction and materials. Prerequisites: Mus. Ed. 201 and 301 or 202 and 302. To be taken during student teaching semester. F 11 402 0 0832

404. Advanced Techniques of Secondary School Music. (1-2). Consideration of special problems related to preparation for student teaching and of instrumental, vocal, and general music programs at the secondary level. Included are audiovisual instruction and materials. Prerequisites: Mus. Ed. 203 and 303 or 204 and 304. To be taken during student teaching semester. F 11 404 0 0832

481. Cooperative Education. (1-5). A field placement which integrates course work with a planned and supervised professional experience designed to complement and enhance the students' 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, enroll 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. 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 kindergarten classroom. Included are the development of the child's musical growth through singing, listening, rhythmic and creative activities; a survey of available materials; and development of playing, singing and conducting skills. F 11 606 0 0832

610A. Music Theater in the Schools. (2). Designed to teach students how to produce a musical in the secondary schools. Includes selection of music, design elements (sets, costumes, lighting) and rehearsal techniques. F 11 610A 0 0832

611. Music for Special Education. (3). Open to any upper-division or graduate students and designed for the potential practicing music teacher, classroom teacher, or special education teacher. Identification of functioning children and their problems and current theory and practices in special music education are included. 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 certification and recertification of music teachers only. F 11 611 0 0832

684. String Teaching Seminar. (2). Historical development of string instrument teaching. Problems involving traditional and recent techniques are studied, as is private study versus class study. School class methods, studio methods, etc. are explored. F 11 684 9 0832

686. Marching Band Techniques. (2). A systematic approach to the marching band with regard to organization, show development, instrumentation, music adaptation, drill construction, and script development. F 11 686 0 0832
732. Music in the Junior High School. (3). Includes administrative structures, the curriculum, adolescent development, teaching as behavior, and competencies needed for successful teaching of general and choral music in grades six through nine. F 11 832 0 0832

737A. Advanced Woodwind Techniques. (2). Special problems and techniques in the teaching of woodwind instruments. Current materials are surveyed. Prerequisites: Mus. Ed. 237 and 238 or equivalent. F 11 737A 0 0832

739A. Advanced Brass Techniques. (2). Special problems and techniques in the teaching of brass instruments. Current materials are surveyed. Prerequisite: Mus. Ed. 239 or equivalent. F 11 739A 0 0832

740A. Advanced Percussion Techniques. (2). Special problems and techniques in the teaching of percussion instruments. Current materials are surveyed. Prerequisite: Mus. Ed. 240 or equivalent. F 11 740A 0 0832

750. Music Education Workshop. (1-4). Repeatable for credit. F 11 750 2 0832

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 students' academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors and Cooperative Education coordinators. Students enrolled in Co-op 781 may follow one of two scheduling patterns: Parallel, enroll 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. F 11 781 2 0832

784. Instrumental Music in the Elementary and Junior High School. (2). An examination of recent developments in instrumental music education and their implications for methods of teaching. F 11 784 0 0832

785. Instrumental Music Organization and Administration. (2). Problems of developing school instrumental music programs. F 11 785 0 0832

Courses for Graduate Students Only

821. Elementary Music Supervision. (3). Trends in elementary music education; evaluation of various materials and techniques; and special projects in planning and executing a modern program of music supervision. Prerequisite: Mus. Ed. 831 or instructor's consent. F 11 821 0 0832

822. Advanced Techniques in Special Music Education. (3). A course for the music education special emphasis. MME candidates only. Research literature and trends in special music education are studied. An evaluation of materials and techniques and special projects exploring the development of musical understanding in the functioning child are included. 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 certification and recertification of music teachers only. Prerequisite: Mus. Ed. 402 or 404. F 11 822 0 0832

823. Special Music Education Practicum. (3). For the music education special music emphasis MME candidate only. Supervised teaching is done in special education classrooms. A companion course to Mus. Ed. 822, this course gives the special music education emphasis MME candidate experience in teaching in special education classrooms. Prerequisite: Mus. Ed. 822 or concurrent enrollment. F 11 823 2 0832

831. Developing the Child's Musical Understanding. (3). Definition of understandings necessary for the attainment of musical awareness in the child. The exploration of classroom experiences is directed toward the successful development of understanding through the application of basic learning principles. Prerequisite: Mus. Ed. 402. F 11 831 0 0832


College of Fine Arts/Music Education 225
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 11 841 4 0832

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 11 842 4 0832

845A. Seminar in Instrumental Music Education Literature. (2). Critical analysis of literature for band, orchestra, and small ensembles in elementary and secondary schools. Current bibliography is used. Repeatable for credit. F 11 845A 9 0832

851. Psychology of Music. (2). Adapted to the viewpoint of the music educator. Emphasis is placed on the physics of sound, psychology of performance and teaching. Aesthetic principles of listening are included. F 11 851 0 0832

852. Introduction to Graduate Study. (3). See course listing under musicology-composition department. F 13 852 0 1006

854. Research Seminar in Music Education. (3). Continued application of techniques of research. The completion of a major research project is required. Prerequisite: Mus.-Comp. 852. F 11 854 9 0832

871. Philosophy of Contemporary Music Education. (2). A study of historical trends and contemporary philosophies relevant to music education, behavioral objectives and curriculum planning. Prerequisite: Mus. Ed. 851. F 11 871 0 0832

875. Thesis Research. (1-2). F 11 875 4 0832

876. Thesis. (2). F 11 876 4 0832

Music Performance

APPLIED MUSIC PRIVATE STUDY

231. (1). Basic instruction. Repeatable for credit. Lower division. F 12 231 3 1004

232. (2). For majors only. Repeatable for credit. Lower division. F 12 232 3 1004

431. (1). Repeatable for credit. Upper division. F 12 431 3 1004

432. (2). For majors only. Repeatable for credit. Upper division. F 12 432 3 1004

434. (4). For performance majors only. Repeatable for credit. Upper division. F 12 434 3 1004

731. (1). Repeatable for credit. Graduate. F 12 731 3 1004

732. (2). For majors only. Repeatable for credit. Graduate. F 12 732 3 1004

734. (4). For performance majors or students preparing for master's degree recitals only. Repeatable for credit. Graduate. F 12 734 3 1004

Applied Music Abbreviations


APPLIED MUSIC CLASSES

117J. (1). Guitar Class. Beginners. F 12 117J 3 1004

118J. (1). Guitar Class. Intermediate. F 12 118J 3 1004

117P. (1). Piano Class. Beginning Majors. F 12 117P 3 1004

118P. (1). Piano Class. Music Majors. F 12 118P 3 1004

119P. (1). Piano Class. Piano Majors. F 12 119P 3 1004

120P. (1). Piano Class. Nonmajors. F 12 120P 3 1004

117Y. Voice for Music Theater. (2). Basic repertoire and singing techniques with weekly master class devoted to music theater techniques and concepts. Restricted to nonvocal majors. F 12 117Y 3 1004

GENERAL PERFORMANCE

Noncredit Courses

050. Recital. (0). F 12 050 1 1004

080. Topics in Music. (1-3). Topics exploring events, conditions, relationships, styles, etc. in music. See semester Schedule of Courses for current listing. Not applicable to degree. Repeatable. F 12 080 2 1004
Lower-Division Courses

107-207. Piano Repertoire. (1-1). Designed to give performing and listening experience to piano majors. Repeatable for credit. F 12 107 2 1004; F 12 207 2 1004

121. Italian Diction. (1). Designed for the vocal performer, including a comprehensive study of Italian consonant and vowel sounds. F 12 121 0 1004

122. English Diction. (1), Designed for the vocal performers, including a comprehensive study of English consonant and vowel sounds. F 12 122 0 1004

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


217. Instrumental Conducting. (2). Fundamentals of baton 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 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 2 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 2 1004

251. Cooperative Education. (1-5). A field placement which integrates course work with a planned and supervised professional experience designed to complement and enhance the students' 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 251 may follow one of two scheduling patterns: Parallel, enroll 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. F 12 251 2 1004

Upper-Division Courses

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


417Y. Voice for Music Theatre. (2). Basic repertoire and singing techniques with weekly master class devoted to music.
theatre techniques and concepts. Restricted to non-vocal majors. F 12 417 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


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 students' 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, enroll 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. 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

580. Piano Pedagogy. (2). Primarily concerned with the art and science of teaching. Includes observations of master teachers in the University and community. F 12 580 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, including the teaching of mini-lessons 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 musicianship. Prerequisite: Mus. Perf. 217 or 218 or equivalent. 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 mini-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 mini-lessons for instructor and class critique. Prerequisite: performance capability on a brass instrument or consent of instructor. F 12 681 0 1004

682. Percussion Pedagogy. (2). A comprehensive study of percussion instrument techniques, concepts, and materials of studio instruction for the advanced student, including the teaching of mini-lessons for instructor and class critique. Prerequisite: performance capability on percussion instruments or consent of instructor. F 12 682 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. Ensembles. (1-1-1-1). (A) Orchestra, (B) Band; Wind Ensemble, (C) Choral Union, (D) Women's Glee Club, Men's Glee Club, (F) University Singers and A Cappella Choir, (J) Piano
Accompaniment, (K) Opera Theater, (L) Madrigals and Chamber Singers, (N) Woodwind Ensemble, (O) Saxophone Quartet, (P) Brass Chamber Ensemble, (R) Percussion Ensemble, (S) String Ensemble, (T) Jazz Arts Ensembles, (V) Guitar. Repeatable for credit. F 12 710 1 1004; F 12 711 1 1004; F 12 712 1 1004; F 12 713 1 1004

717Y. Voice for Music Theatre. (2). Basic repertoire and singing techniques with weekly master class devoted to music theatre techniques and concepts. Restricted to non-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. Prerequisites: Mus. Perf. 580 and 581. 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 class piano or private piano (college curriculums); (2) class piano in early childhood; (3) class piano for leisure-age students; (4) class piano in public (or private) schools, extending the advanced preparation of piano pedagogy students as needed. Repeatable for credit. Prerequisite: Mus. Perf. 580. F 12 843 0 1004

852. Introduction to Graduate Study. (3). See course listing under musicology-composition department. F 13 852 0 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. in music. See semester Schedule of Courses for current listing. Not applicable to degree. Repeatable. F 13 080 2 1006

Lower-Division Courses

113. Introduction to Music. (2). 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 13 113 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

127. Theory I. (2). Fundamentals of music, melodic writing and analysis, elementary melodic formal structures (cadences, 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. 129. F 13 127 0 1004

127H. Theory I Honors. (2). Fundamentals of music, melodic writing and analy-
sis, elementary melodic formal structures (cadence, phrase, period), simple harmonic relationships, and fundamental voice-leading techniques. Prerequisites: concurrent enrollment in Mus.-Comp. 129 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: Mus.-Comp. 127 or 127H, concurrent enrollment in Mus.-Comp. 129 or 130, and departmental consent. 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, rhythmic perception. 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 1005

161. Music Appreciation. (1-2). Intended to develop a capacity for critical listening and an appreciation for the various musical styles. Special attention is given to works from the standard musical repertoire. The course is designed exclusively for the nonmusic major. F 13 161 0 1005

162. Afro-American Music. (2). A survey of Afro-American music, its origins and development and the influence of Afro-American music in the United States up to the present time. F 13 162 0 1005

227. Theory III. (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 chromaticism. 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 on 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 students' 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, enroll 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. 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 three arts. F 13 310 0 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 0 1005

316. Symphonic Literature. (3). 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 0 1005

331. History of Music in the Middle Ages and Renaissance. (3). A survey of the evolution of musical styles and practices in the Western world through the 16th century. Lectures, reference readings and the study of representative examples of music are included. Prerequisites: Mus.-Comp. 113 and 227, or instructor’s consent. F 13 331 0 1006

332. History of Music in the 17th and 18th Centuries. (3). A survey of musical styles and practices of the baroque and classic periods. Lectures, reference readings and representative musical examples are included. Prerequisites: Mus.-Comp. 113 and 227. F 13 332 0 1006

333. History of Music in the 19th and 20th Centuries. (3). A survey of the styles and practices of romanticism and of the 20th century. Lectures, reference readings, performances and representative musical examples are included. Prerequisite: Mus.-Comp. 113 and 227. F 13 333 0 1006

345. Jazz Arranging. (2). Arranging for small and large jazz ensembles, with emphasis on current big band styles. Prerequisite: Mus.-Comp. 228 and 230 or instructor’s consent. F 13 345 0 1004

346. Styles of Jazz. (3). A survey of all eras in the evolution of the many styles in the jazz idiom from the end of the 19th century to the present. Open to majors and nonmajors. F 13 346 0 1006

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 students’ 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 481 may follow one of two scheduling patterns: parallel, enroll 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. F 13 481 2 1006.


Courses 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 in the smaller forms. Designed for theory-composition majors. Repeatable. Prerequisites: Mus.-Comp. 260, with consent of theory-composition area faculty and department chairperson to continue as a theory-composition major. F 13 559 3 1004 & F 13 560 3 1004

561. 18th Century Counterpoint. (2). Contrapuntal 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, rehearsing and performing of early music. Prerequisite:
582-583. Piano Literature. (2-2). Survey of the historical eras of professional piano repertory. F 13 552 0 1006; F 13 553 0 1006.

597-598. Organ Literature and Practice. (1-1). Performance and discussion of works for the instrument of all periods; study of organ design and construction; and practice in aspects of service playing, such as hymn playing, modulation, accompanying and improvisation. Required of all organ majors. Repeatable. Prerequisite: Mus.-Comp. 228 or departmental consent. F 13 597 0 1006; F 13 598 0 1006.

623. Opera Literature. (2). A comprehensive survey of Italian, German, French, Russian, English and American opera literature from the 17th century to the present. 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.

626. Voice Literature. (3). A comprehensive survey of early Italian arias, French chansons, German lieder, contemporary English songs and Russian and Spanish literature. F 13 626 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.


645. Choral Arranging. (2). Scoring for women's, men's and mixed choruses. Performance and analysis of student's arrangements in class are included. Prerequisites: Mus.-Comp. 228 and 230. F 13 645 0 1004.


659-660. Applied Composition. (2-2). Individual study in 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 contrapuntal composition techniques of the 16th century. Prerequisite: Mus.-Comp. 227. F 13 661 0 1004.

671. Chromatic Harmony. (2). Advanced study of chromatic 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 13 685 0 1006.

690. Special Topics in Music. (1-4). For individual or group instruction. Repeatable with departmental consent. F 13 690 2 1006.


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 students' academic program. Individualized programs must...
be formulated in consultation with and approved by appropriate faculty sponsors and Cooperative Education coordinators. Students enrolled in Co-op 781 may follow one of two scheduling patterns: parallel, enroll 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. F 13 781 2 1006

791-792. Seminar in Music History. (3-3). Areas of interest in music history are developed as time permits. No effort at a chronological survey is made. Ideas evoking the most interest and considered by the instructor to be of the greatest professional benefit are included when interest warrants. F 13 791 9 1006; F 13 792 9 1006

Courses for Graduate Students Only

830. Seminar in Music Theory. (3). An analytical study of the materials used in musical composition from antiquity to the present, employing analytical approaches such as Schenker, Hindemith and serial techniques. The course is designed to develop analytical perspective rather than compositional skills. F 13 830 0 1004

840A-C. Seminar in the Techniques of Composition. (2). The nature of compositional techniques is examined through selected works in different media: (A) large ensembles, (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

College of Fine Arts/Musicology-Composition 233
More than 80% of WSU nursing graduates remain in Kansas.

The Center for Continuing Health Education reaches almost 2,000 persons yearly.

The physician's assistant program is unique in Kansas, and the dental hygiene the only program of its kind at a Regents' institution.
The College of Health Related Professions was established in 1970. Sixteen programs of study are offered at the undergraduate and graduate levels. Departments within the college are accredited through the following agencies: the Council on Dental Education of the American Dental Association, the American Medical Association Council on Medical Education, the American Physical Therapy Association Committee on Accreditation in Education, the American Nurses' Association, the National League for Nursing, and the Association of University Programs in Health Education.

Degrees Offered

UNDERGRADUATE

Of the programs offered at the undergraduate level, five lead to the Bachelor of Science (BS)—health care administration, medical record administration, medical technology, nursing, and physical therapy. Four programs lead to a Bachelor of Health Science (BHS)—cytotechnology, dental hygiene, physician's assistant, and respiratory therapy.

In addition, the Associate of Science is awarded in dental hygiene and respiratory therapy. Students in the nurse clinician, physician's assistant, and emergency medical training programs receive academic credit and a certificate of completion.

GRADUATE

The College of Health Related Professions offers a graduate program leading to a Master of Health Science (MHS) with options for emphasis in administration, education or advanced clinical study. Admission to the MHS program of study requires a bachelor's degree and the fulfillment of requirements for each department.

A Master of Nursing program, individualized to meet the needs and professional goals of the student, is offered especially for the part-time (3-6 credits) student, although full-time study is available. The student selects role development in administration, teaching, or in an area of clinical concern.

More information on graduate programs is available in the Wichita State University Graduate School Bulletin.

Policies

ADMISSION

All students desiring admission to undergraduate programs offered by the College of Health Related Professions must:

1. Meet Wichita State University admission requirements (see the Admission to Wichita State section of the Catalog)
2. Have an overall grade point average of 2.00 in all previous college work.

3. Meet the requirements in one of the following categories:

   **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.

   **Category II—Students Seeking a Baccalaureate Degree.** In addition to meeting the general admission requirements to the College of Health Related Professions, each student must meet the college’s 24-hour transfer rule. (1) All students transferring to the College of Health Related Professions must have completed a minimum of 24 semester hours of credit, out of which 12 credit hours must be in any combination of biological sciences, chemistry, physics, and/or mathematics. (2) Students must maintain a minimum grade point average of 2.00 in the 12 credit hours of science courses.

   **Category III—Students Seeking a Graduate Program of Study.** Students seeking admission to graduate programs within the college should consult the Graduate Bulletin. The Bulletin may be obtained through the Graduate School in Jardine Hall.

Admission to the college does not guarantee acceptance into any of the professional programs. To be admitted to a professional program, students must be accepted into Wichita State University and the College of Health Related 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 counselor in the Health Professions Counseling Center to clarify preprofessional and professional course and admissions 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 level.

Students on probation may not enroll for more than 12 semester hours in the fall or spring semester, or 5 hours in the Summer Session, excluding 1 hour of military science, physical education, or marching band. Exception 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 Related 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 clinical health facilities for clinical education will be subject to dismissal from the professional program for failure to meet the rules, regulations, or professional standards governing a facility.
CREDIT BY EXAMINATION

Some of the programs in the College of Health Related 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 Related Professions Admissions-Exceptions Committee and the dean.

Students should check with their departmental advisers about eligibility and prerequisite requirements for this type of examination. Transcripts will identify the courses and credits received by students taking equivalency/competency examinations.

Students will be assessed approximately one-third the cost of tuition and fees per credit hour, 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 a NCr, D, or F in only one segment of a course that combines theory and clinical practice, they still fail 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 Progression in their department for permission to remain in the program.

EXCEPTIONS

Students may petition for exception to any University, college or departmental 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.

CLINICAL AFFILIATION

The college, because of its location in Wichita, has clinical affiliation agreements with various excellent health facilities which assist in the clinical education of students. A listing of the clinical affiliates, including a wide variety of hospitals and community agencies, can be obtained from the dean’s office.

LIABILITY INSURANCE REQUIREMENTS

Most students are required to purchase professional liability insurance in the amount of not less than $100,000/300,000 as well as health insurance at the beginning of the professional phase of a College of Health Related 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 related 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 Related 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 college cooperative education coordinator. 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 related students who are pursuing a bachelor's degree must meet general University requirements and fulfill the course requirements specified in the curriculum of the department offering their degree.

A minimum of 30 credit hours in course work in residence at WSU is required for all students seeking a bachelor's degree. A minimum of 30 unduplicated credit hours in course work in residence at WSU is required for students seeking a second bachelor's degree. In addition, these students must also complete all University, college, and departmental requirements for the degree 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.

The College of Health Related Professions offers the Bachelor of Science (BS) in health care administration, medical record administration, medical technology, nursing, and physical therapy.

A Bachelor of Health Science (BHS) is offered with majors in cytotechnology, dental hygiene, physician's assistant, and respiratory therapy. Students in the BHS program must fulfill the general University requirements and may select one of the following emphasis options (all options are not available in each program): (1) education, (2) administration and supervision, or (3) natural or clinical sciences, with specific preparation available in the majors just listed. Courses in these options may be offered in the College of Health Related Professions, College of Business Administration, College of Education, College of Engineering, and/or Fairmount College of Liberal Arts and Sciences. Each student's curriculum is structured individually, and a contract for the program is developed that must be approved by the department chairperson and signed by the student before it may be implemented.
DEGREE REQUIREMENTS AND COURSE LISTINGS

BACCALAUREATE

Cytotechnology

The curriculum is designed for persons who wish to become professional cytotechnologists and work with pathologists in the detection of malignancy, or cancer cells, in various body fluids or in the identification of changes in cast-off body cells. The preprofessional part of the program includes the University's general education requirements and certain science courses that serve as prerequisites for the clinical year. The professional part of the program is spent in an approved hospital under the supervision of a specially trained pathologist and includes formal lectures and laboratory experience for which the student receives 30 credit hours. Upon completion of the clinical experience, students are eligible to take the registry examination in cytotechnology to qualify for certification as registered cytotechnologists—CT (ASCP). Students may then spend one additional year of work, based on an approved contract worked out with an adviser, and receive the Bachelor of Health Science, provided at least 30 hours of Wichita State residency credit has been earned.

PREPROFESSIONAL CURRICULUM

As a minimum, students must have two years of college, or a total of 60 semester credit hours, with 14 hours in the biological sciences, in order to be admitted to the clinical year. At least 8 hours taken in the biological sciences must include laboratory experience. Although not obligatory for admission into an approved school of cytotechnology, the following program sequence is recommended because of its strong emphasis on cellular biology and genetics, which prepares students for a better understanding of the technical and clinical aspects of cytotechnology.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biol. 203, Introductory Biology I</td>
<td>5</td>
</tr>
<tr>
<td>Biol. 204, Introductory Biology II</td>
<td>5</td>
</tr>
<tr>
<td>Biol. 120, Introduction to Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>Biol. 225, Human Anatomy</td>
<td>3</td>
</tr>
<tr>
<td>Biol. 226, Elementary Human Physiology</td>
<td>3</td>
</tr>
<tr>
<td>Biol. 509G, Foundations of Human Heredity</td>
<td>4</td>
</tr>
<tr>
<td>Chem. 111, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 112, General and Inorganic Chemistry</td>
<td>5</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>Math. 111, College Algebra</td>
<td>3</td>
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<tr>
<td>Psych. 111, General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Soc. 211, Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or Speech 112, Interpersonal Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

College of Health Related Professions/Cytotechnology 239
PROFESSIONAL CURRICULUM

Admission. Students must be accepted for the third year of training by an affiliated school of cytotechnology that is accredited by the Council on Medical Education of the American Medical Association and the American Society of Clinical Pathologists through its Committee on Cytotechnology and Board of Schools of Medical Technology. At the present time the schools of cytotechnology in Wichita are located at St. Francis Hospital and Wesley Medical Center.

Curriculum. The courses listed at the end of this section are offered by the affiliated school where the student is accepted for the third year of training and are available only to students in the program.

Upper-Division Courses

401. Introduction to Histology and Pathology. (3). Lectures and demonstrations in basic histology and pathology of anatomical systems and studies in diagnostic cytology. Offered only in the fall semester. H 16 401 2 1299

405. Diagnostic Cytology of Female Reproductive System. (6). Microscopic study and diagnosis of benign and malignant cells found in smears and aspirations from female genital tract. Offered only in the fall semester. H 16 405 2 1299

411. Diagnostic Cytology of Respiratory System. (5). Microscopic study and diagnosis of benign and malignant cells in sputum and bronchial washings. Offered only in the fall semester. H 16 411 2 1299

414. Diagnostic Cytology of Effusions. (2). Microscopic study and diagnosis of benign and malignant cells in pleural, peritoneal, pericardial and cerebrospinal fluids. Offered only in the spring semester. H 16 414 2 1299

416. Diagnostic Cytology of Gastrointestinal System. (2). Microscopic study and diagnosis of benign and malignant cells found in cytological specimens from mouth, esophagus, stomach, colon and rectum. Offered only in the spring semester. H 16 416 2 1299

418. Diagnostic Cytology of Urinary System. (2). Microscopic study and diagnosis of benign and malignant cells found in urinary specimens. Offered only in the spring semester. H 16 418 2 1299

420. Diagnostic Cytology of Breast and Other Miscellaneous Sites. (2). Microscopic study and diagnosis of benign and malignant cells found in breast secretions, joint fluids, skin, cysts and other miscellaneous sites. Offered only in the spring semester. H 16 420 2 1299

423. Journal Seminars and Cytology Research. (3). Participation in journal seminars and research and selected topics of diagnostic cytology. Offered only in the spring semester. H 16 423 9 1299

427. Methodology. (5). Routine and special methods in collection and processing of specimens for cytology, cytogenetics and histology. Offered only in Summer Session. H 16 427 2 1299

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 a baccalaureate degree should contact the dental hygiene department for individual advising. Students who are registered dental hygienists must:
1. Submit an application by March 1 of the year in which they plan to enroll
2. Meet the admissions requirements of Wichita State University and the College of Health Related Professions
3. Submit the results of the National Board Examination for Dental Hygienists 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 structured individually. A contract thus developed is approved by the Degree Program Committee 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 Radiology. (3). 2R; 3L. A presentation of the theory and practice of exposing, processing and mounting X-ray films. The laboratory periods are used to gain proficiency in X-ray techniques. Care of the equipment is stressed. Prerequisite: departmental consent. H 12 104 1 1213

201. Clinical Dental Hygiene I Seminar. (1). 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 9 1213

202. Clinical Dental Hygiene I. (2). 9L. This course emphasizes providing patient care in a clinical setting. Basic instrumentation techniques as well as the prevention of dental disease will be stressed. Patient evaluation and treatment planning skills will be developed. Offered only in the spring semester. Prerequisite: departmental consent. H 12 202 1 1213

206. General and Oral Pathology. (3). A survey of general pathology of tissues and organs of human anatomy. Discussions are held on dental pathology of the 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 12 206 0 1213

290. 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 12 290 0 1213

Upper-Division Courses

301. Dental Materials and Expanded Functions. (3). 1R; 3L. Fundamental instruction in practical laboratory phases of modern technique and the manipulation
of materials and equipment used in dental practice and expanded auxiliary practice. Prerequisite: departmental consent. H 12 301 1 1213

302. Clinical Dental Hygiene II. (2). Continued development of proficiency of clinical techniques emphasizing preventive treatment and complete patient evaluation. Class meets during Summer Session. Prerequisite: departmental consent. H 12 302 0 1213

303A. Clinical Dental Hygiene III Seminar. (1). Seminar discussion of current and advanced clinical concepts and techniques as well as other topics related to future employment opportunities. Offered only in fall semester. Prerequisite: departmental consent. H 12 303A 9 1213

304A. Clinical Dental Hygiene IV Seminar. (1). 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 304A 9 1213

305. Periodontics for the Dental Hygienist. (3). Lecture and visual aid presentation of the etiology and classification of periodontal disease. A study of the treatment of the periodontally involved patient with further demonstration of advanced scaling and root planning procedures and local anesthesia as it relates to the periodontal patient. Prerequisite: departmental consent. Offered only in the fall semester. H 12 305 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 and ethics 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 Hygiene. (1). An introduction to the foundations of dental health in the community, epidemiology, health care systems, and organization of community services with fieldwork in applying the learned concepts. Prerequisite: departmental consent. H 12 309 0 1213

311. Dental Health Education. (2). This course will cover the professional philosophy and foundations of dental health education. Students will develop dental health education materials and presentations will be given to children, adult and minority groups in the community. H 12 311 0 1213

323. Clinical Dental Hygiene III. (3). 12L. Continued development of clinical proficiency and utilization of various scaling techniques and instruments. Offered only in fall semester. Prerequisite: departmental consent. H 12 323 1 1213

324. Clinical Dental Hygiene IV. (4). 12L. During the final semester of clinical dental hygiene, students are expected to utilize information and skills acquired in previous courses, 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. (3). Examination and seminar discussion of the following topics: administrative theory, principles and concepts of organizations, history of management thought, planning and effecting innovation, business administration and finance, operations, motivation, leadership, conflict and communication. Prerequisite: departmental consent. H 12 400 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 1212

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/clinical settings. Prerequisite: departmental consent. H 12 420 2 1213

430. Curriculum Development in Dental Hygiene Education. (3). A continuation of DH 420. Focus will be placed on the development of an educational curriculum for a dental hygiene program, and additional opportunities will be available for instruction in the clinical/laboratory setting. Prerequisite: departmental consent. H 12 430 2 1213

455. Personnel Management in Dental Hygiene. (3). Analysis of personnel management and completion of a personnel simulation including job analysis, recruitment, interviewing, testing, job evaluation, wage determination, training, em-
### Courses

**Communications (9 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

**Division A—Humanities and Fine Arts (9 hours)**
Minimum of 9 hours in three different departments

**Division B—Social and Behavioral Sciences (81 hours)**
- Econ. 201, Principles of Economics I .................................. 3
- Econ. 202, Principles of Economics II ................................. 3
- Psych. 111, General Psychology ........................................ 3
- Psych. 514, Psychology of Illness .................................... 3
- Soc. 211, Introduction to Sociology .................................. 3
- Soc. 538, Medical Sociology ........................................... 3
- Acctg. 210, Financial Accounting I, or Acctg. 110 and 120, Basic Accounting I and II ............................................. 3
- Acctg. 220, Managerial Accounting I .................................. 3
- Acctg. 320, Managerial Accounting II, or Fin. 640, Financial Management ......................................................... 3
- DS 495, Management Information Systems for Business ......... 3
- Fin. 340, Finance ............................................................ 3
- Mgmt. 360, Concepts of Administration .............................. 3
- Pers. 664, Labor Relations, or Econ. 661, Collective Bargaining and Wage Determination ............................................. 3
- Management 680, Decision Making .................................... 3
- Pers. 466, Personnel Management ..................................... 3
- Three additional upper-division hours from administration courses .......................................................... 3
- HAE 410, Community Health Concepts ............................... 3
- HAE 440, Health Care Administration Practicum .................. 6
- 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 (elective) ............ 3
- HAE 510, Health Finance ............................................... 3
- HAE 590, Legal Aspects of Health Care Administration ........ 3
- HAE 605, Health Services Research .................................... 3
- HAE 684, Seminar in Health Care Administration ................. 3

**Division C—Natural Sciences and Mathematics (6 or 7 hours)**
- Biol. 105G, The Human Organism, or any higher-level biology course 4
- Math. 111, College Algebra, or Math. 109, College Algebra with Review 3

Approved electives to complete the 124-hour graduation requirements

### Lower-Division Courses

231G. Current Issues in Food and Nutrition. (3). A survey course that will examine the various controversies, fads, and misconceptions surrounding nutrition and health; the cultural and historical aspects of food in America, the political aspects of food and farm policy. The course will include the basic nutrition principles that are needed to fully understand the issues discussed. H 24 231 0 0424
281. Cooperative Education Field Study. (1-5). 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 21 281 2 1201

Upper-Division Courses

440. Health Care Administration Practicum. (6) or (40L). A course providing 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 departmental administration. A written report is required. Prerequisite: senior standing or departmental consent. H 21 440 2 1202

481. Cooperative Education Field Study. (1-5). 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 21 481 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 6 hours. Prerequisite: departmental consent. H 21 490 3 1202

Courses for Graduate/Undergraduate Credit

503. Organization and Administration of the Health Care System. (3). Cross-listed as Geron. 503. Analysis of the nature of health and the inputs 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. Prerequisite: departmental consent. H 15 503 0 1201

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 pricing of health services; the need for insurance; and the role of the government in the health sector. Prerequisite: HAE 503 or Econ. 202. H 15 504 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 15 505 0 1202

507. Health Planning. (3). Designed to discuss strategic business planning in health services management. Includes a strategic management scheme that will accommodate change and encourage innovation and enhanced productivity. Presents an identification of and adaptation to strategies and options in an anticipatory time frame that will provide the organization with protection against the perils of crisis decision-making in traditional entrepreneurial organizations. Prerequisite: junior standing and instructor’s consent. H 24 507 3 1202

509. Health Care Operations Analysis. (3). An examination of methods for measuring the operational efficiency and effectiveness of health care organizations and medical care programs. Included are methods to analyze and evaluate current operations and approaches to plan better manpower, facility, technology, financial planning, and management control systems in a health setting. Prerequisites: HAE 503, Math. 111 or equivalent, Mgmt. 360, and junior standing. H 21 509 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 15 510 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, subpoena, records and testimony; settlement of claims (insurance); doctor-patient-nursing home relationship and legal consents; and other topics are considered. Prerequisite: departmental consent. H 21 590 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 ex post facto research plus statistical techniques, including correlation coefficients, the t-test, chi square and two-way analysis of variance. Prerequisite: departmental consent. H 15 605 4 1201

684. 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 21 684 0 1202

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 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 Wichita State University and are eligible to become registered by successfully completing the registration examination given by the American Medical Record Association.

PREPROFESSIONAL CURRICULUM

Courses          Hrs.
Communications (9 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
Division A—Humanities and Fine Arts
Phil. 121, Introduction to Philosophy ................................ 3
Phil. 327, Philosophy of Health Care ................................ 3
General Studies courses ........................................ 4
Division B—Social and Behavioral Sciences
Econ. 201, Principles of Economics I ................................ 3
Psych. 111, General Psychology ....................................... 3
Psych. 510, Psychology of Illness .................................... 3
Soc. 211, Introduction to Sociology ................................ 3
Soc. 538, Medical Sociology .......................................... 3
DS 495, Management Information Systems for Business .......... 3
Mgmt. 360, Concepts of Administration .............................................. 3
Pers. 466, Personnel Management .................................................. 3
HAE 410, Community Health Concepts ............................................ 3
IS 704, Introduction to Education Statistics .................................... 3
Division C—Natural Sciences and Mathematics
Biol. 105G, Human Organism ..................................................... 4
Biol. 120, Introduction to Microbiology ......................................... 4
Biol. 225, Human Anatomy ......................................................... 3
Biol. 226, Human Physiology ...................................................... 3
Chem. 103 (highly recommended as a prerequisite for Biol. 120) ......... 2
or 2 additional hours chosen from chemistry, biology, or physics ...... 3
Math. 111, College Algebra, or equivalent ...................................... 3
HS 411, Special Projects—Health Information Management ............. 3
Two of the following four courses:
Mgmt. 464, Organizational Communication .................................... 3
Mgmt. 663, Organizational Interactions ........................................... 3
Mgmt. 665, Organizational Development ......................................... 3
Mgmt. 683, Comparative and International Management ................... 3
The following electives are recommended:
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
Additional hours of electives to total 90 hours of preprofessional courses

ADMISSION TO PROFESSIONAL CURRICULUM

Students who have taken their college work at 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 November 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 August. 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 137 credit hours, including 90 credit hours in the preprofessional curriculum and 47 credit hours in the professional curriculum, are 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 131 hours, includes three years of premedical technology curriculum in the basic sciences, social sciences, humanities, and communication. The senior
year, composed of the professional medical technology courses, lasts 12 months. Students may enter the University-based program, which includes structured lecture and laboratory experiences in the University's student clinical laboratory as well as in the program's affiliated laboratories: Statlab, Inc., St. Joseph Medical Center, Wesley Medical Center, the Wichita Clinic, and the Veterans Administration Center. A second option available is enrollment in one of the affiliated hospital-based programs in Kansas. Students should seek additional information concerning these program options directly from the Department of Medical Technology. The curriculum is being revised; therefore, students are advised to obtain current information from their major advisers. 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

Courses                       Hrs.

Communications (9 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 (6 hours)*
Six hours in at least two different departments

Division B—Social and Behavioral Sciences (6 hours)
Psy. 111, General Psychology ........................................ 3
Electives ........................................................................ 3
Course offered by any other department in the social and behavioral sciences division of the general education curriculum ........................................ 3

Division C—Natural Sciences and Mathematics (80 hours)
Biol. 203, Introductory Biology I ..................................... 5
Biol. 204, Introductory Biology II .................................... 5
Biol. 330, General Microbiology ..................................... 5
Courses covering mammalian anatomy and physiology (select from Biol. 225, 226, 527, 534, 535) ........................................ 6-9
Chem. 111, General Chemistry † ...................................... 5
Chem. 112, General and Inorganic Chemistry † .................. 5
Course coverage in organic chemistry (Chem. 531 and 532, 10 hours, or Chem. 533 and 534, 5 hours) ........................................ 5-10
Math. 111, College Algebra ........................................... 3
Electives from areas of biological sciences, chemistry, physics, mathematics, or others as approved by Department of Medical Technology ........................................ 12
MT 405, Medical Immunology ........................................ 2
Electives from nonmedical technology areas ........................................ 6

* Students may wish to select General Studies courses to satisfy the University graduation requirement of 9 hours of General Studies courses. (See Academic Information—General Studies section of the Catalog.)
† May substitute Chem. 123-124, General and Analytical Chemistry (10 hours) if prerequisites are met. Check with adviser.

ADMISSION TO THE PROFESSIONAL CURRICULUM

Students who intend to apply for admission into the professional curriculum apply during their third year in the program. Applications must be submitted
to the Department of Medical Technology by November 1 for fall entry of the following year, and September 15 for entry in the following spring.

To qualify as a candidate for admission to the professional phase the student must:

1. Be admitted to Wichita State University
2. Be in the process, or have completed, the preprofessional requirements
3. Submit application to department
4. Submit three letters of recommendation
5. Have a minimum GPA of 2.00
6. Complete professional goal statement
7. Be interviewed by the Medical Technology Admissions Committee.

Acceptance into the professional phase of the program is determined by the Medical Technology Admissions Committee.

PROFESSIONAL CURRICULUM

The senior year, 12 months in length, is comprised of the professional courses. This 12 months is divided into two six-month periods. The first six months consists of formal lectures and student laboratory sessions in all the disciplines of medical technology. During the second six months, the student rotates throughout the various departments in the clinical affiliates. There they are given an opportunity to apply their newly acquired skills, knowledge, and attitudes as a member of the health care team.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>MT 400, Special Topics</td>
<td>1</td>
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<tr>
<td>MT 405, Medical Immunology</td>
<td>2</td>
</tr>
<tr>
<td>MT 450, Clinical Chemistry I</td>
<td>3</td>
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<tr>
<td>MT 451, Clinical Chemistry I Laboratory</td>
<td>2</td>
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<tr>
<td>MT 456, Clinical Chemistry II</td>
<td>2</td>
</tr>
<tr>
<td>MT 457, Clinical Chemistry II Laboratory</td>
<td>2</td>
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<tr>
<td>MT 459, Applied Clinical Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>MT 460, Hematology I</td>
<td>2</td>
</tr>
<tr>
<td>MT 461, Hematology I Laboratory</td>
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<tr>
<td>MT 466, Hematology II</td>
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<tr>
<td>MT 467, Hematology II Laboratory</td>
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<td>MT 462, Hemostasis</td>
<td>2</td>
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<tr>
<td>MT 463, Hemostasis Laboratory</td>
<td>2</td>
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<tr>
<td>MT 469, Applied Hematology</td>
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<tr>
<td>MT 470, Immunohematology I</td>
<td>2</td>
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<tr>
<td>MT 471, Immunohematology I Laboratory</td>
<td>2</td>
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<tr>
<td>MT 476, Immunohematology II</td>
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<td>MT 477, Immunohematology II Laboratory</td>
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<tr>
<td>MT 479, Applied Immunology and Immunohematology</td>
<td>2</td>
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<tr>
<td>MT 480, Clinical Immunology I</td>
<td>1</td>
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<tr>
<td>MT 483, Clinical Immunology I Laboratory</td>
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<tr>
<td>MT 486, Clinical Immunology II</td>
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<tr>
<td>MT 490, Clinical Microbiology I</td>
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<tr>
<td>MT 491, Clinical Microbiology I Laboratory</td>
<td>2</td>
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<tr>
<td>MT 496, Clinical Microbiology II</td>
<td>2</td>
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<tr>
<td>MT 497, Clinical Microbiology II Laboratory</td>
<td>2</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 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

160. Introduction to the Clinical Laboratory Sciences. (2). 1R; 2L. A study of clinical laboratory disciplines, including hematology, immunohematology, chemistry, microbiology, cytology, and histology, through an examination of laboratory testing in each discipline 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 14 160 2 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 and satisfactory academic standing prior to the first job assignment. H 14 281 2 1223

310. Clinical Laboratory Services. (2). 2R. 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 CHRP program and/or instructor's consent. H 14 310 2 1223

Upper-Division Courses

400. Special Topics. (1-3). 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

405. Medical Immunology. (2). An introduction to the study of immunological concepts as they apply to the study, prevention, and causation of the disease process. Prerequisites: Biol. 225 and 226. H 14 405 0 1223

406. Foundation of Laboratory Practices. (2). An introduction to clinical laboratory skills and instrumentation. Topics included are laboratory safety, specimen collection and processing, medical terminology, and use and care of the microscope. Prerequisite: departmental consent. H 14 406 0 1223

411. Hematology. (4). A combined theory and practice course that emphasizes the diagnosis of hematologic diseases by laboratory methods. Offered only in the summer. H 14 411 2 1223

413. Coagulation. (2). Combined theory and practice course covering aspects of bleeding disorders and associated diagnostic laboratory procedures utilized in the evaluation of factor deficiencies. Offered only in the summer. H 14 413 2 1223

421. Serology. (2). A study of the theory and techniques of various serological procedures dealing with immunologic responses to infections and autoimmune diseases. Offered only in the fall. H 14 421 2 1223

422. Immunohematology. (4). Course includes the theory and laboratory procedures covering the basic and advanced principles of immunohematology and following AABB-approved transfusion practices. Offered only in the spring. H 14 422 2 1223

430. Clinical Biochemistry. (7). A study of routine and special clinical chemistry procedures and their significance in clinical medicine. Offered only in the fall. H 14 430 2 1223

440. Clinical Microbiology. (8). Includes combined theory and practice covering: (a) morphological, cultural and serological characteristics of the pathogenic bacteria, parasites and fungi and (b) techniques required for processing specimens and for identifying organisms encountered in clinical material. Offered only in the spring. H 14 440 2 1223

250
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. Prerequisites: Chem. 361 and Biol. 226. H 14 450 0 1223

451. Clinical Chemistry I Laboratory. (2). 6L. Application of the theory of the procedures and techniques used for colorimetric, spectrophotometric, and titrimetric analysis of serum, plasma and other body fluids for clinically significant substances. H 14 451 1 1223

452. Analysis of Body Fluids. (1). Course includes the study of renal physiology, routine urinalysis, and renal function tests. Also encompasses the principle 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. (2). 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. Prerequisites: 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 to techniques appropriate to the evaluation of methodology, acid-base balance, advanced enzyme quantification, endocrinology, and toxicology. Prerequisite: MT 456, concurrent enrollment, or departmental 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 the diagnosis of disease. Prerequisites: Bio. 225-226 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. Prerequisites: MT 460 or concurrent enrollment and/or departmental consent. H 14 461 1 1223

462. Hemostasis. (2). This is a theory course covering all aspects of bleeding disorders and the associated diagnostic laboratory procedures utilized in the evaluation of the various hemostatic disorders. Prerequisites: Biol. 226, MT 460 and departmental consent. H 14 462 1 1223

463. Hemostasis Laboratory. (1). 3L. The laboratory course emphasizes the routine screening tests and the special diagnostic procedures used in diagnosis of bleeding problems. Prerequisites: MT 462 or concurrent enrollment and departmental consent. H 14 463 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 466 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 463, MT 467, and departmental consent. H 14 469 2 1223

470. Immunohematology I. (2). An introduction to blood banking theory pertinent to assurance of quality transfusion practices in a donor service including selection, collection, processing, and component therapy and to a transfusion service including application of immunology and genetics to blood group systems, compatibility testing, and clinical correlations related to transfusion reactions and to the prediction, diagnosis, and prevention of hemolytic disease of the newborn. Prerequisite: MT 405 or equivalent or consent of instructor. H 14 470 0 1223

471. Immunohematology I Laboratory. (1). 3L. A laboratory course in techniques relevant to performance of a blood banking technologist in a donor or transfusion service. Methodology 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. Prerequisite: MT 405 or
equivalent and MT 470 or concurrent en-
rollment or consent of instructor. H 14 471
1 1223

476. Immunohematology II. (2). A
problem-solving, theoretical course in blood
banking, covering HLA, disputed patern-
ity, forensic testing, antibody identification
techniques, and resolution of serologi-
cal incompatibilities encountered in
blood types, compatibility testing, he-
motherapy, hemolytic disease of the new-
born workups, Rh immune globulin tests,
and hemolytic anemia workups. Prereq-
usite: MT 470 or consent of instructor. H
14 476 0 1223

477. Immunohematology II Laboratory.
(1). 3L. A laboratory course in techniques
relevant to resolution of medical-legal
cases, antibody identification, and prob-
lems encountered in blood typing, com-
patibility testing, hemotherapy, hemolytic
disease of the newborn, Rh immune glo-
bulin, and hemolytic anemia. Prerequis-
te: MT 476 or concurrent enrollment or
instructor's consent. 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, direct an-
tiglobulin evaluation, provision of safe
blood or blood components for transfu-
sion, and resolution of discrepancies en-
countered in performing any of the pro-
cedures. Prerequisite: 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. Prereq-
usite: MT 405 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 stu-
dent with a field placement that integrates
theory with a planned and supervised profes-
sional experience designed to com-
plement and enhance the student's aca-
demic program. Individualized programs
must be formulated in consultation with
and approved by appropriate faculty
sponsors and cooperative education coor-
dinators. Prerequisites: the basic require-
ments for admission include successful
completion of the freshman year and sat-
isfactory academic standing prior to the
first job assignment. Repeateable for credit.
H 14 481 2 1223

483. Clinical Immunology I Laboratory.
(1). 3L. A laboratory course in techniques
relevant to serological diagnosis of the
following conditions: syphilis, acute bact-
erial infections, streptococcal infections,
febrile diseases, mycoplasma infections,
infected mononucleosis, rheumatoid ar-
thritis, and pregnancy. Prerequisite: MT
480 or concurrent enrollment or consent of
instructor. H 14 481 1 1223

486. Clinical Immunology II. (2). An
advanced study of the analysis of laboratory
data used in the diagnosis and manage-
ment of immunopathological conditions.
Prerequisites: MT 480 and 483. H 14 486
0 1223

490. Clinical Microbiology I. (3). Basic
theory covering (a) procedures for speci-
men processing in the clinical laboratory,
(b) normal flora, (c) morphological, cul-
tural, and serologic characteristics of
common pathogenic bacteria, (d) screen-
ting procedures for acid-fast bacteria,
fungi, and parasites, and (e) basic theory
in antimicrobial susceptibility testing tech-
niques. Prerequisites: Biol. 550 and con-
current enrollment in or completion of
MT 491. H 14 490 0 1223

491. Clinical Microbiology I Laboratory.
(2). 6L. Basic procedures for the set up
and examination of clinical specimens.
Isolation and identification procedures for
the more common pathogenic organisms.
Procedures for setting up and screening
specimens for acid-fast bacteria, fungi,
and parasites. Use and interpretation of
common antimicrobial susceptibility test-
ing procedures. Runs concurrently with
MT 490. Prerequisites: Biol. 550, previous
or concurrent enrollment in MT 490, and
departmental consent. H 14 491 1 1223

496. Clinical Microbiology II. (2). 2L.
Advanced theory, procedures, and ratio-
 nale for the isolation and identification of
the anaerobic and unusual aerobic organ-
isms. Discussion of disease processes and
identification procedures of the acid-
fast bacteria and fungi. Discussion of par-
asitic diseases and the procedures for
identification of the parasite agent. Intro-
duction to advanced antimicrobial suscep-
tibility testing techniques. Prerequisite:
Biol. 550, MT 490, MT 491, MT 497, or
concurrent enrollment. H 14 496 0 1223

497. Clinical Microbiology II Laboratory.
(2). 6L. Advanced laboratory techniques
in the isolation and identification of an-
aerobic and unusual aerobic organisms.
Techniques for cultures and identification
of acid-fast bacteria and fungi. Procedures for the positive identification of ova and parasites. Advanced antimicrobial susceptibility testing techniques. Prerequisites: Biol. 550, MT 490, MT 491, and concurrent enrollment in MT 496. H 14 497 1 223

498. Applied Clinical Microbiology. (2). Application of theoretical and practical aspects of clinical microbiology in a commercial laboratory and operating hospital laboratory. Prerequisites: Biol. 550, MT 490, MT 491, MT 496, and MT 497. H 14 498 2 1223

Course for Graduate/Undergraduate Credit
752. Method Evaluation and Selection. (3). This course will present an objective, practical approach to the evaluation of laboratory methodologies. This approach incorporates the use of statistical analysis, evaluation of technology, and clinical application. Prerequisites: MT 459, 469, 479 and 498, or equivalent, HS 705, or instructor’s consent. H 14 752 0 1223

760. Hematologic Neoplasms. (3). 3R. This course deals with the etiology, pathophysiology, and morphology of hematologic neoplasms, and the health care practitioners’ interactions with persons of those disorders. H 14 760 1223

770. Therapeutic Dimensions of Clinical Laboratory Science. (3). A study of the expanding role of the clinical laboratory in the monitoring of therapy and the patients’ response to therapy. Areas to be addressed include hemoengineering and hemotherapy, imagery, rejection phenomena, and chemotherapy including therapeutic drugs, electrolytes, vitamins, trace minerals, and antimicrobials. H 14 770 0 1223

790. Epidemiology and Infection Control. (3). 3R. A study of the expanding role of hospital personnel in the performance of hospital epidemiology and infection control. Areas to be addressed will include basic epidemiologic principles, basic considerations of hospital infections including investigations and surveillance, potential problem areas within the hospital environment, the role of the hospital laboratory and possible endemic and epidemic infections. Prerequisite: course in medical microbiology or instructor’s consent. H 14 790 0 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 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.

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.

Course 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 (9 hours)
Phil. 121, Introduction to Philosophy, or Phil. 100G, The Meaning of Philosophy * 3
Six hours in two other departments (excluding performance and studio arts)†

Division B—Social and Behavioral Sciences (12 hours)
Psych. 111, General Psychology 3
Psych. 361, Child Psychology 3
Soc. 211, Introduction to Sociology 3
One course in anthropology, political science, economics, or minority studies 3

Division C—Natural Sciences and Mathematics (18-25 hours)
Biol. 105G, The Human Organism (if no previous or minimal high school biology) 4
Biol. 120, Introduction to Microbiology 4
Biol. 225, Human Anatomy 3
Biol. 226, Elementary Human Physiology 3
Chem. 103, General Chemistry, or Chem. 111, General Chemistry 5
HS 331, Principles of Dietetics and Nutrition 3
Three-hour course in statistics with Department of Nursing approval ‡ 3

Electives (3-10 hours) †

* Students who wish a minor in philosophy should take Phil. 121.
† Students should select some General Studies courses to meet the University graduation requirement of 9 hours of General Studies courses, and Q courses to meet the 30-hour requirement. See Academic Information—General Education section of the Catalog.
‡ Math. 111 may be required as a prerequisite to statistics.

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 must be received by January 1; for spring semester admission, no later than August. To qualify as a candidate for admission to the Department of Nursing, students must:
1. Be enrolled in, or admitted to, 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.
PROFESSIONAL CURRICULUM

The following courses in the Department of Nursing are required for the Bachelor of Science in nursing. A total of 124 hours of university credit is required for graduation.

Courses

**Division A—Humanities and Fine Arts (3 hours)**
A 3-hour upper-division course in philosophy to be selected with Department of Nursing approval

**Division C—Mathematics and Natural Sciences (54-58 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Nurs. 327</td>
<td>Nursing as a Practice Discipline</td>
<td>3</td>
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<tr>
<td>Nurs. 330</td>
<td>Technologies I</td>
<td>1</td>
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<tr>
<td>Nurs. 332</td>
<td>Dimensions of Self-Care</td>
<td>4</td>
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<tr>
<td>Nurs. 334</td>
<td>Dimensions of Professional Nursing †</td>
<td>5</td>
</tr>
<tr>
<td>Nurs. 336</td>
<td>Design of Nursing Systems</td>
<td>5</td>
</tr>
<tr>
<td>Nurs. 340</td>
<td>Technologies II</td>
<td>1</td>
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<tr>
<td>Nurs. 343</td>
<td>Elements of Pathology and Medical Therapeutics I</td>
<td>3</td>
</tr>
<tr>
<td>Nurs. 347</td>
<td>Nursing Systems: Behavioral and Organic Disorders</td>
<td>3</td>
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<tr>
<td>Nurs. 349</td>
<td>Nursing Systems: Age and Role</td>
<td>3</td>
</tr>
<tr>
<td>Nurs. 352</td>
<td>Nursing Practice</td>
<td>3</td>
</tr>
<tr>
<td>Nurs. 460</td>
<td>Technologies III</td>
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<tr>
<td>Nurs. 463</td>
<td>Elements of Pathology and Medical Therapeutics II</td>
<td>3</td>
</tr>
<tr>
<td>Nurs. 466</td>
<td>Nursing Systems: Families</td>
<td>4</td>
</tr>
<tr>
<td>Nurs. 468</td>
<td>Scholarship Dimensions of Nursing</td>
<td>4</td>
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<tr>
<td>Nurs. 470</td>
<td>Technologies IV</td>
<td>1</td>
</tr>
<tr>
<td>Nurs. 472</td>
<td>Nursing Systems: Health Delivery Systems</td>
<td>3</td>
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<td>Nurs. 473</td>
<td>Senior Seminar</td>
<td>3</td>
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<tr>
<td>Nurs. 474</td>
<td>Nursing Systems: Individuals and Small Groups</td>
<td>3</td>
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<tr>
<td>Nurs. 478</td>
<td>Nursing Systems: Large Groups</td>
<td>3</td>
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<tr>
<td>Upper-division elective courses ‡</td>
<td>9</td>
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</tr>
</tbody>
</table>

| † A transition course designed to be taken by registered nurse students. 
| ‡ At least 3 credit hours must be taken outside the Department of Nursing.

OTHER REQUIREMENTS

Students must purchase uniforms and other apparel for use during some clinical laboratory experiences and 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 not less than $300,000/$900,000; 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. Information related to these requirements is available from the Department of Nursing.

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. (3). An introductory course in the study of the self-care concept of nursing and its use in nursing practice, education, theory and research, and the study of nursing as a health and assisting service. The student examines self as a student of university education for professional nursing and how to study and learn in the practice
330. Technologies I. (1). 3L. 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. Emphasis is placed on the scientific and humanistic basis for the various technologies. Prerequisite: admission to department or departmental consent. H 11 327 0 1203

332. Dimensions of Self-Care. (4). 3R; 3L. The study of self-care practices of individuals and groups in health and within ranges of physiological and psychological alterations. Emphasis is on cultural and scientific norms for universal self-care requirements. Self-care agency and deliberate action will be studied. Open to nonnursing majors with departmental consent. H 11 330 1 1203

334. Dimensions of Professional Nursing. (5). 4R; 3L. A course designed to provide for registered nurse students an introduction 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 1 1203

336. Design of Nursing Systems. (5). 3R; 6L. The study of knowledge, attitudes and skills for the design, implementation and evaluation of nursing systems for individuals. Methods of assistance and types of nursing systems will be studied. Prerequisite: admission to department. Prerequisites or corequisites: enrollment in Nurs. 327 and 332. H 11 336 1 1203


343. Elements of Pathology and Medical Therapeutics I. (3). The study of psychological and physiological pathology which underlies specific health problems and leads to self-care deficits which are studied in concurrent nursing courses. Health problems will be examined in terms of pathology, diagnostic and treatment methods, and impact on society. Open to nonnursing majors with departmental consent. H 11 343 0 1203

347. Nursing Systems: Behavioral and Organic Disorders. (3). The study of design and control of nursing systems for individuals with attention to behavioral and organic disorders and relations among these, health state and health care situations. The major types of nursing systems to be studied are partly and wholly compensatory. Prerequisites: Nurs. 327, 332, 336 and 343. H 11 347 0 1203

349. Nursing Systems: Age and Role. (3). The study of design and control of nursing systems for individuals with attention to age, developmental stage, life cycle events and various roles as these are determinants of nursing systems. The major type of nursing system to be studied is supportive educative. Prerequisites: Nurs. 327, 332, 336 and 343. H 11 349 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 development of nursing care plans, scientific rationale for nursing interventions, priorities and evaluation of nursing care and nursing actions. Prerequisite: departmental consent. H 11 350 0 1203

352. Nursing Practice. (3). 9L. A clinical course for use and evaluation 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. Prerequisites: Nurs. 327, 332, 336 and 343. 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: Nurs. 336 and 343. Concurrent: Nurs. 347, 349, 352, and 340. Departmental consent required. H 11 352H 1 1203

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 competencies in nursing practice. Repeatable. Prerequisite: departmental consent. H 11 425 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 lifespan, to changed body image, disability and disfigurement, chronic illness, dying and death. Includes grief and mourning. Open to nonnursing majors. H 11 430 0 1203
460. Technologies III, (1). 3L. A continuation of NURS 330 and 340 which builds on content presented in these courses. Prerequisites: NURS 330 and 340. Open to nonnursing majors with departmental consent. H 11 460 1 1203

463. Elements of Pathology and Medical Therapeutics II. (3). A continuation of NURS 343, which builds on content presented in the first course. Prerequisites: NURS 327, 332, 336 and 343. Open to nonnursing majors with departmental consent. H 11 463 0 1203

466. Nursing Systems: Families. (4). 2R; 3L. The study of design and control of nursing systems for the family unit with shared health goals and of socio-economic factors which influence the health situation. Attention will be given to family systems theory. Prerequisites: NURS 343, 347, 349, 352 and 463. H 11 466 1 1203

466H. Clinical Honors: Nursing Systems for Families. (3). 9L. A clinical honors course for the use and examination of nursing theory and research in the design and control of nursing systems for the family as a client of nursing. The emphasis of the course is the design and control of nursing systems for families experiencing crisis. Prerequisites: NURS 347, 349, 340, 352, 463 and departmental consent. Pre- or corequisites: NURS 460, 466 and 468. H 11 466H 1 1203

468. Scholarship Dimensions of Nursing. (4). 3R; 3L. The study of research and theory development in nursing and the use of these in developing nursing knowledge. Students will examine research problems and use research findings in clinical nursing situations. Relations among roles of practitioner, educator, researcher and theory developer will be examined. Prerequisites: NURS 343, 347, 349, 352 and 463. H 11 468 1 1203

470. Technologies IV. (1). 3L. A continuation of NURS 330, 340 and 460 which builds on content presented in these courses. Prerequisites: NURS 330, 340 and 460. Open to nonnursing majors with departmental consent. H 11 470 1 1203

472. Nursing Systems: Health Delivery Systems. (3). 9L. This practicum course examines systems of nursing delivery as a part of the larger health care delivery system with emphasis on organization and administration, change and control technologies. The student may select from a variety of health care systems for clinical nursing experiences. Prerequisites: NURS 466, 468, and concurrent enrollment in NURS 473 and 474. 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: NURS 466, 468, and concurrent enrollment in NURS 472 and 474. H 11 473 1 1203

474. Nursing Systems: Individuals and Small Groups. (3). 9L. This practicum course emphasizes the complexity of design and control of nursing systems for individuals and small groups with a specified range of self-care deficits. The student may elect to concentrate on wholly compensatory, partially compensatory or educative supportive nursing systems. Prerequisites: NURS 466, 468, and concurrent enrollment in NURS 472 and 473. H 11 474 1 1203

478. Nursing Systems: Large Groups. (3). 2R; 3L. The study of nursing to large groups with multiple, complex health problems. Community health problems and resources will be assessed, and designs of nursing systems for large groups will be studied. Prerequisites: NURS 466 and 468. 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 multiple, complex health problems. 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: NURS 460, 466, 468, and departmental consent. Corequisites: NURS 470, 472, 473, 474 and 478. H 11 478H 1 1203

481. Cooperative Education Field Study.
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: parallel, enroll concurrently in a minimum of six hours of course work in addition to their co-op assignment, or alternating, working full time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisites: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. H 11 481 2 1203

**Courses for Graduate/Undergraduate Credit**

505. Directed Study in Nursing. (1-4). Elective. Individual study of the various aspects and/or problems of professional nursing. Repeatable. Prerequisite: departmental consent. H 11 505 3 1203

543. Women and Health Care. (3). This course examines the historical development of the women's health movement, focuses on current issues relevant to women and health care, and explores the roles of women in the health care system and as consumers of health care. Self-care practices of women are examined and ways to promote positive health practices are studied. Open to nonnursing majors. H 11 543 0 1203

570. Interpretations of Sexuality for Health Professions. (3). Cross-listed as HS 570. Elective. Strategies to assist clients and families to cope with sexual problems and disorders. Emphasis on relating varying interpretations of biological, psychological and cultural aspects of sexuality to the helping professions. Open to nonnursing majors. H 11 570 0 1203

701. Orientation to Graduate Nursing Education. (1). Graded S/U only. Designed to facilitate adjustment and socialization to graduate nursing education. Prerequisites: admission to graduate program in nursing and departmental consent. H 11 701 0 1203

703. Foundations of Nursing. (4). Study of the evolution of nursing through analysis of historical, theoretical, philosophical and ethical-legal foundations of nursing. Selected major theories pertinent to health care are examined. Parameters of nursing are appraised in relation to political, economic, cultural and organizational factors affecting health care systems. Projections for the future are explored. Prerequisites: admission to graduate program in nursing and departmental consent. H 11 703 0 1203

705. Nursing Research. (3). Building on an initial research experience, this course is designed to assist the student in understanding premises which govern research design, implementation and evaluation. Consideration is given to current issues in nursing 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 undergraduate research course and departmental consent. Prerequisites or corequisites: Nurs. 701 and 703. H 11 705 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. Prerequisites: admission to Graduate School and departmental consent prior to registration. 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 major adviser and preceptor, objectives and evaluative criteria for the experience. Prerequisites: admission to undergraduate program or to Graduate School, Nurs. 700, and departmental consent prior to registration. H 11 796 2 1203

799. Directed Readings in Nursing. (1-2). An opportunity for the student to engage in critical search of the literature in areas related to the profession and practice of nursing. Prerequisites: admission to Graduate School and departmental consent prior to registration. H 11 799 3 1203

**Courses for Graduate Students Only**

802. Design and Management of Nursing Systems. (3). Analysis of nursing systems based on current theories and management strategies. Prerequisites: departmental consent and Phase I courses: Nurs. 701, 703, 705 and 709. H 11 802 0 1203

804. Nursing Practicum. (1-6). A clinical
experience in selected settings that enables the student to implement a plan for nursing practice based on current theory, test a clinical study question, and conduct a professional development program. Prerequisite: departmental consent. Prerequisite or corequisite: Nurs. 802. H 11 804 2 1203

811. Foundations of Nursing Administration. (3). This course is designed to assist the student in acquiring theoretical knowledge of organizations. Consideration is given to current issues and research in nursing administration and impact on nursing practice. Prerequisites: departmental consent prior to registration; and Phase I courses: Nurs. 701, 703, 705 and 709. Prerequisites or corequisites: Phase II courses: Nurs. 802 and 804. H 11 811 0 1203

812. Nursing Administration Practicum. (3 or 6). A practicum in a 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 or service, mid-level nursing administration, staff development or community health. Prerequisite: departmental consent. Prerequisite or corequisite: Nurs. 811. H 11 812 2 1203

813. Foundations of Nursing Education. (3). Designed to assist the student to explore theoretical and practical aspects to curriculum development and teaching of nursing in higher education and continuing education. Prerequisites: departmental consent and Phase I courses: Nurs. 701, 703, 705 and 709. Prerequisites or corequisites: Phase II courses: Nurs. 802 and 804. H 11 813 0 1203

814. Nursing Education Practicum. (3 or 6). An experience of nursing education in which the student, under professional guidance, becomes directly involved in clinical and classroom teaching, curriculum development and participation in other faculty functions in higher education and continuing education. A seminar accompanies the field experience. Prerequisites: departmental consent. Prerequisite or corequisite: Nurs. 813. H 11 814 2 1203

815. Foundations of Clinical Concentration. (3). Seminars will enable students to explore current clinical theory and research and identify appropriate nursing systems for selected client population. Prerequisites: admission to graduate program in nursing, departmental consent and Phase I courses: Nurs. 701, 703, 705, and 709. Corequisites: Nurs. 802, 804, and a cognate course. 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. Prerequisites: admission to graduate program in nursing and departmental consent. Prerequisite or corequisite: Nurs. 815. H 11 816 1 1203

817. Foundations of Clinical Concentration: Diabetes Mellitus. (3). Seminars in various nursing categories will enable the students to explore current clinical theory and research and to identify appropriate nursing systems for clients with diabetes mellitus. Special emphasis will be given to the psychological adjustment of the person with this disease. Material will be directed to the support of the person with diabetes in the attainment and maintenance of optimal functioning. Prerequisites: departmental and instructor's consent; Phase I Courses: Nurs. 701, 703, 705, and 709; and Phase II courses: a cognate course, Nurs. 802, and 804. H 11 817 0 1203

818. Clinical Concentration Practicum in Diabetes Nursing. (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 nursing management. A seminar will accompany the practicum. Prerequisite: Nurs. 817. H 11 818 1 1203

819. Foundations of Clinical Concentration: Mental Health Nursing. (3). Seminars will enable students to explore current clinical theory and research and to identify appropriate nursing systems for mental health clients. Prerequisites: departmental and instructor's consent; Phase I courses: Nurs. 701, 703, 705, and 709; and Phase II courses: a cognate course, Nurs. 802, and 804. H 11 819 0 1203

821. Thesis. (1-6). Graded S/U only. An opportunity for the student, in conjunction with the academic adviser and a three-member thesis committee, to design and conduct a formal research project. Prerequisites: admission to Graduate School and departmental consent prior to registration. H 11 821 3 1201

822. Clinical Concentration Practicum in Mental Health Nursing. (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 mental health nursing. A seminar will accompany the practicum. Prerequisites: completion of Phase II courses (Nurs. 802 and 804) and Nurs. 819. H 11 822 1 1203

College of Health Related Professions/Nursing 259
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 adviser. Prerequisites: admission to Graduate School and departmental consent prior to registration. H 11 823 4 1201

825. Independent Study. (1-6). Independent study provides opportunity for the student to develop, in collaboration with a departmental faculty member, objectives and protocol for independent work related to the practice of nursing. Prerequisites: admission to graduate school and departmental consent prior to registration. H 11 825 3 1201

827. Research Seminar. (1). Designed to assist the student to complete a thesis proposal. Prerequisites: Nurs. 701, 703, 705 and departmental consent. H 11 827 0 1201

829. Foundations of Clinical Concentration: Nursing of Children. (3). Seminars will enable students to investigate current clinical theory and research and identify appropriate nursing systems for children. Special emphasis will be given to the nursing assessment of the growth and development of children. The parents, as self-care agents, will be a focus in developing nursing designs. Prerequisite or corequisite: Phase I courses: Nurs. 701, 703, 705, and 709; and Phase II courses: a cognate course, Nurs. 802, and 804. H 11 829 0 1203

832. Clinical Concentration Practicum in Nursing of Children. (3-6). An intensive clinical experience in which the student is expected to study, design, and implement nursing systems for individuals or groups of children. A seminar will accompany the practicum. Prerequisite: Nurs. 829. H 11 832 1 1203

833. Foundations of Clinical Concentrations in Adult Nursing. (3). Examination of current clinical theories and research relevant to healthy and ill adults in this culture. Emphasis is placed on designing appropriate nursing care systems for adults by nurses with advanced preparation. Prerequisites: Phases I and II of graduate program; Nurs. 733 (or HS 833), Nurs. 791A or consent of instructor. H 11 833 0 1203

834. Clinical Concentration in Adult Nursing. (3 or 6). An intensive clinical experience in which the student is expected to study, design and implement nursing care systems or approaches for individuals or groups in specific areas of adult nursing. Areas may involve health maintenance or illness care of acutely or chronically ill adults. A seminar will be included as part of the practicum. Prerequisites: Phases I and II of graduate program; graduate pathophysiology; Nurs. 833 may be concurrent. H 11 834 1 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 Wichita State’s general education graduation requirements for the Bachelor of Science in physical therapy.

Courses Hrs.

Communications (9 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 (9 hours) *
Nine hours in at least three different departments

Division B—Social and Behavioral Sciences (9 hours)
Psych. 111, General Psychology ................................ 3
Soc. 211, Introductory Sociology ............................... 3
Psych. 314, Child Psychology; Psych. 365, Psychology of Aging; Psych. 514, Psychology of Illness; or Soc. 537, Social Consequences of Disability ......................................................... 3

Division C—Natural Sciences and Mathematics (36-37 hours)
Biol. 203, Introductory Biology I ............................. 5
Biol. 225, Human Anatomy .................................... 3
Biol. 226, Elementary Human Physiology .................. 3
Chem. 111, General Chemistry I ............................. 5
Chem. 112, General and Inorganic Chemistry .............. 5
Math. 111, College Algebra, and 123, College Trigonometry or
Math. 112, Precalculus Mathematics .......................... 5-6
Phys. 213, General College Physics I ......................... 5
Phys. 214, 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 9 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 Wichita State
2. Have a minimum cumulative grade point average of 2.75 in all college courses, including a minimum 2.75 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 Related 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.

Courses

\[
\begin{array}{ll}
\text{Division D—Professional Studies} & \text{Hrs.} \\
\text{PT 300, Basic Patient Care Skills} & 2 \\
\text{PT 302, Clinical Education I} & 1 \\
\text{PT 312, Clinical Education II} & 1 \\
\text{PT 320, Applied Biomechanics} & 3 \\
\text{PT 350, Physical Therapy Evaluation Procedures} & 2 \\
\text{PT 355, Physical Agents} & 4 \\
\text{PT 380, Growth, Development, and Aging} & 2 \\
\text{PT 409, Introduction to Research for the Health Professions} & 1 \\
\text{PT 411, Special Projects} & 1-1 \\
\text{PT 422, Clinical Education III} & 2 \\
\text{PT 432, Clinical Education IV} & 3 \\
\text{PT 440, Prosthetics and Orthotics} & 2 \\
\text{PT 442, Clinical Internship I} & 6 \\
\text{PT 445, Physical Therapy Procedures} & 2 \\
\text{PT 450, Therapeutic Exercise} & 4 \\
\text{PT 452, Clinical Internship II} & 6 \\
\text{PT 480, The Physical Therapist in Practice} & 3 \\
\text{PT 485, Topics in Physical Therapy} & 1 \\
\text{PT 489, Basic Joint Mobilization} & 2 \\
\text{PT 505, Pathophysiology I} & 4 \\
\text{PT 605, Pathophysiology II} & 4 \\
\text{Biol. 470, Applied Human Physiology} & 4 \\
\text{HS 301, Clinical Pharmacology} & 3 \\
\text{HS 310, Gross Anatomy} & 6 \\
\text{HS 511, Neuroanatomy and Neurophysiology} & 3 \\
\text{RT 102, Cardiopulmonary Resuscitation and Prudent Heart Living} & 1 \\
\end{array}
\]

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 $100,000/$300,000) and health insurance coverage. This must be done on a yearly basis. In addition, students are required to provide their own transportation to and from the health care facilities used for clinical experiences. During internship 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. (1-5). A field placement which integrates coursework with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors and Cooperative Education coordinators. Students enrolled in Co-op 281 may follow one of two scheduling patterns: Parallel, enroll 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 such students need not be concurrently enrolled in any other course. Prerequisite: satisfactory academic standing prior to the first job assignment; or credit. H 17 281 2 1212

Upper-Division Courses

300. Basic Patient Care Skills. (2). 1R; 2L. An introduction to fundamental patient care skills and principles used by physical therapists. Prerequisite: departmental consent. H 17 300 1 1212

302. Clinical Education I. (1). 4P. Introduction to basic patient care in various hospital departments. Offered Cr/NCr only. Prerequisite: departmental consent. H 17 302 2 1212

312. Clinical Education II. (1). 4P. Application of the skills acquired in class to patients in physical therapy clinics, supervised by a physical therapist at each clinic. Offered Cr/NCr only. Prerequisite: departmental consent. H 17 312 2 1212

3320. 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 3320 1 1212

350. Physical Therapy Evaluation Procedures. (2). 1R; 3L. In this course the student will study and develop skill in the performance of the fundamental evaluation procedures used by physical therapists. 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

380. Basic Human Growth and Development and the Aging Process. (2). 2R; 1L. Introduction to growth and development from conception through aging. Includes basic concepts of development of the musculo-skeletal, neurophysiological and cardiovascular systems and significant changes which occur throughout the aging process. Included in the course will be evaluation tools used in assessing the most prevalent motor and developmental disabilities in children under five years of age. Basic physical therapy treatment procedures used in treating these conditions will also be presented. Prerequisite: departmental consent. H 17 380 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 investigative study through the completion of a project in, or related to, the field of physical therapy. Students must complete 2 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. Prosthetic and orthotic principles, types, and training will be studied, with an emphasis on the role of the physical therapist. Prerequisite: departmental consent. H 17 440 1 1212

442. Clinical Internship I. (6). 40P. Full-time assignments to physical therapy clinics where the student is responsible for patient evaluation and the planning, administration and evaluation of treatment programs under supervision. Offered only in Summer Session. Offered Cr/NCr only. Prerequisite: departmental consent. H 17 442 2 1212

445. Physical Therapy Procedures. (2). 1R; 2L. The study of evaluation and treatment procedures used by physical therapists in dealing with patients with such
450. Therapeutic Exercise. (4). 2R; 4L.
The major approaches to therapeutic exercise will be presented and skill in performance developed. The use of therapeutic exercise equipment will also be studied. Activities of daily living will be 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 Internship II. (6). 40P.
Continuation of PT 442 at a different clinic. Offered Cr/NCr only. Prerequisite: PT 442. H 17 452 2 1212

480. The Physical Therapist in Practice. (3).
A study of administrative, supervisory, organizational and consultative roles of a physical therapist, including current trends in physical therapy and healthcare, employment opportunities and legal responsibilities. Offered only in the spring semester. Prerequisite: departmental consent. H 17 480 0 1212

485. Topics in Physical Therapy. (1).
Weekly discussion topics will include those of current interest and activity within the profession. Among the topics will be education and accreditation, realm of practice and competency, and the changing roles and interactions of diverse health professionals. Prerequisite: departmental consent. H 17 485 0 1212

489. Basic Joint Mobilization. (2). This course is intended to provide the student with basic knowledge and skills necessary to select and perform appropriate techniques of joint mobilization for the evaluation and treatment of joint dysfunction. Prerequisite: departmental consent. H 17 489 1 1212

Courses for Graduate/Undergraduate Credit

500. Advanced Developmental Disabilities. (1). 1R; 1L. Elective. The emphasis of this course is on advanced evaluation and treatment of children with perceptual motor and/or developmental disabilities. Reading assignments, class discussions and laboratory experiences will be directed toward students' interests or particular needs. Prerequisite: PT 380. H 17 500 0 1212

505. Pathophysiology I. (4). The body's defenses and responses to disorders, disease, and injury will be studied. The common disorders, diseases, and injuries to the body systems will be analyzed as to cause, effect, and treatment. Prerequisite: departmental consent. H 17 505 0 1201

605. Pathophysiology II. (4). The in-depth analysis of diseases, disorders, and injuries to the musculoskeletal system and to the nervous system will be presented. Pathology, assessment, and treatment will be discussed. Prerequisite: departmental consent. H 17 605 0 1201

Physician's Assistant

All students completing the 24-month physician's assistant program receive a certificate of completion. In addition, students who meet all University degree requirements have the option of receiving the Bachelor of Health Science. Nearly all past graduates of the program have met BHS requirements at the end of the professional program.

As defined by the National Academy of Sciences, the physician's 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 National Board Examination of the National Board of Medical Examiners and to be registered in states that have made provisions for the registration of physician's assistants, including Kansas. Students enrolled in the program are awarded Wichita State credit for all completed work. This program has been accredited by the American Medical Association.
ADMISSION REQUIREMENTS

Minimum requirements for students accepted for the program are a baccalaureate degree or three years of direct patient contact medical experience, or an equivalent combination of academic achievement and medical experience. Students are required to have taken mathematics, chemistry, and human anatomy and physiology before admission. Applicants should have a broad background and knowledge of the medical environment and of medical practices and procedures in such areas as nursing, medical technology, and physical therapy or have three years of responsible and progressive health care experience as a medical corpsman, nursing assistant, or medical technician. The program staff will consider individual waivers to these requirements upon request.

Applicants must be accepted by the Admissions Committee of the Physician’s Assistant Program. The committee’s decision is based on the student’s previous education and medical experience and on personal interviews. Applications must be completed by February 1 for the fall class.

CURRICULUM

The Physician’s Assistant Program curriculum consists of both classroom and clinical courses. Clinical courses are taught by physicians in affiliated hospitals throughout the state.

Once admitted, students must take the following courses to meet the physician’s assistant professional requirements. Professional courses are available only to students in the program.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>HS 388, Clinical Anatomy</td>
<td>3</td>
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<tr>
<td>HS 389, Clinical Anatomy</td>
<td>3</td>
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<tr>
<td>HS 390, Clinical Physiology</td>
<td>4</td>
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<tr>
<td>HS 400, Clinical Pathophysiology</td>
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</tr>
<tr>
<td>HS 421, Applied Clinical Pharmacology I</td>
<td>3</td>
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<tr>
<td>HS 422, Applied Clinical Pharmacology II</td>
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<tr>
<td>PA 211, Assessment and Management of the Integument</td>
<td>2</td>
</tr>
<tr>
<td>PA 212, Assessment and Management of the Cardiovascular System</td>
<td>2</td>
</tr>
<tr>
<td>PA 213, Assessment and Management of the Pulmonary System</td>
<td>2</td>
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<tr>
<td>PA 214, Assessment and Management of the Gastro-Intestinal System</td>
<td>2</td>
</tr>
<tr>
<td>PA 218, Assessment and Management of Obstetrics and Gynecology</td>
<td>2</td>
</tr>
<tr>
<td>PA 221, Assessment and Management of the Nervous System</td>
<td>2</td>
</tr>
<tr>
<td>PA 222, Assessment and Management of the Musculo-Skeletal System</td>
<td>2</td>
</tr>
<tr>
<td>PA 223, Assessment and Management of the Endocrine System</td>
<td>2</td>
</tr>
<tr>
<td>PA 224, The Medical History and Counseling Techniques</td>
<td>2</td>
</tr>
<tr>
<td>PA 225, Introduction to the Profession</td>
<td>1</td>
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<tr>
<td>PA 226, Assessment and Management of the Renal and Genito-Urinary Systems</td>
<td>2</td>
</tr>
<tr>
<td>PA 227, Assessment and Management of Ophthalmic and Otolaryngological Problems</td>
<td>2</td>
</tr>
<tr>
<td>PA 228, Clinical Skills I</td>
<td>2</td>
</tr>
<tr>
<td>PA 410, Clinical Rotation in Medical-Inpatient Service</td>
<td>5</td>
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<tr>
<td>PA 414, Clinical Rotation in Emergency Room</td>
<td>5</td>
</tr>
<tr>
<td>PA 418, Clinical Rotation in Family Practice I</td>
<td>5</td>
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<tr>
<td>or PA 419, Clinical Rotation in Primary Care I</td>
<td>5</td>
</tr>
</tbody>
</table>

College of Health Related Professions/Physician’s Assistant 265
PA 422, Clinical Rotation in Internal Medicine ....................... 5
or
PA 412, Clinical Rotation in Surgery I ............................ 5
PA 430, Clinical Conference I .................................. 2
PA 432, Clinical Conference II .................................... 3
PA 440, Clinical Preceptorship ................................. 6

Recommended Electives (20 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 physician’s assistant curriculum will receive a certificate of completion. In addition, students may qualify for the Bachelor of Health Science with emphasis in physician’s assistant by completing the physician’s 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 clinic 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 blood gases; respiratory therapy; management of the pulmonary cripple; special pulmonary problems of the newborn; epidemiology of pulmonary disease; management, convalescence 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 gastro-intestinal (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 symptomatology, roentgenology of the GI tract, GI 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 both the central and peripheral nervous systems. Special considerations include special diagnostic procedures, neurological 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 musculo-skeletal system. Special considerations include congenital anomalies; orthopedic emergencies; traction, splinting and casting; the common arthropathies; and rehabilitation. H 19 222 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 hypothalamus; diseases of the thyroid, parathyroid and adrenal gland; diabetes mellitus; diagnostic procedures; special diets; endocrine emergencies; and the treatment of endocrine diseases. H 19 223 0 1299

224. The Medical History and Counseling Techniques. (2). 2R; 1L. The theory and techniques of the medical history and counseling are considered. The basic concepts of the character of historical data and interviewing techniques are considered. Philosophies of counseling are presented 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

225. Introduction to the Profession. (1). An introductory course for the physician’s assistant student that details the history, philosophy, and future of the profession. Special consideration is placed on the interdisciplinary aspect of patient care, and the team approach is emphasized. Guest lecturers from other disciplines describe their role in the health field to integrate the entire concept for the student. Prerequisite: instructor’s consent. H 19 225 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-urinary (GU) system, infectious diseases, trauma, calculi, and special diagnostic procedures. During this course common venereal diseases are examined with special emphasis on management, treatment, and epidemiology. Prerequisite: instructor’s consent. H 19 226 0 1299

227. Assessment and Management of Ophthalmic and Otorhinolaryngological Problems. (2). A theory course dealing with potential pathophysiology of the eye, ear, nose, and throat. Special emphasis is placed on etiology, diagnosis, and treatment of ophthalmic and otorhinolaryngological (ENT) problems. Included in the course are tumors of the ear, nose, throat, and eye; tracheostomy; emergencies; tonometry; audiometry; and ophthalmic manifestations of systemic diseases. Prerequisite: instructor’s consent. H 19 227 0 1299

228. Clinical Skills I. (2). 1R; 4L. A combined theory, laboratory, and clinical experience in which students apply their knowledge to the care of patients. Special considerations include the physical examination with emphasis in applied anatomy and physiology basic to understanding the examination with examples of normalities and abnormalities; medical terminology; evaluation of patients; patient rapport; and professional conduct. Lecture, simulation, and clinical application are employed in this course. Prerequisite: admission to the Physician’s Assistant Program. H 19 228 0 1299

251. 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, enroll concurrently in a minimum of six hours of course work in addition to their co-op assignment; or alternating, working full time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisites: completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. H 19 281 2 1299

Upper-Division Courses

311. Clinical Rotation in Rehabilitation. (3). A four-week clinical experience in which students participate in the care and rehabilitation of a variety of patients. During this rotation students are involved in learning the techniques of occupational therapy and physical therapy. Time is also
410. Clinical Rotation in Medical In-Patient Service. (5). A six-week clinical experience in which students participate in the care of the hospitalized patient. During the rotation, students are involved in admitting, taking histories and performing physical examinations, diagnostic procedures and preoperative procedures, and assisting in the operating room and with the immediate postoperative care and convalescence of the patient. H 19 410 1 1299

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 1214

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 preps, 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 the patient with ear, nose and throat problems. During this rotation the student is involved in obtaining a detailed data base, performing diagnostic and therapeutic procedures unique to the otorhinolaryngologist, and treatment of the ear, nose and throat problems. Students also observe and participate in the daily practice experienced by a physician with a otorhinolaryngology specialty. H 19 314 1 1299

315. Clinical Rotation in Outpatient Mental Health (3). A three-week clinical experience in which the student participates in the care of patients in an outpatient mental health clinic. Students will be involved in data collection, diagnosis, treatment and follow up of patients with a variety of psychiatric and behavioral problems. Special emphasis will be placed upon the decisional processes involved in treating patients on an outpatient basis. Prerequisite: departmental consent. H 19 315 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 and preoperative 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 gynecology patients. During this rotation, students are involved in patient assessment, diagnostic procedures and treatment of the gynecology patient. Students follow obstetric patients through 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 examinations, assessment 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 metropolitan mental health clinic. Students are involved in data collection, assessment and the formulation of treatment plans for patients with a variety of psychic or emotional disturbances. Special emphasis is placed on suicide prevention. H 19 415 1 1299

417. Clinical Rotation in Admitting and Personnel Health Care. (5). A six-week clinical experience in which students participate in the care of patients seeking hospitalization. In addition, students study employees' health service. Students are involved in history and physical examination, assessment and determinations as to whether hospitalization is needed. Students also have the opportunity to do annual examinations of employees as well as participating 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 resi-
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. During this rotation the student is involved in obtaining a detailed data base, performing diagnostic and therapeutic procedures, counseling the acute and chronically ill patient in the disease process and therapy. Students also observe and participate in the daily practice and problems experienced by the internal medicine physician. 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 medical adult patient in both an inpatient and outpatient environment. During this rotation the student is involved in developing the patient's medical history, performing diagnostic and therapeutic procedures, counseling the patient and family, and following up on the patient. Students also observe and participate in the daily practice and problems 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 developing the patient's medical history, performing diagnostic and therapeutic procedures, counseling the patient and family, and following up on the patient. Students also observe and participate in the daily practice and problems experienced by the pediatrician. 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 the opportunity to correlate physical and historical findings to radiographic results. Students are also involved in the role of the radiologist 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 improve their skills in admitting, taking history, 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 and treatment. Students also observe the diversity and complexity of the role of the family practitioner. Prerequisite: department chairperson's consent. 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 examination, diagnostic procedures, development of plan of care and treatment. Students also observe the diversity and complexity of the role of the primary 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 is the writing of clinical papers during the semester and an analysis of clinical problems encountered in the clinical rotation. This requires competent utilization of the computer patient tracking system at the Program for an analysis by the student 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 to be offered in the spring semester to clinical Physician's Assistant students. The primary focus of the class will be on issues affecting the graduate Physician's Assistant, which include legislative issues, professional associations and responsibilities, practice limitations, malpractice issues, etc. This course will include review sessions for the National Board Examination utilizing lecture, demonstration, and computer-assisted 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 culmina-
tion of the student's clinical training. Students are placed with a primary-care physician to enable them to function as members of the health-care team in a setting similar to that which would be encountered by the graduate physician's assistant. H 19 440 1 1299

481. Cooperative Education Field Study.
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: parallel, enroll concurrently in a minimum of six hours of course work in addition to their co-op assignment, or alternating, working full time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisites: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. H 19 481 2 1299

Respiratory Therapy

The baccalaureate program in respiratory therapy through a Bachelor of Health Science is designed for the individual currently enrolled in the Wichita State 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

The Bachelor of Health Science program requires completion of a basic program in respiratory therapy plus the general requirements of the University. (The basic program is given later in the section under the heading Associate of Science Programs—Respiratory Therapy.) It is a three-track option program providing three interrelated courses of study. Students may select one of the following options: (1) respiratory therapy education, (2) management, or (3) advanced clinical study. Courses taken in these options are offered by the College of Health Related Professions, the College of Business Administration, the College of Education, and Fairmount College of Liberal Arts and Sciences. Students may also take a combination of the two options. A contract for graduation must be completed one semester prior to the expected graduation date.

The following three options are available to the major after completion of the Associate of Science in respiratory therapy. The suggested curricula are described with courses listed in the appropriate sequences. Substitutions or other changes must be approved by the respiratory therapy adviser. In addition to the courses listed below, general education and other University requirements must be satisfied. (See the Academic Information—Requirements for Graduation section of the Catalog.)

Education Option

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs</th>
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<tbody>
<tr>
<td>Psych. 361, Child Psychology</td>
<td>3</td>
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<tr>
<td>IS 433, Educational Psychology: Learning and Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>RT 320, Clinical Projects</td>
<td>6</td>
</tr>
<tr>
<td>HAE 501, Health Education Curriculum Development</td>
<td>3</td>
</tr>
<tr>
<td>HAE 506, Teaching and Learning Strategies in Health Science</td>
<td>3</td>
</tr>
<tr>
<td>HS 411, Special Projects (student teaching practicum)</td>
<td>6</td>
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</table>
Management Option

Course

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Econ. 201, Principles of Economics</td>
<td>3</td>
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<tr>
<td>Acctg. 210, Financial Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
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<tr>
<td>Acctg. 110 and 120, Basic Accounting I and II</td>
<td>6</td>
</tr>
<tr>
<td>Mgmt. 360, Concepts of Administration</td>
<td>3</td>
</tr>
<tr>
<td>Pers. 466, Personnel Management</td>
<td>3</td>
</tr>
<tr>
<td>HAE 503, Organization and Administration of the Health Care System</td>
<td>3</td>
</tr>
<tr>
<td>HAE 507, Health Planning</td>
<td>3</td>
</tr>
<tr>
<td>HAE 565, Concepts of Quality Assurance in Health Care Administration</td>
<td>3</td>
</tr>
<tr>
<td>HAE 590, Legal Aspects of Health Care Administration</td>
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Clinical Option

An advanced clinical specialty option is available. It consists of 24 credit hours chosen on an individual basis with the respiratory therapy adviser.

Lower-Division Courses

101. Overview of Respiratory Therapy. (3). An overview of the profession, the cardiopulmonary system, and therapy modalities. H 13 101 0 1215

102. Cardiopulmonary Resuscitation. (1). Instruction and supervised practice of cardiopulmonary life support plus introduction to basic terminology and principles of circulation and respiration are provided with special emphasis on guidelines for prudent heart living. H 13 102 0 1215

111. Introduction to Respiratory Therapy. (2). An introduction to respiratory therapy: its history and purpose, as well as the basic skills of a respiratory therapist that can be developed in a skills laboratory. Included are medical gas therapy, humidification and aerosol therapy, and a review of basic functional anatomy and pathophysiology of the respiratory system. Prerequisite: departmental consent. H 13 111 1 1215

112. Respiratory Therapy Procedures. (4). A comprehensive development of skills with equipment used in respiratory management, with emphasis upon respirators as used for ventilatory failure. Familiarity with many different respirators and their application to pathological conditions is developed with the use of lung analogs in a skills laboratory. Monitoring equipment and an introduction to monitoring of ventilatory patients are also included. Prerequisite: RT 111 or departmental consent. H 13 112 1 1215

122. Introduction to Clinical Procedures. (1-3). The student's first introduction to the clinical environment for observation and practice of the therapeutic skills that are required of the therapist. An introduction to cardiopulmonary resuscitation and pulmonary functions is included. Prerequisite: RT 112 or departmental consent. H 13 122 1 1215

202. Respiratory Therapy Practicum I. (1-5). The student acquires practical experience in affiliated health care agencies. Course stresses therapy in noncritical areas, as well as over all departmental operations. Prerequisite: RT 122. H 13 202 0 1215

203. Respiratory Therapy Practicum II. (1-5). A continuation of RT 202, but with greater emphasis on the critically ill and diagnostic areas of respiratory therapy. Prerequisite: RT 202. H 12 203 0 1215

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, enroll concurrently in a minimum of six hours of course work in addition to their co-op assignment, or alternating, working full time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisites: completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. H 13 281 2 1215
Upper-Division Courses

301. Seminar I. (2). Discussion of departmental operations. Prerequisite: RT 122. H 13 301 9 1215

302. Seminar II. (2). Discussion of advanced skills and techniques involving patients and preparation of case studies. Prerequisite: departmental consent. H 13 302 0 1215

310. Respiratory Therapy Practicum III. (1-6). Students practice advanced therapeutic techniques in the hospital environment. H 13 310 2 1215

320. Clinical Projects. (1-3). Provides an opportunity for the student, on an individual basis, to select a topic for independent investigation. (Elective.) Repeatable to 6 hours. H 13 320 4 1215

325. Respiratory Physiology. (4). Comprehensive review of respiratory and cardiovascular physiology as it applies to respiratory therapy. Emphasis is on pulmonary function, blood gas analysis and acid-base analysis as related to disease. Laboratory involves proper techniques for pulmonary function studies and blood gas analysis on various pieces of equipment. Prerequisite: RT 122. H 13 325 1 1215

326. Clinical Respiratory Pathology. (3). Comprehensive presentation of clinical pathology of the respiratory system in adult, pediatric and newborn patients. The clinical progress of respiratory disease from onset of symptoms to acute or chronic conditions. Partially taught by practicing physicians. Prerequisite: RT 122. H 13 326 0 1215

330. Blood Gases: Clinical Application, Instrumentation, and Quality Control. (1-3). May be repeated to 6 hours. Blood gases, acid-base theory, clinical application, blood gas analysis, and quality control will be presented. Modern monitoring trends and equipment usage will be emphasized and demonstrated. Prerequisites: college chemistry and human physiology, or departmental consent. H 13 330 0 1215

335. Ventilators and Applied Critical Care. (1-6). A study of mechanical ventilators and applied patient care, including monitoring techniques, criteria for ventilatory support, and aspects of critical care. Prerequisite: departmental consent. H 13 335 0 1215

360. Pulmonary Rehabilitation. (1-5). Objectives, methods, and expected results will be presented and discussed. Patient testing methods including clinical exercise testing, patient and family education, bronchial hygiene, breathing retraining, biofeedback, physical reconditioning, and home care will be described and discussed. Prerequisite: departmental consent. H 13 360 0 1215

465. Cardiopulmonary Diagnostic, Preventive and Rehabilitative Methods. (5). Study of cardiopulmonary diagnostic procedures, disease prevention and intervention and cardiopulmonary rehabilitation. Stress testing, exercise physiology and home care concepts are practiced in lab and clinical practicum. Prerequisite: admission to program or departmental consent. H 13 465 3 5215

481. 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 481 may follow one of two scheduling patterns: parallel, enroll concurrently in a minimum of six hours of course work in addition to their co-op assignment, or alternating, working full time one semester in a field study and returning to full school enrollment the following semester; such students need not be concurrently enrolled in any other course. Prerequisites: successful completion of the freshman year and satisfactory academic standing prior to the first job assignment. May be repeated for credit. H 13 481 2 1215

ASSOCIATE OF SCIENCE PROGRAMS

The College of Health Related 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 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 Related Professions does not guarantee admission into the dental hygiene program. Persons interested in the dental hygiene program should direct their inquiries to the Chairperson of the Department of Dental Hygiene, Wichita State University, Wichita, KS 67208.

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 have a minimum of one semester of college or a total of 15 semester hours. Recommended high school courses are mathematics, biology, chemistry, and physical science.

Students must meet the following admission criteria. They must:
1. Have taken subjects relevant to health professions (science, chemistry, physiology, biological sciences, and so on)
2. Maintain a minimum grade point average of 2.00 in all high school and college work
3. Have satisfactory results on the American College Test (ACT)
4. Complete Wichita State and College of Health Related 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 or observe in a dental office prior to or concomitant with their application to the dental hygiene program.

Curriculum. The following courses, totaling 79 to 83 hours, must be taken by dental hygiene students. For course descriptions see the dental hygiene baccalaureate program section of the Catalog.

Courses

<table>
<thead>
<tr>
<th>Communications (6 hours)</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Eng. 101, College English I*</td>
<td>3</td>
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<tr>
<td>Speech 111, Basic Public Speaking, or Speech 112, Basic Inter-</td>
<td></td>
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<tr>
<td>personal Communication</td>
<td>3</td>
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</tbody>
</table>

| Division A—Humanities and Fine Arts (3 hours)                  |      |
| Minimum of any 3 hours                                         | 3    |

| Division B—Social and Behavioral Sciences (6 hours)            |      |
| Psych. 111, General Psychology                                 | 3    |
| Soc. 211, Introduction to Sociology                            | 3    |

| Division C—Natural Sciences and Mathematics (64-68 hours)      |      |
| Biol. 105C, The Human Organism (if no previous or adequate high |      |
| school biology)                                              | 4    |
| Biol. 120, Introduction to Microbiology                       | 4    |

College of Health Related Professions

Associate 273
These prerequisite courses suggested to be taken prior to the professional curriculum.

SPECIAL REQUIREMENTS

Students are required to purchase uniforms 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, Wichita State University, Wichita, KS 67208.

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 administering apparatus; environmental control systems; humidification and aerosols; drugs and medications; ventilatory assistance and ventilatory control; postural drainage; chest physiotherapy and breathing exercise; respiratory 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.

Since respiratory therapy as a special health area is broadly defined and parallels closely other professional areas, it is important to realize that such
therapy interrelates with patient care performed by nurses, physical therapists, and other technologists.

The Wichita State 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 Therapy 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 affiliated hospitals.

The following courses should be taken by respiratory therapy students desiring an Associate of Science in respiratory therapy.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Recommended Semester</th>
<th>Hrs.</th>
<th>Sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications (6 hours)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eng. 101, College English I</td>
<td></td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication</td>
<td></td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Division A—Humanities and Fine Arts (3 hours)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum of any 3 hours</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Division B—Social and Behavioral Sciences (3 hours)</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Psych. 111, General Psychology</td>
<td></td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Division C—Natural Sciences and Mathematics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biol. 120, Introduction to Microbiology</td>
<td></td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Biol. 225, Human Anatomy</td>
<td></td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Biol. 226, Elementary Human Physiology</td>
<td></td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Chem. 103 or 111, General Chemistry</td>
<td></td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Math. 109, College Algebra with Review, or Math. 111, College Algebra</td>
<td></td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Phys. 111, Introductory Physics, or Phys. 131, Physics for the Health Sciences</td>
<td></td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>RT 101, Overview of Respiratory Therapy</td>
<td></td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>RT 102, Cardiopulmonary Resuscitation (recommended)</td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>HS 301, Clinical Pharmacology</td>
<td></td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

ADMISSION TO THE PROFESSIONAL CURRICULUM

Students submitting application to the professional program are eligible for consideration after they have met the Wichita State and College of Health Related Professions general admission requirements with a minimum grade of C in anatomy and physiology, microbiology, and chemistry 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.
Courses Recommended
Division C—Natural Sciences and Mathematics Semester
(42-44 hours) Hrs. Sequence

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hrs.</th>
<th>Sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT 111</td>
<td>Introduction to Respiratory Therapy</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>RT 112</td>
<td>Respiratory Therapy Procedures</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>RT 122</td>
<td>Introduction to Clinical Procedures</td>
<td>3</td>
<td>4 or 5</td>
</tr>
<tr>
<td>RT 202</td>
<td>Respiratory Therapy Practicum I</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>RT 203</td>
<td>Respiratory Therapy Practicum II</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>RT 301</td>
<td>Seminar I</td>
<td>2</td>
<td>5 or 6</td>
</tr>
<tr>
<td>RT 302</td>
<td>Seminar II</td>
<td>2</td>
<td>5 or 6</td>
</tr>
<tr>
<td>RT 310</td>
<td>Respiratory Therapy Practicum III</td>
<td>4</td>
<td>5 or 6</td>
</tr>
<tr>
<td>RT 320</td>
<td>Clinical Projects</td>
<td>1-3</td>
<td>4, 5, or 6</td>
</tr>
<tr>
<td>RT 325</td>
<td>Respiratory Physiology</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>RT 326</td>
<td>Clinical Respiratory Pathology</td>
<td>3</td>
<td>5 or 6</td>
</tr>
<tr>
<td>HS 230</td>
<td>Clinical Anatomy of Thorax</td>
<td>1</td>
<td>5 or 6</td>
</tr>
<tr>
<td>RT 335</td>
<td>Ventilators and Applied Critical Care</td>
<td>1-6</td>
<td>5</td>
</tr>
</tbody>
</table>

* Admission into the professional program is required before students can enroll in professional courses.

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 $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 Department of Respiratory Therapy, Wichita State University, Wichita, KS 67208.

SPECIAL CERTIFICATE PROGRAMS

The College of Health Related Professions offers certificate programs in basic emergency care training, nurse clinician, and physician’s assistant.

Basic Emergency Medical Care Training

A certificate in basic emergency medical care training is offered by the Department of Health Administration and Education. The certificate is obtained with successful completion of HAE 110, described under the heading Service Departments—Health Administration and Education.

Students who would like to enroll in this course must fulfill all requirements for admission to Wichita State University and be at least 18 years old. An application to the Emergency Medical Training Admissions Committee must also be submitted. HAE 110 classroom instruction encompasses anatomy and physiology, pathophysiology, emergency recognition, and care of medical emergencies and trauma-related injuries. In addition, students spend 10 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 5-credit-hour course meets the
educational prerequisite for taking the state and/or national registry examinations for emergency medical technicians.

**Nurse Clinician**

The Nurse Clinician Program is designed to involve registered professional nurses in a formal learning experience focused upon the biopsychosocial assessment of pediatric and adult clients/patients and families and upon the principles of clinical management of such individuals. The program is divided into two phases: (1) one semester of on-campus core study and selected clinical experiences in a variety of health care settings and (2) 8 months (one semester and one Summer Session) of clinical preceptorship off-campus with periodic seminars on the Wichita State campus. A certificate of completion is awarded upon satisfactory completion of all required courses in both phases of the program. Graduates of the program are eligible to take National Certification Exams for Nurse Practitioners given by the American Nurses' Association.

**ACADEMIC REQUIREMENTS**

**Admission.** In addition to fulfilling all requirements for admission to Wichita State and the College of Health Related Professions, students wishing to enroll in the Nurse Clinician Program must apply for, and obtain approval of, the Admissions Committee of the Department of Nurse Clinician. Applicants to this program must be registered nurses with a diploma or an associate or bachelor's degree with a minimum GPA of 2.00. Students must submit a photocopy of their current Kansas license to practice as a registered professional nurse with a minimum of one year professional nursing experience, references, official records from their school of nursing, and transcripts of all colleges attended. An interview is required. Students must be admitted to Wichita State and apply for undergraduate or graduate credit, as appropriate, and must meet the requirements accordingly. Students desiring to apply this credit toward a degree in nursing are highly encouraged to discuss this with the specific school of nursing prior to admission to or during enrollment in the Nurse Clinician Program. The admission deadline is set by the department admissions committee. Once admitted, students must take the following required courses to receive a certificate of completion.

<table>
<thead>
<tr>
<th>Courses Required</th>
<th>Hrs.</th>
<th>Semester Sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC 515, Ecology of Primary Care</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>NC 525, Health Care Systems Analysis</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>NC 535, Clinical Assessment</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>NC 545, Nurse Clinician Practicum I</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>NC 546, Family Health Management</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>NC 555, Nurse Clinician Practicum II</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>NC 556, Ethical/Legal Issues in Primary Care</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>NC 695, Clinical Pathophysiology and Management</td>
<td>5</td>
<td>1</td>
</tr>
</tbody>
</table>

**Electives**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs.</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC 540, Directed Studies in Expanded Role</td>
<td>1-4</td>
<td>2 or 3</td>
</tr>
<tr>
<td>NC 550, Special Topics</td>
<td>1-4</td>
<td>2 or 3</td>
</tr>
<tr>
<td>NC 560, Health Assessment Methods</td>
<td>4</td>
<td>2 or 3</td>
</tr>
<tr>
<td>NC 565, Concepts of Quality Assurance in Health Care</td>
<td>3</td>
<td>2 or 3</td>
</tr>
</tbody>
</table>

*College of Health Related Professions/Nurse Clinician* 277
Curriculum. The nurse clinician curriculum for majors (34 credit hours) consists of core and preceptorship phases distributed throughout the year, with participation in periodic seminars required. It is desirable, but not a requirement for admission, for students to recommend a licensed physician to serve as the primary preceptor in the eight-month preceptorship. Selected courses are open to nonmajors. Students may matriculate through the program as full- or part-time students. Students with previous preparation in expanded role functions may elect to apply for advanced standing credit by participating in the University departmental examination system. Additional information may be obtained by writing: Chairperson, Department of Nurse Clinician, Wichita State University, Wichita, KS 67208.

Special Requirements

Nurse clinician students are required to show proof of professional liability insurance coverage in amounts of not less than $300,000 and are required to show evidence of health insurance. For matriculation to clinics, students must submit a photocopy of current Kansas nursing license and must complete the WSU health history and examination form.

Progression

To progress in the professional sequence, a grade point average of 2.00 or better must be earned in all professional courses. Students who receive a D or F in any professional course may not progress in the professional sequence. 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 Admissions and Progression in the department.

Exceptions

Exceptions to all departmental requirements may be granted by the department chairperson with the approval of the dean and the college Committee on Admissions, Exceptions, and Scholarships. A written petition must be submitted to the department chairperson by the applicant or student.

Graduation Requirements

Students must maintain a minimum 2.00 grade point average in all required courses in the core and preceptorship phases of the curriculum and show evidence of competence in expanded role functions.

Cooperative Education

The nurse clinician department participates in the University Cooperative Education program, which is an academic program designed to complement and enhance the regular program of students. The program consists of field placement in off-campus facilities and individualized field studies, which are formulated in consultation with and approved by nurse clinician faculty and Cooperative Education coordinators. Academic credit is awarded in two courses: NC 281 and 481.

Lower-Division Course

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 23 281 2 1201.

Upper-Division Course

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 23 281 2 1201.

Courses for
Graduate/Undergraduate Credit

515. Ecology of Primary Care. (3). A lecture series designed to discuss applied knowledge of principles of human behavior. Psychosocial components of client/patient management are introduced through the study of wellness-illness behaviors in relation to cultural forces and of emotional stresses as these affect the client/patient, family and health team members. Prerequisite: departmental consent. H 23 515 0 1201

525. Health Care Systems Analysis. (3). A seminar and discussion course designed to prepare primary-care nurse clinicians to enter the preceptorship by analyzing role identification and the relationship between the nurse clinician and members of the health team in the delivery of health care. Focus is on continuity and comprehensiveness of health care as the goals of role modification. Prerequisite: departmental consent. H 23 525 0 1201

535. Clinical Assessment. (3). 3B. A course utilizing lecture, seminar, demonstration, and simulated laboratory experiential sessions that prepare the primary-care nurse clinician to enter the preceptorship by providing basic knowledge in clinical assessment and health management of clients/patients. Methods of history taking and interview techniques, physical assessment, multiphasic screening, sources of clinical data, special procedures, developmental assessment and aspects of well-child and adult care are explored. The assumption of responsibility for the in-depth care of multiple-problem clients/patients is explained. Prerequisite: departmental consent. Corequisite: NC 536 (RN only). H 23 535 0 1201

536. Clinical Assessment Lab. (2). A course utilizing clinical experience in primary care with clinical conferences that prepare the primary care nurse clinician to enter the preceptorship by providing basic knowledge and skills in clinical assessment and management of clients. Application of history taking and interview techniques, physical assessment, multiphasic screening, sources of clinical data, special procedures, developmental screening and assessment and aspects of well client care are explored. Prerequisites: Nurs. 535 may be taken concurrently and departmental consent. H 23 536 2 1201

540. Directed Study in Expanded Role Nursing. (1-4). A guided-design course contracted with the student composed of objectives, description of study, method, anticipated results and selected resources. Results include a scholarly description of study with critique of relevancy to expanded role nursing. Prerequisites: NC 505, 515, 525, 535 or departmental consent. H 23 540 3 1201

545. Nurse Clinician Practicum L (6). 1B, 5L. A course designed for clinical application of theoretical context identified as related functions for expanded role nursing. The practicum is designed for primary-care settings to meet the requirements of expanded-role program and to receive a certificate of completion. Emphasis is placed on history-taking skills and physical and psychosocial assessment. Prerequisites: departmental consent, physician preceptor, NC 505, 515, 525 and 535. H 23 545 2 1201

546. Family Health Management. (3). A course designed to enhance the health assessment and management skills involved in family and community settings. Emphasis is placed upon assessment of health and disease conditions throughout the life span and upon health planning strategies for individuals and groups within the community. Scientific principles and rationale underlying these health plans are incorporated. Prerequisites: NC 505, 515, 525, 535. Corequisite: NC 545 or departmental consent. H 23 546 0 1201

550. Special Topics. (1-4). Specialized individual or group study of specific topics relevant to the nurse practitioner role, with adaptations made to relate to a student's individual interests and practice...
areas, e.g., advanced clinical assessment, problems in pathophysiology, etc. Prerequisites: NC 505, 515, 525, 535 or departmental consent. H 23 550 0 1201

555. Nurse Clinician Practicum II. (6). IR; 5L. A clinical application course designed to enhance problem-solving skills of nurse clinician preceptees in client/patient management situations in their preceptorship setting. Emphasis is on case presentations and analysis of the assessment, planning, implementation and evaluation. Phases of health care delivery with modification of the plan of care are also presented. Prerequisites: departmental consent, physician preceptor, NC 505, 515, 525, 535 and 545. H 23 555 2 1201

556. Ethical/Legal Issues in Primary Care. (3). A course designed to integrate current ethical-legal-social issues into expanded-role nursing practice. Focus is upon the utilization of professional standards of practice, legal implications, ethical issues, and social trends that nurse practitioners face in practice setting. Prerequisites: NC 545 and 546. Corequisite: NC 555 or departmental consent. H 23 556 2 1201

Physician’s Assistant

The Physician’s Assistant Program is a 24-month program designed to train primary care physician’s assistants. As defined by the National Academy of Sciences, the physician’s 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's 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 Related 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’s 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 Related Professions. In addition, the department conducts
consumer health education programs and coordinates continuing education for health professionals. These programs are usually held in cooperation with other departments within the College of Health Related Professions and community agencies.

**Lower-Division Courses**

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 10 hours of in-hospital observation. Prerequisite: departmental or instructor's consent. H 22 110 1 1201

111. 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 22 111 0 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 22 410 0 1214

440. Health Care Administration Practicum. (6). 40P. Prerequisite: senior standing or departmental consent. H 21 440 2 1202

490. Independent Study in Health Care Administration. (1-4). Prerequisite: departmental consent. H 21 490 3 1202

**Courses for Graduate/Undergraduate Credit**

501. Health Education Curriculum Development. (3). A course designed to assist health professionals in constructing health science curricula. Emphasis is given to identifying various curriculum models and applying educational principles, writing behavioral objectives and the acquisition of supplementary materials. Special emphasis is given to program development in school, community and patient education settings. Prerequisite: junior, senior or graduate standing in one of the professional programs or instructor's consent. H 22 501 0 1201

503. Organization and Administration of the Health Care System. (3). Prerequisite: departmental consent. H 15 503 0 1202

504. Health Economics. (3). Cross-listed as Econ. 665. Prerequisite: HAE 503 or Econ. 202. H 15 504 0 1202


506. Teaching and Learning Strategies in Health Science. (3). A course examining the various means of presenting health knowledge and coupling these teaching strategies with the audiences and types of student bodies that will receive this knowledge. The nature of health care curriculum is examined in depth, as are procedures for developing and improving them. Health education curricula are explored. Prerequisite: departmental consent. H 22 506 0 1202

507. Health Planning. (3). Prerequisite: departmental consent. H 21 507 3 1202

509. Health Care Operations Analysis. (3). Prerequisites: HAE 503, Math. 111 or equivalent, Mgmt. 360, and junior standing. H 21 509 0 1202

510. Health Finance. (3). Prerequisites: HAE 503 and Accdg. 210 or equivalent. H 15 510 0 1202


590. Legal Aspects of Health Care Administration. (3). Cross-listed as Geron. 590. Prerequisite: junior standing or departmental consent. H 21 590 0 1202

605. Health Services Research. (3). Prerequisites: departmental consent. H 15 605 4 1201

684. Seminar in Health Care Administration. (3). May be repeated for credit. Pre-

*For complete course descriptions see Health Care Administration Program in the Catalog.
requisites: HAE 503 and at least one other HAE course. H 21 684 0 1201 *

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 administrative problem-solving as a structured process. Prerequisite: instructor's consent. H 21 720 0 1201

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

150. Workshop in Health Sciences. (1-4). H 18 150 2 1201

201. Orientation to Health Professions. (2). An examination of the health team concept, the role and relationship of the various providers of health care and the criteria for the selection of a health career. 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

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 the human cadaver. Open to non-physical therapy majors. Open to non-physical therapy majors. Prerequisite: departmental consent. H 18 310 1 0412

315. Head and Neck Anatomy. (2). An in-depth study of the landmarks, muscles, nerves, vascular supply, etc., of the head and neck region. H 18 315 0 1201

331. 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
for the health professional, presenting concepts of the process of disease. Departments will 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 18 400 0 1201

401. Advanced Clinical Pharmacology. (3). An advanced study of clinical pharmacology, pharmacognosy and pharmacodynamics that includes drug synergisms and side effects. Prerequisites: HS 301 and instructor’s consent. H 18 401 0 1201

411. Special Projects. (1-6). Supervised intensive study of special topics and problems related to health professions. By arrangement. Prerequisite: department chairperson’s consent. H 18 411 3 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 pharmacodynamic and toxicologic properties of chemotherapeutic agents and of drugs affecting the cardiovascular and autonomic nervous systems. Prerequisites: current enrollment in HS 390 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 excretory, endocrine and central nervous systems. Prerequisites: HS 421 and instructor’s consent. H 18 422 0 1201

430. Introduction to Fluids and Electrolytes. (2). Concepts of fluid and electrolyte balance in health and disease; included are discussions of clinical cases of diagnostic and therapeutic interest. Prerequisites: Chem. 103, Biol. 226 or equivalent, and departmental consent. H 23 430 0 1201

450. Workshop in Health Sciences. (1-4). H 18 450 2 1201

Courses for Graduate/Undergraduate Credit

511. Neuroanatomy and Neurophysiology. (3). 2R; 2L. Study of the structure, physiology, and functions of the central and peripheral nervous systems. Prerequisites: 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

570. Interpretations of Sexuality for Health Professions. (3). Cross-listed as Nurs. 570. Elective. Strategies to assist clients and families to cope with sexual problems and disorders. Emphasis on relating varying interpretations of the biological, psychological and cultural aspects of sexuality to the helping professions. Open to nonnursing majors. H 18 570 0 1203

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 will be presented and will 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

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 profession. Included in the course will be 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 will address the selection of sample, measurement instrument, and research design. H 18 710 0 1201

750. Workshop in Health Related Professions. (1-4). An examination of relevant topics directly and/or indirectly related to the delivery of health care service. H 18 750 0 1201
The college is the oldest and largest degree-granting college in the University.

In addition to offering majors in 25 different departments and programs, the college is responsible for teaching the greatest proportion of the University general education curriculum.

WSU offers the only Master of Fine Arts in creative writing program in the state.
Fairmount College of Liberal Arts and Sciences offers a variety of programs designed to serve the general objectives of Wichita State University and to enhance its urban mission. The college’s programs seek 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 intensive 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 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, history, journalism, linguistics, communicative disorders and sciences, mathematics, minority studies, music, philosophy, physics, political science, psychology, religion, social work, sociology, Spanish, speech communication, and studio arts. Students who major in communicative disorders and sciences, music, or studio arts must establish two minors in Fairmount College of Liberal Arts and Sciences.

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 anthropol­
ogy, communications (interdisciplinary), English, gerontology, history, polit­
ical 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 Administra­
tion of Justice (MAJ) in administration of justice; the Master of Education
(MEd) in speech; the Master of Arts in Liberal Studies (MALS) in interdis­
ципиary studies, and the Master of Urban Affairs (MUA) in urban affairs.

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

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 are continued 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 re-enroll 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 file an application for
graduation and complete a degree card at the end of the semester in which 90
credit hours have been earned. Although actual graduation may be several
semesters away, both the application and the degree card must be completed
at this time. Applications filed in the semester in which graduation is in­
tended 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 Building.
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 help 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 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 provides students the opportunity to augment formal course work with employment directly relevant to the student’s educational objectives.

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) 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 University requirements:

1. Communications—6 hours of composition and 3 hours of oral communication (for BA or BS degree, a grade of “C” or better must be earned in Eng. 101 and 102).

2. General Education—30 hours of “Q” and “G” 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.

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 6 hours from the major may apply in this distribution toward the BA.† Candidates for the BS degree must take 9 hours in at least three of the following subdivisions. Nine hours must be “G” or “Q” courses in either degree.††

1. History
2. Literature (see Item II)
3. American Studies
4. Philosophy
5. Religion
6. Humanities
7. Linguistics—Ling. 150G, 315, 577
8. Art History (any course) and Music—Mus.-Comp. 113, 114, 160G, 161, 162
9. Speech Communication
10. Women’s Studies

II. Literature. Students must complete at least 3 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. 131, 132, or Pol. Sci. 121 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 9 hours in at least two of the following subdivisions.† Only 3 hours from the major department may apply.†† In either degree, 6 hours must be in “G” or “Q” courses.

1. Administration of Justice
2. Anthropology
3. Economics—Econ. 200G, 201, 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 4 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 2 units of high school laboratory science (exclusive of general science) must take at least 9 hours, including 4 hours in a laboratory science and one course in each 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; 103, 5 hours; 111, 5 hours; 112, 5 hours; and all other courses except Chem. 201. Geog. 201, 3 hours; and 235, 3 hours. (No other geography courses count toward the physical science division.) Geol. 101, 3 hours nonlaboratory; 111, 3 hours; 300G, 3 hours; 302, 3 hours; 312, 3 hours. Phys. 111, 4 hours; 195G, 3 hours, or with 196, 4 hours; 213, 5 hours; 214, 5 hours; 313, 4 hours; 314, 4 hours; 315, 1 hour; 316, 1 hour.

2. Biological Sciences—Biol. 105G, 4 hours; 203, 5 hours; 204, 5 hours; 102G, 5 hours nonlaboratory; and 509G, 4 hours nonlaboratory.

VI. Mathematics. Students must demonstrate proficiency by passing Math. 109, 111, 112, or 211, or by passing an examination of equivalent mathematical skills.

VII. Foreign Languages. Candidates for any BA degree and for the BS degree outside the division of natural sciences and mathematics* must demonstrate proficiency at a level equivalent to 5 hours beyond the 112 course in one foreign language, or equivalent to the completion of the 112 course in two foreign languages. This proficiency may be demonstrated in either of the following ways:

1. Students may successfully complete 111, 112, plus 5 additional hours in one foreign language or 111 and 112 in two foreign languages.

2. Other foreign language experience, or high school foreign language study at the rate of 1 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.

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 6 hours from the major can be used to satisfy college distribution requirements

* The division of natural sciences and mathematics includes the departments of biological sciences, chemistry, geology, mathematics, physics, and computer science.
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 the Fairmount College of Liberal Arts and Sciences.

IX. Field Major. Field majors in biochemistry, chemistry/business, classical studies, geology, 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 9 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 adviser in the major areas in Fairmount College of Liberal Arts and Sciences.

X. Minor. 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), engineering administration, 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 the preprofessional or nontraditional career student greater flexibility in planning for his or her unique future.

The requirements of the degree include the following:
   1. Communications—6 hours of composition and 3 hours of oral communication (for BA or BS degree, a grade of "C" or better must be earned in 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 9 "G" or "Q" hours):
   1. History (no specific requirement)
   2. American Studies
   3. Philosophy
   4. Religion
   5. Linguistics
   6. Literature (no specific requirement)
   7. Foreign languages (no specific requirement)
   8. Women's Studies
   9. Humanities
   10. Speech Communication
   11. Art History and Musicology—Composition 113, 114, 161, 162, and 493G (count as out-of-college hours)

B. Social and Behavioral Sciences (minimum of 12 hours within two departments with 6 "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. Gerontology
   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 6 hours "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—6 hours
   2. Oral communication—3 hours
   3. Social sciences—6 hours
   4. Natural sciences and mathematics—6 hours
   5. Humanities—6 hours
   6. Electives—3 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 10 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—6 hours
   2. Oral communication—3 hours
   3. Social sciences—6 hours
   4. Natural sciences and mathematics—6 hours
   5. Humanities—6 hours
   6. Electives—3 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

III. General Electives (10-15 semester hours)
   Students must select at least 10 to 15 hours of elective courses in consultation with their academic adviser to support the overall objectives of the degree program.

Associate of Arts in Natural Sciences and Mathematics

The associate degree in natural sciences and mathematics requires 60 semester hours, including the following requirements:
I. General Education (30 semester hours)
   1. English composition—6 hours
   2. Oral communication—3 hours
   3. Social sciences—6 hours
   4. Natural sciences and mathematics—6 hours
   5. Humanities—6 hours
   6. Electives—3 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.
   Biochemistry   Geology
   Biological sciences Mathematics
   Chemistry       Physics
   Computer science Statistics
III. General Electives (10-15 semester hours)
   Students must select at least 10 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 Gerontology
The associate degree in gerontology is offered through the gerontology program, as described in the Gerontology section of the Catalog.

Associate of Science in Administration of Justice
The Associate of Science is offered through the Department of Administration of Justice, as described in the Administration of Justice section of the Catalog.

Special Programs of Study
Fairmount College of Liberal Arts and Sciences provides basic courses for certain professional fields and for subsequent professional studies. Liberal arts studies are vital in establishing background resources for such areas.

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 9 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.
   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. 203, 204, 416, and 584; Chem. 123, 124, 531, 532, 662, 663, 664, and 665; Phys. 213 and 214; and Math. 112 or 111 and 123. Also required are the following courses which are cross-listed in the Departments 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 a 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 6 hours selected from Greek or Roman history (Hist. 559, 560, 562, 563, 734) and 6 hours selected from art history (Art Hist. 221, 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. 101, 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 done 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 Romance Languages.

Geology. See Geology section for a complete description.

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 deSilva (management) or Professor Dreifort.

Latin American Studies. The interdepartmental curriculum in Latin American studies provides a broad-based program of study leading to a better understanding of both historic and contemporary Latin America. Two alternatives are offered: an emphasis in Spanish language or an emphasis in social sciences. A minor also is offered.

A major in Latin American studies with an emphasis in Spanish consists of at least 32 hours, including Anthro. 508; Econ. 671; Hist. 111 and 112; Geog. 530; Pol. Sci. 523; and Span. 626 and other 500-level or 600-level courses in Latin American literature. Other courses must be selected from the following: Hist. 553 and Pol. Sci. 320. Approved special projects courses related to Latin
America taken in the departments listed above also may count toward the major in Latin American studies. Proficiency in reading Portuguese is required.

A major in Latin American studies with an emphasis in social sciences consists of at least 30 hours, including 21 hours of required courses: Anthro. 508; Econ. 671; Hist. 111, 112, and 554; Geog. 530; and Pol. Sci. 523. An additional 9 hours must be selected from the following: Hist. 553; Pol. Sci. 320; and one other course approved by the student’s major adviser. Approved special projects courses related to Latin America taken in the departments listed above may also count toward the major in Latin American studies. Majors must take at least 13 hours of Spanish or demonstrate equivalent competence in reading and conversation.

A minor in Latin American studies requires that students take Anthro. 508, Econ. 671, Geog. 530, Hist. 111, and Pol. Sci. 523. In addition, Spanish must be chosen to fulfill the liberal arts language requirement.

Urban Affairs. See Urban Affairs 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 the 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 the Fairmount College of Liberal Arts and Sciences are listed in the College of Fine Arts, Division of Art, section of the Catalog. Two minors in Fairmount College of Liberal Arts and Sciences must be completed with a studio arts major.

COMMUNICATIVE DISORDERS AND SCIENCES (LOGOPEDICS)

Requirements and curriculum for a major or minor in communicative disorders and sciences in the Fairmount College of Liberal Arts and Sciences are listed in the College of Education section of the Catalog. Two minors in the Fairmount College of Liberal Arts and Sciences must be completed with this major.

MUSIC

Requirements and curriculum for a major or minor in music in the college of liberal arts and sciences are listed in the College of Fine Arts, Division of Music, section of the Catalog. Two minors in the Fairmount College of Liberal Arts and Sciences must be completed with this major.

SPECIAL PREPROFESSIONAL PROGRAMS

Advisers in the various preprofessional fields and closely related departments provide specific information regarding courses and requirements.
Prelaw

The Association of American Law Schools states that students interested in pursuing a law degree should get a broad undergraduate education that provides "comprehension and expression in words, critical understanding of the human institutions and values with which the law deals, and creative power in thinking." These qualities are to be achieved through disciplined study in the fields of the student’s choice. Requirements for the bachelor’s degree provide students with both a general education and a concentration in a field of major study.

Prelaw advisers can be contacted through the college office in Room 200 of the liberal arts and sciences building. They can supply students information about entrance requirements for law school so undergraduate programs can be arranged to meet these requirements.

Premedical, Predental, Preveterinary, Prepharmacy, Preoptometry

Medical schools encourage students to obtain a broad education in addition to the prescribed studies in the sciences. Preparation for the study of medicine should include courses that develop disciplined thinking, intelligent appreciation of values, and sympathetic understanding of man and society. Since the study of medicine is associated with scientific knowledge and techniques, courses in biological sciences, chemistry, physics, and allied fields are required. Students may choose to major in one of these fields, or they may select other majors in preparation for the study of medicine.

While the four-year degree program is preferred, it is possible in some medical schools to gain admission on the basis of a three-year program of studies. Wichita State students on the three-year program may be granted the BA by Wichita State if they have taken 94 hours 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 zoology 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, especially biological sciences, is recommended. The counselor for predental studies in the 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 the 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, mortuary science, and related professional fields.

Pretheological

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 the college of liberal arts and sciences may qualify for secondary teaching certificates in Kansas and several other 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 the following locations: Emporia State University, Fort Hays State University, the University of Kansas, Ft. Leavenworth, and Kansas City.

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 has an opportunity to 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 100, 201, 220, 403, 512, 521, and 12 hours in one of the following areas of specialization, plus a 3-hour elective in administration of justice (except in the General Administration of Justice track, where 15 hours of electives are required).

I. Agency Administration (12 hours)
   This area concerns the management of law enforcement and corrections agencies' staff services. Course work in this area includes AJ 382, 501, 510, 633, 636, and 637.

II. Corrections Services (12 hours)
   This area involves rehabilitative casework and court-directed supervision of convicted offenders in both correctional institutions and the community. Course work in this area includes AJ 533, 606, 641, 653, 656, and 680.

III. 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, 343, 520, 533, 641, and 680.

IV. 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, 606, and 680.
V. Investigation (12 hours)
This area encompasses scientific and traditional criminal investigation services provided by law enforcement agencies. Course work in this area includes AJ 343, 344, 345, 600, 643, and 646.

VI. Prevention Programs Development (12 hours)
This area concerns the development of community-based law enforcement and corrections programs and the development of crime and delinquency prevention programs. Course work in this area includes AJ 382, 560, 606, 610, 636, and 660.

VII. 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 includes AJ 320, 343, 370, 570, 572, and 670.

VIII. 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 in administration of justice course work (all of which must be upper division), including a minimum of 12 hours to be distributed among at least three of the seven specialty areas listed above. Any course listed in two areas fulfills only the distribution requirement for one area.

In addition to specific course requirements, all students seeking the Bachelor of Science (BS) 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 may take foreign language course work at their discretion.

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 adviser'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 administra-
tion of justice major. Those students seeking this certificate must satisfactorily complete Min. Stud. 210 and one of Min. Stud. 331, 332, 333, or 334, plus 12 additional hours in minority studies course work, 9 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>I. General Education Course Requirements (30 hours)</th>
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<tbody>
<tr>
<td>Eng. 101, College English I, 3 hours</td>
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<tr>
<td>Eng. 102, College English II, 3 hours</td>
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<tr>
<td>Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communications, 3 hours</td>
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<tr>
<td>Humanities, 6-9 hours</td>
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<tr>
<td>Social sciences, 6-9 hours</td>
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<tr>
<td>Science or mathematics (including one laboratory course), 6-9 hours</td>
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<tr>
<th>II. Professional Curriculum (12 hours)</th>
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<tbody>
<tr>
<td>AJ 100, Introduction to Administration of Justice, 3 hours</td>
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<tr>
<td>AJ 143, Police in the Community, 3 hours</td>
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<tr>
<td>AJ 201, Agency Administration I, 3 hours</td>
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<tr>
<td>AJ 220, Criminal Law, 3 hours</td>
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<tr>
<th>III. Elective Hours (22 hours)</th>
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**Lower-Division Courses**

AJ 100 or departmental consent is prerequisite for all administration of justice courses unless otherwise noted.

100. *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 29 100 0 2105

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 within the community structure are examined. A 29 143 0 2105

**Upper-Division Courses**

201. *Agency Administration I.* (3). A survey of management models, administrative techniques and patterns of organizational structure characteristic of administration of justice agencies. A 29 201 0 2105


220. *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 processes and rules of evidence are examined. A 29 220 0 2105

303. *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 29 303 9 2105
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 0 2105

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 personal identification, investigative photography, and traffic accident and safety investigative systems. Emphasis is placed on field research and evidentiary aspects of investigative technology. A 29 340 1 2105

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 1 2105

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 1 2105

345. **Investigative Photography.** (3). Departmental fee. Basic photography theory and practice as applied to criminal investigation and criminalistics. Students take, develop, prepare and document pictures for evidential purposes. Prerequisite: AJ 343 or instructor's consent. A 29 345 1 2105

370. **Analysis of Security Administration.** (3). A course of study for interested students and practitioners of security management. The history, philosophy of security, personnel security measures and security goals of business, security firms, military services and government bureaus are discussed. These classes are open to all interested students in any major field of study. A 29 370 0 2105

382. **Women in the Administration of Justice.** (3). Cross-listed as WS 382. A course designed to examine the role of women within the criminal justice system. It is approached from 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 29 382 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. Prerequisite: 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 not to exceed a total of 6 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 128 hours for 3 hours credit; there is a maximum of 6 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 faculty supervision of administration of justice topics, including law enforcement, corrections and the judicial process. Repeatable for credit, not to exceed a total of 6 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. Prerequisite: administration of justice major. A 29 481 3 2105

Courses for Graduate/Undergraduate Credit

501. **Agency Administration II.** (3). An intensive examination of a variety of emerging administrative 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 instruments are examined, as well as the advantages of using ADP in basic and applied research in the administration of justice. A 29 510 0 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 general methodology of research 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 admitting or excluding evidence; witnesses and privileged communications; 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, 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 operations of existing and projected 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 qualities of human beings in different systems under different headings. Analysis 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 pilferage problems as they affect 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 hardware and software. Prerequisite: AJ 370 or instructor's consent. A 29 572 0 2105

600. Forensic Anthropology. (3). Cross-listed as Anthro. 600. This course encompasses the area of criminal investigation involving biological evidence: blood, hair, fingerprint, dentition, and skeletal system. It covers procedures of collection, preservation, marking, transportation, referral, laboratory analysis, classification, and identification, with an emphasis in anthropological interpretation. A 28 600 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

610. 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 29 610 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 techniques utilized by administration of justice agencies in both public and community relations programs that are designed to optimize the agency's communication capability. 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 su-
pervision, training and evaluation techniques utilized by administration of justice agencies, with emphasis on techniques that optimize 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 student to concepts 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. Prerequisite: AJ 343 and 344. A 29 646 0 2105

653. Field Corrections Techniques. (3). An analysis of the techniques of probation, parole, after-care 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). An analysis of the techniques of institutional correctional practice, including diagnostic centers, halfway houses and other related treatment models. Special emphasis is placed on institutional corrections techniques as they relate to other segments of the administration of justice system. A 29 656 0 2105

660. 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 instructor's theory that supports innovation. Prerequisite: AJ 370 or departmental consent. A 29 670 0 2105

680. 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 United Nations Treatment of Offenders and Crime Prevention is incorporated. A 29 680 0 2105

750. Workshops in Administration of Justice. (3). Prerequisite: AJ 100 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 formulation and completion of an academic project related to the field experience. The cooperative education experience must be an integral part of the student's graduate program. Individualized programs must be formulated in consultation with and approved by the department cooperative education coordinator. Open only to AJ graduate students. A 29 781 3 2105

Courses for Graduate Students Only

800. General Seminar on the Administration of Justice. (3). An overview and integration of major propositions, 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. Prerequisite: AJ 560 or departmental consent. A 29 801 0 2105

802. Advanced Field Corrections Methods. (3). An in-depth analysis of the methods of field corrections, including
amination are the mediums of witnesses, analysis and demonstration of historical, 2105
805. Seminar on Principles of Evidence and Proof. (3). An in-depth examination of different types of legal proof that are presented at court trials. Included in the examination are the mediums of witnesses, records, documents, concrete objects, etc. A 29 804 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 selection and formulation of research problems; 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 criminology and of 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 overall system of criminal justice are investigated to demonstrate the pertinence of theory to practice. Examples of issues include role conflicts in law enforcement and corrections, police professionalism, its place 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, possibilities and problems encountered in the establishment and utilization of automated information and computerized data-processing systems. Special attention is given to the implications that automated information systems have 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 and 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 administration of justice agencies can make toward development and implementation of effective environmental public education and assistance programs. A 29 827 9 2105
832. Seminar on Agency-Community Re-
lations. (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 communications 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 functional components, such as training of corrections personnel, community coordination for 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

The program in American studies provides both a broad cultural background and a specialization in a field of particular interest.

Major. Students must have a minimum of 37 hours, consisting of 2 or 4 hours of Amer. Stud. 301; 9 hours from Amer. Stud. 511, 512, 521, 522, 611, or 612; and 3 to 6 hours from Amer. Stud. 698 and 699. In addition, 18 hours can be chosen from at least three of the following groups:

1. English—252, 362, 502, 503, 540
2. History—131, 132, 501, 502, 503, 519, 520, 535, 536, 537
3. Political Science—121, 311, 315, 316
4. Anthropology—511, 535, 538, 540, 611, 690, 698
5. Philosophy—556
6. Economics—627
7. Speech—632
8. Geography—520

Minor. A minor in Fairmount College of Liberal Arts and Sciences consists of 15 hours, including 2 or 4 hours from Amer. Stud. 301 plus at least 6 other upper-division hours.

Lower-Division Courses

100. Business History of the United States. (3). Cross-listed as Econ. 100. A 11 100 0 0313

150. Workshop in American Studies. (1-3). A course designed to provide specialized instruction using a variable format in an American studies’ relevant subject. A 11 150 2 0313

201G. The American Hero. (3). Defines historical, cultural and environmental conditions that fostered the rise of many genres of American folk heroes. Representative heroes from colonial times to the present are examined to see how they symbolize the American character. A 11 201G 0 0313

210. 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 11 210 0 0313

281. Cooperative Education in American Studies. (1-3). The course will permit American studies students to participate
in the Cooperative Education program. A 11 281 0 0313

Upper-Division Courses

301. Introduction to American Studies. (2). An examination of the American background from an interdisciplinary perspective. The intent is to show how the humanities and social sciences can be linked in the study of America. Repeatable for a total of 4 hours of credit. Prerequisite: departmental consent. A 11 301 0 0313

310. Studies in Popular Literature (3). Cross-listed as Eng. 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 merits of this work and the way it reflects popular tastes and values. Repeatable for credit with change of content. A 11 310 0 0313

315. Special Topics in American Studies. (1-3). An analysis of special topics in American studies. Repeatable for credit. Prerequisite: departmental consent. A 11 315 0 0313

350. 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 impact that sports has upon our American culture. A 11 350 0 0313

481. Cooperative Education in American Studies. (1-3). The course will permit American studies students to participate in the Cooperative Education program. A 11 481 0 0313

Courses for Graduate/Undergraduate Credit

511. Patterns of Development of Early Americans. (3). The study of the records of Americans from settlement to the closing of the frontier. A 11 511 0 0313

512. Twentieth Century Problems in American Studies. (3). An analysis and a study of problems in various disciplines that influence American development. A 11 512 0 0313


518. Recent British-American Philoso-

phy. (3). Cross-listed as Phil. 518. A 11 518 0 0313

521. The Midlands and the High Plains. (3). The background, the factors in the settlement of this vast area and the results of this settlement. A 11 521 0 0313

522. The American Southwest. (3). The background of the settlement of the American Southwest, the impact of the commingling of three different cultures and the evolving of a fourth culture. A 11 522 0 0313

533. Women and The Law. (3). Cross-listed as Women's Studies 533. 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 will also be given to women in the field of law, such as lawyers and legislators. A 11 533 0 0313

540. American Folklore. (3). Cross-listed as Eng. 540. A survey of the types and functions of unwritten traditional materials in the United States, including beliefs, tales, jokes, folk music, customs, and crafts, including some ethnic varieties: the unwritten materials that form the uniqueness of American culture. A 11 540 0 0313

601. Directed Readings in American Studies. (1-3). Prerequisite: instructor's consent. A 11 601 3 0313

602. Directed Readings in American Studies. (1-3). Prerequisite: instructor's consent. A 11 602 3 0313

611. The Romantic Revolution. (3). The impact of the Romantic Revolution on the nation's civilization as a liberating force in the period of its greatest change. A 11 611 0 0313

612. The Growth of Nationalism. (3). American civilization during the period of its awakening to its place as a nation and the problems encountered. A 11 612 0 0313

632. American Public Address. (3). Cross-listed as Speech 632. A 11 632 0 0313

698. Introduction to Research. (3). Bibliography, methodology and the philosophy of research. Repeatable for a total of six hours of credit. Prerequisite: departmental consent. A 11 698 9 0313

699. Seminar in American Studies. (3). Seminar in individual conferences organized around a problem or problems pre-
sent by 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 6 hours of credit. Prerequisite: departmental consent. A 11 699 9 0313

Anthropology

A major in anthropology consists of at least 30 hours, including Anthro. 101; 102 or 124; and 647; an area course, such as Anthro. 307, 312, 506, or 511; and one course in archaeology: Anthro. 305, 335, 501, 508, 513, or 538. Students who expect to pursue graduate work in anthropology should also take Anthro. 526. (Anthro. 100G, 126G, and 749 do not count toward 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 6 hours from another department may be counted.

Minor. A minor consists of 15 hours of anthropology (including at least 6 hours of upper-division work) chosen in consultation with the student’s major adviser.

Lower-Division Courses

100G. Anthropology of Modern Life. (3). Anthropological perspectives on the behavior and institutions of contemporary man, with particular emphasis on the mass culture of the United States. A 28 100G 0 2202

101. Biological Anthropology and Archaeology. (3). This course provides an introduction to the biological evolution and behavioral development of humans. Students are introduced to the basic concepts of population genetics, evolution, human ecology and culture along with the types of data and modes of analysis currently used in biological anthropology and archaeology. These are used to formulate explanations of the physical and cultural developments of humans and primates in the last 65 million years. Present day variations in biological and behavioral traits are also discussed. A 28 101 0 2202

102. Cultural Anthropology. (3). The meaning of culture, its significance for human beings and its diverse forms among peoples of the world, past and present. A 28 102 0 2202

124. General Anthropology. (3). An introduction to the fields of physical anthropology, archaeology and linguistics and an analysis of the concepts of society and culture, with special emphasis on nonliterate peoples of the world. A 28 124 0 2202

126G. Popular Archaeology. (3). Archaeology for everyone—its mysteries, romance and applications. Roles of interested non-specialist hobbyist, technician and professional will be compared. Emphasis on archaeology in the public eye and mind. A 28 126G 0 2203

150. Workshop in Anthropology. (1-3). 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

Upper-Division Courses

303. Peoples and Cultures of the World. (3). A survey of the cultural configurations of nonliterate peoples of aboriginal America, Asia, Oceania and Africa. Prerequisite: Anthro. 102 or 124. A 28 303 0 2202
305. World Archaeology. (3). The course introduces the basic concepts, methods, techniques and modes of analysis of scientific archaeology. These are applied to a series of problems of increasing complexity: the emergence of human culture, the development of domestic plants and animals, and the evolution of cities and complex societies. A 28 305 0 2203

307. Peoples of Africa. (3). A description and analysis of the culture areas of Africa south of the Sahara Desert, from ethnographic and ethnographic sources. A 28 307 0 2202

312. Peoples of Asia. (3). Study of tribal cultures and civilizations of Asia in terms of major culture areas, racial varieties and linguistic patterns. A 28 312 0 2202

318. Culture and Personality. (3). The relationship of individual personality, both normal and abnormal, to group membership and cultural configuration. A 28 318 0 2202

323. Primitive Folklore. (3). Survey of the oral literature of Africa, the Americas and the Pacific. The role of myths, tales, riddles 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 in, but not limited to, those outside the western, scientific tradition. Attitudes toward the etiology of disease, the techniques of healing, the use of curative drugs and other agents, the roles of healers and therapists and the attitudes of the community toward the ill 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 origin of the state, precocious 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. A 28 481 0 2202

498. Readings in Anthropology. (2-3). Repeatable up to 6 hours. Special problems in anthropology. Prerequisite: 12 hours of anthropology. A 28 498 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 archaeologists and the theoretical rationale leading to sound interpretations of the structure of extinct cultures. Prerequisite: Anthro. 101 or 124 or equivalent. A 28 501 0 2203

502. Introduction to Archaeological Laboratory Techniques. (1-3). Maximum of three hours. An introduction to the laboratory processing of archaeological materials. Students will obtain direct experience in all phases of preparing excavated materials for analysis including cleaning, restoring, preserving, numbering, and cataloging of ceramic and lithic artifacts and other remains. Prerequisites: Anthro. 101, 124, or 305. A 28 502 1 2203

506. Peoples of the Pacific. (3). A survey of the races, languages and cultures of nonliterate peoples of Polynesia, Micronesia and Indonesia. A 28 506 0 2202

508. Ancient Civilizations of the Americas. (3). A cultural survey of the Aztec, Maya and Inca. Prerequisite: Anthro. 102 or 124. A 28 508 0 2212

511. The Indians of North America. (3). A survey of tribal societies and native confederations north of Mexico from the prehistoric through the historic period. Prerequisite: Anthro. 101 or 124. A 28 511 0 2212

513. Archaeology of East Asia. (3). A broad survey of archaeology throughout eastern Asia from the early hominid fossils at Peking and Java to the development of Chinese and Southeast Asian civilizations. Special attention will focus on China (through the Han Dynasty), South-
east Asia and Australia/New Guinea. Recent archaeological finds of the Peoples' Republic of China will be included. Prerequisite: one 3 hour course in archaeology or consent. A 28 513 0 2203

514. Anthropological Perspectives in Gerontology. (3). Cross-listed as Geron. 514. An anthropological analysis of the latter stages of the life cycle with historical and cross-cultural perspectives. Prerequisite: Anthro. 106C or 124 or Soc. 211. A 28 514 0 2202

519. Applying Anthropology. (3). The application of anthropological knowledge in the solution of social problems in industry, public health and public administration. Prerequisite: Anthro. 102 or 124. A 28 519 0 2202

521. Performing Arts in Other Cultures. (3). The performing arts are highly developed in many cultures around the world in dance, music, song and in the dramatic presentations of ceremony and pageantry. These will be studied on film, tape, and records and in live performances available locally. Prerequisite: Anthro. 102 or 124 or instructor's consent. A 28 521 0 2202

522. Primitive Art. (3). A survey of the arts of preliterate peoples, with special attention to their function in the cultural setting. Prerequisite: Anthro. 102 or 124. A 28 522 0 2202

525. Culture Change and Modernization. (3). Examination of the dynamics of socio-cultural change in the past and present with emphasis on processes of modernization in nonindustrial societies. Prerequisite: 6 hours of anthropology. A 28 525 0 2202

526. Social Organization. (3). A survey of the varieties of social organization among nonindustrialized peoples throughout the world. This course deals with family systems, kinship, residence patterns and lineage, clan and tribal organizations. Prerequisite: 6 hours of anthropology. A 28 526 0 2202

531. Culture and Physical Man. (3). An exploration of the intimate relationship between cultural practices and biological attributes of human populations. The course will interrelate human biological and cultural evolution to the present and probable future. Prerequisite: Anthro. 101 or equivalent. A 28 531 0 2202

538. Early Man in the New World. (3). A critical examination of facts and theories concerning early man in the New World, from the peopling of the continent to the beginning of the Archaic Tradition, and of the role of cultural contacts between eastern Asia and North America. Prerequisite: Anthro. 101 or 124, or equivalent. A 28 538 0 2203

540. The Indians of the United States: Conquest and Survival. (3). An anthropological inquiry into four centuries of cultural contact, conflict, resistance and renaissance. Prerequisite: Anthro. 101 or 124, or equivalent. A 28 540 0 2212

542. Women in Other Cultures. (3). Cross-listed as WS 542. A course dealing with the place of women in primitive and other non-Western societies, in various aspects of culture: political, economic, social, religious, domestic, intellectual, psychological and aesthetic. Societies are compared and contrasted in order to see how different kinds of roles for women are related to different kinds of societies. A 28 542 0 2202

545. Economic Anthropology. (3). The study of methods of production, division of labor, organization of markets, concepts of money and property allocation in tribal societies. An emphasis is placed on kinship units as units of consumption and production. Prerequisite: 6 hours of anthropology. A 28 545 0 2202

555. Fossil Evidence for Human Evolution. (3). A detailed examination of man's evolutionary history as evidenced by fossil remains and a survey of various interpretive explanations of the fossil record. Prerequisite: Anthro. 101 or Biol. 233 or equivalent. A 28 555 1 2202

556. Human Variability. (3). A critical examination of the biological aspects of contemporary human variation, stressing human adaptations. Prerequisites: Anthro. 101 and Biol. 100. A 28 556 1 2202

557. Human Osteology. (3). A course dealing with human skeletal and dental materials, with applications to both physical anthropology and archaeology. Topics in lecture and extensive laboratory sessions include bone and tooth identifications, measurement and analysis and skeletal preservation and reconstruction. Individual projects are undertaken. Prerequisite: Anthro. 101 or equivalent. A 28 557 0 2202

612. Indians of the Great Plains. (3). An investigation of the cultural dynamics of the Great Plains area, from the protohistoric period to the present. Prerequisites: 6 hours of anthropology and departmental consent. A 28 612 0 2212

613. Archaeology of the Great Plains. (3). The archaeology of the Great Plains area from the earliest evidence into the historic period. Prerequisite: 6 hours of anthropology including at least one archaeology course. A 28 613 0 2203

636. Advanced Studies in Archaeology and Ethnohistory. (3). Special area and theory problems in a historical approach to culture. Prerequisites: 6 hours of anthropology and departmental consent. A 28 636 0 2202

647. Theories of Culture. (3). A survey of the main theoretical movements in cultural anthropology, including both historical and contemporary schools of thought. Prerequisite: 6 hours of anthropology. A 28 647 0 2202

648. Contemporary Theories in Anthropology. (3). This course deals with developments in anthropological theory since World War II: neoevolution, cultural ecology, ethnoscience (componental analysis, cognitive anthropology), structuralism, ethology, radical anthropology and others. Prerequisite: 6 hours of anthropology. A 28 648 0 2202

580. Human Paleoeconomy. (3). A thorough review of the ecological approach to culture history through the practice of archaeological and multidisciplinary studies. Problem formulation, specialized techniques, and interpretation will be emphasized. Prerequisite: Anthro. 501 or equivalent or instructor's consent. A 28 580 0 2203

597. Topics in Anthropology. (3). Detailed study of topics in anthropology, with particular emphasis being established according to the expertise of the various instructors. A 28 597 3 2202

600. Forensic Anthropology. (3). Cross-listed as AJ 600. The course encompasses the area of criminal investigation involving biological evidence: blood, hair, fingerprint, dentition and skeletal system. It covers procedures of collection, preservation, marking, transportation, referral, laboratory analysis, classification and identification, with a emphasis on anthropological interpretation. A 28 600 0 2202

602. Archaeological Laboratory Analysis. (1-3). Students analyze archaeological materials, including ceramic, lithic, faunal and vegetal remains according to accepted methods. Students learn to apply standard methods of identification and modes of interpretation to the materials to produce an acceptable archaeological report. Prerequisites: Anthro. 502 and instructor's consent. A 28 602 1 2202

606. Museum Methods. (3). An introduction to museum techniques relating to the acquisition of collections and related procedures, such as accessioning, cataloging, documentation, presentation and storage. Emphasis is to current trends in museological philosophy concerning purpose, function and relevance of museums, as well as career opportunities. Prerequisite: instructor's consent. A 28 606 5 2202

607. Museum Exhibition. (3). Contemporary philosophy of exhibition design and the application of recent concepts to the planning and installation of an exhibit. Prerequisite: Anthro. 606 or instructor's consent. A 28 607 5 2202

611. Southwestern Archaeology. (3). A comprehensive survey of the prehistoric, historic and living cultures of the American Southwest, with particular emphasis on the cultural continuities and changes covering 12,000 years. Prerequisites: 6 hours of anthropology and departmental consent. A 28 611 0 2203

612. Indians of the Great Plains. (3). An investigation of the cultural dynamics of the Great Plains area, from the protohistoric period to the present. Prerequisites: 6 hours of anthropology and departmental consent. A 28 612 0 2212

613. Archaeology of the Great Plains. (3). The archaeology of the Great Plains area from the earliest evidence into the historic period. Prerequisite: 6 hours of anthropology including at least one archaeology course. A 28 613 0 2203

636. Advanced Studies in Archaeology and Ethnohistory. (3). Special area and theory problems in a historical approach to culture. Prerequisites: 6 hours of anthropology and departmental consent. A 28 636 0 2202

647. Theories of Culture. (3). A survey of the main theoretical movements in cultural anthropology, including both historical and contemporary schools of thought. Prerequisite: 6 hours of anthropology. A 28 647 0 2202

649. Contemporary Theories in Anthropology. (3). This course deals with developments in anthropological theory since World War II: neoevolution, cultural ecology, ethnoscience (componental analysis, cognitive anthropology), structuralism, ethology, radical anthropology and others. Prerequisite: 6 hours of anthropology. A 28 648 0 2202

651. Language and Culture. (3). Cross-listed as Ling. 651. An introduction to historical and descriptive linguistics. The course deals with the ethnography of communications, lexicostatistics and linguistic determination. Prerequisite: 6 hours of anthropology. A 28 651 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. 667 and Ling. 667. Examination of aspects of the structure of English and their relation to linguistic theory. Prerequisite: Eng. 315 or Ling. 577, or Anthro. 577 or instructor's consent. A 28 667 0 1505

690. Field Methods in Anthropology. (3-6). A maximum of 6 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 pose 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: 6 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 6 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, interview and observation techniques, as well as more specialized methods such as photography, mapping and tape recording. Repeatable up to 6 hours. Prerequisite: departmental consent. 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 6 hours. Prerequisite: 5 hours of anthropology. A 28 837 9 2202

847. Colloquium in Anthropology. (1-2). S/U grade only. Repeatable for a maximum of 3 hours. To provide graduate students with seminar-style experience in recent research in all of the subfields of anthropology. Course will also allow those students preparing their first papers for presentation at professional conferences to present them before a critical but friendly audience. Students presenting colloquium papers will 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 6 hours. Prerequisite: 5 hours of anthropology. A 28 848 9 2202

870. Independent Reading. (2-3). Repeatable up to 6 hours. Prerequisite: departmental consent. A 28 870 3 2202

875-876. Thesis. (2-2). A 28 875 4 2202; A 28 876 4 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 in their educational careers as possible for assignment to a faculty academic adviser.

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, and 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. 203, 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 coursework. Students pursuing a BA may take 40 semester hours of biological sciences coursework for credit, while those pursuing a BS may take 50 semester hours of biological sciences coursework 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 5 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 coursework or its equivalent: (1) Chem. 111 and 112 or 123 and 124; and, (2) any two from among Chem. 523 (unless Chem. 123 and 124 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, or 520, or 524, or 527, or 528, or 532, or 540, or 544, or 650; (3) Biol. 418 and either Biol. 560, or 575, or 577, or 578; and, (4) for the BS (but not for the BA), a minimum of 7 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 coursework or its equivalent: (1) either Chem. 111 and 112, or Chem. 123 and 124; and, (2) Chem. 531.

Biochemistry Field Major. The departments of biological sciences and chemistry participate jointly in this program. Required courses are: Biol. 203, 204, 416, and 584; Chem. 111, 112, 523, 531, 532, 662, 663, 664, and 665; Phys. 213 and 214; Math. 112 or 111 and 123. Also required are Biol. 360, 666, and 669 (two enrollments), which are cross-listed in the chemistry department.

Service Courses. The Department of Biological Sciences offers service courses designed primarily to meet the needs of students in other departments. These are listed below as “Non-Majors Courses.” These service courses, or their equivalents at other institutions, cannot be used to satisfy the biological sciences coursework requirements for the major.

NON-MAJOR 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 of the biological sciences, with emphasis upon man himself. A 12 102G 0 0401

105G. The Human Organism. (4). 3R; 2L. Lab fee. (Day and evening sections offered fall and spring semesters; day section offered 8-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 lab-
oratory 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 will not be given for both Biol. 102G and Biol. 105G. Students repeating Biol. 100G (no longer offered) should enroll in this course. A 12 105G 1 0401

120. Introduction to Microbiology. (4). 3R; 2L. Lab fee. (Day sections offered fall and spring semesters and 8-week summer session; evening section offered spring semester.) Fundamentals of microbiology, with emphasis on microorganisms important in sanitation and disease. A 12 120 1 0411

225. Human Anatomy. (3). 2R; 2L. Lab fee. (Day sections offered fall and spring semesters and 8-week summer session; evening section offered fall semester.) Elementary human anatomy. A 12 225 1 0412

226. Elementary Human Physiology. (3). 3R. (Day sections offered fall and spring semester and 8-week summer session; evening section offered spring semester.) Basic human physiology. Enrollment in Biol. 227 is optional. Prerequisite: Biol. 225. Chem. 103 is recommended as a prerequisite. A 12 226 0 0410

227. Elementary Human Physiology Laboratory. (1). 3L. Lab fee. (Day sections offered fall and spring semester and 8-week summer session; evening section offered spring semester.) A laboratory in which some of the principles of human physiology are demonstrated in an experimental setting. Prerequisite or corequisite: Biol. 226. A 12 227 1 0410

Upper-Division Courses

310. The Biology of Human Reproduction and Fetal Development. (4). 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 will be presented initially at an introductory level and will be developed subsequently to include the results of recent findings in each of these 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 control of reproductive potential. Prerequisite: Biol. 102G or 105G or 203 or 225. A 12 310 0 0410

470. Applied Human Physiology. (4). 3R; 3L. Lab fee. (Offered fall semester only.) Designed for students in physical therapy and physical education. Advanced course in human physiology stressing applications of physiological principles. Prerequisite: Biol. 226. A 12 470 1 0410

Courses for
Graduate/Undergraduate Credit

509G. Foundations of Human Heredity. (4). Introduction to the mechanisms and societal significances of developmental, transmission 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 outside of the natural sciences and does not carry credit toward a biological sciences major or minor. Students seeking graduate credit will be expected to produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: junior standing. A 12 509G 0 0417

518. Biology of Aging. (3). Cross-listed as Geron. 518. An introduction to the phenomenon of aging, including a survey of age-related processes and mechanisms of senescence, with emphasis on man. Students seeking graduate credit will be expected to produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: a basic course in biological sciences that will satisfy the general education requirements is recommended. A 12 518 0 0410

570. Ecology of Man. (3). An introduction to the fundamentals of ecology, with emphasis on man as a part of the environment. A 12 570 0 0420

INTERDIVISIONAL COURSES

Lower-Division Courses

150. Biology Workshop. (1-3). A 12 150 2 0401

203. Introduction to Organismal Biology. (5). 4R; 3L. Lab fee. (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, ho-
meostatic systems involving nervous and hormonal control; nutrient procurement, circulation, use and cycling in plants, animals, and communities; and, asexual and sexual reproduction and inheritance in plants, animals, and communities. The laboratory stresses evolutionary trends in the plant and animal kingdoms and the ecological relationships of plants and animals. Students who wish to repeat Biol. 114 (no longer offered) should enroll in this course. Prerequisite: concurrent enrollment in Chemistry 103 or 111 or 123 is recommended. A 12 203 1 0401

204. Introduction to Cellular Biology. (5). 4R; 3L. Lab fee. (Day sections offered fall and spring semester; evening section offered spring 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; regulation of cellular activities by protein synthesis, protein activity, and membrane mechanisms; and, 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. 203 and Chemistry 103 or 111 or 123. A 12 204 1 0401

Upper-Division Courses

360. Explorations in Biochemistry. (1). A course designed primarily for students who choose the biochemistry field major, it is to be taken early in the program. The course will acquaint students with the subject matter of biochemistry and introduce current problems and research in biochemistry. Prerequisites: Biol. 204 and Chem. 112. A 12 360 0 0414

416. The Biology of Cells. (3). Fundamentals of cellular biology, including basic constituents, structure, metabolism, reproduction and mechanisms of intra- and inter-cellular coordination. Prerequisites: Biol. 204 and Chem. 112. A 12 416 0 0417

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 course work to job-related situations. For information contact the department chairman or the Cooperative Education program office. No more than 4 credit hours earned in Biol. 481 may be applied toward satisfying the credit hour requirements for a major in biological sciences. Prerequisite: applicant and Cooperative Education position approved by the departmental affairs committee. A 12 481 2 0499

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 will include computations on data derived from both the primary literature and independently designed research projects. The design of experiments to answer specific hypotheses, the treatment of non-normally distributed data sets and non-homogeneous experimental test units, and the use of packaged computer programs for certain statistical tests will be emphasized. Access to calculators with at least two memory banks is strongly encouraged. Students seeking graduate credit will be expected to complete an additional statistical analysis assignment involving the use of the computing facilities. Prerequisites: Stat. 370. A 12 573 2 0419

584. Genetics. (5). The mechanisms of heredity and variation in plants and animals with a critical review of the concept of the gene. Students seeking graduate credit will be expected to complete reading assignments in the technical literature resulting in several written reports or a comprehensive term paper chosen in consultation with the instructor. Prerequisite: Biol. 204. A 12 584 0 0422

666. Special Topics in Biochemistry. (3). A course designed primarily for students who choose the biochemistry field major. A small number of current problems in biochemistry will be discussed in depth. Reading published research papers in the field will be required. Students seeking graduate credit will be 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 12 666 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 4 0414

750. Biology Workshop. (1-3). A 12 750 2 0401

780. Molecular Genetics. (3). Studies of the physicochemical nature of genetic material and the mechanisms of genetic regulation of metabolism. Students seeking graduate credit will be 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). Lab fee. 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 Courses

330. General Microbiology. (5). 3R; 6L. Lab fee. (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. 350 (no longer offered) should enroll in this course. Prerequisites: Biol. 204 and Chem. 112. A 12 330 1 0411

Courses for Graduate/Undergraduate Credit

531. Food Microbiology. (4). 2R; 4L. Lab fee. 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 seeking graduate credit will be expected to prepare a term paper based on the technical literature on a topic chosen in consultation with the instructor. In addition, graduate student responses on essay examinations will be read with greater expectations with respect to clarity, quantity and quality of information presented. Prerequisite: Biol. 330. A 12 531 1 0411

552. Mycology. (4). 2R; 4L. Lab fee. The structure, development and reproduction of fungi, with emphasis on the cytology and physiology of forms of scientific and economic importance. Students seeking graduate credit will be expected to produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204. A 12 552 1 0411

590. Immunobiology. (3). The nature of antigens and antibodies and their interactions. Cellular and humoral aspects of immunologic phenomena are included. Prerequisites: Biol 204 and Chem. 531. A 12 590 0 0416

591. Immunobiology Laboratory. (3). 6L. Lab fee. Methods of immunization and techniques for qualitative and quantitative determinations of antibody production and antigen-antibody reactions. Prerequisites or corequisites: Biol. 590, Chem. 531 or instructor's consent. A 12 591 1 0416

654. Pathogenic Microbiology. (4). 2R; 4L. Lab fee. An introduction to the important pathogenic microorganisms and their relationships to health and disease in man. Prerequisite: Biol. 330. A 12 654 1 0411

658. Microbial Physiology. (3). The physiology and metabolism of microorganisms. Prerequisites: Biol. 330 and Chem. 531. A 12 658 0 0411

659. Microbial Physiology Laboratory. (3). 6L. Lab fee. An introduction to the basic techniques involved in the study of microbial physiology. 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 6 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 Ab-
struct form and obtain departmental approval prior to enrollment. Prerequisites: Biol. 204. A 12 660 4 0407

756. Microbial Genetics. (4). The relationship between development, metabolism and genetics in microorganisms. Prerequisites: Biol. 330 and 584 or departmental consent. A 12 756 0 0422

790. Advanced Immunology. (3). Contemporary problems in immunologic research. Lectures, assigned readings and reports are included. Students seeking graduate credit will be expected to produce a term paper based on the technical literature on a topic chosen in consultation with 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, and energy metabolism; thermoregulation; osmoregulation and excretion; muscular movement and locomotion; sensation; 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

417. Biology of Organisms. (3). Anatomy, physiology, life history and other properties of life considered at the organismic level of biological organization. Prerequisite: Biol. 204. A 12 417 0 0401

418. The Biology of Ecosystems. (3). 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. Lab fee. An introduction to the structure, reproduction and evolution of the major groups of living and extinct vascular plants. An introduction to flowering plant systematics is included. Students seeking graduate credit will be 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

505. Plant Physiology. (4). An introduction to the principles which govern plant growth and development, including water relations, long distance transport processes, mineral nutrition, photosynthesis and respiration as it relates to growth and development, and the chemical and environmental regulation of developmental processes. Concurrent enrollment in Biol. 506 is optional. Students seeking graduate credit will be 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. Prerequisites: Biol. 204 and Chem. 112. A 12 505 0 0406

506. Plant Physiology Laboratory. (2). 4L. Lab fee. 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 seeking graduate credit will be 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 1 0406

520. Invertebrate Zoology. (4). 3R; 3L. Lab fee. A comparative study of the morphology and phylogeny of the invertebrates, with emphasis on the basic body types and their major variations. Students seeking graduate credit will be 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. Lab fee. Evolution, distribution, systematics, natural history and special characters of vertebrate animals. Students seeking graduate credit will be 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

526. Comparative Vertebrate Endocrinology. (3). Offered spring semester of odd numbered years. The structure and function of vertebrate endocrine systems is presented with an emphasis placed on
aspects of endocrine regulation in mammals and contrasting examples from other vertebrates. Topics covered include: a survey of the structure and function of endocrine glands and the hormones they produce; the chemistry of steroid hormones; and, the endocrine regulation of metabolism, ionic and osmotic balances, amphibian metamorphosis, migratory behavior, and reproduction. Students seeking graduate credit will be expected to participate in weekly seminars in addition to the lectures. Prerequisites: Biol. 320 or 534 and Chem. 112 or consent of instructor. A 12 526 0 0410

527. Comparative Anatomy. (5). 3R; 4L. Lab fee. Offered spring semester only. An intensive study of representative chordates with emphasis on vertebrate anatomy. Students seeking graduate credit will be 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. Lab fee. (Offered fall semester only.) The parasites of man and other vertebrate hosts. Students seeking graduate credit will be 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. Lab fee. An introduction to the morphology, physiology, life cycles, behavior, ecology and economic significance of insects. Students seeking graduate credit will be 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 systematics 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 functions. Students seeking graduate credit will be expected to submit a term paper based upon library research on a topic in mammalian physiology chosen in consultation with the instructor. Prerequisites: Biol. 204 and Chem. 531 or instructor’s consent. A 12 534 0 0410

535. Mammalian Physiology Laboratory. (3). 4L. (Offered spring semester of odd numbered years.) Lab fee. An empirical approach to mammalian physiology. Students seeking graduate credit will be expected to submit an additional laboratory report relating the results of a laboratory experiment to those found in the current technical literature. Prerequisite: concurrent or prior enrollment in Biol. 534. A 12 535 1 0410

540. Comparative Embryology. (4). 2R; 4L. Lab fee. Gametogenesis, fertilization and developmental processes in animals, with emphasis on vertebrates. Students seeking graduate credit will be expected to complete additional assignments chosen in consultation with the instructor. Prerequisite: Biol. 204. Biol. 527 is also recommended. A 12 540 1 0427

544. Histology. (4). 2R; 4L. Lab fee. The microscopic anatomy of vertebrate tissues with emphasis on mammals. Students seeking graduate credit will be 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. Lab fee. 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 0420

575. Field Ecology. (3). 9L. Lab fee. Techniques for analysis of systems consisting of living organisms and their environments. Field trips are required. Students seeking graduate credit will be 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. Lab fee. Introduction to the biological and physical processes that operate in lakes, streams and estuaries. Assigned readings, individual projects and field trips are required. Students seeking graduate credit will be expected to investigate 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 will be reported as a technical paper. Prerequisites: Biol. 204 and instructor’s consent. A 12 578 1 0420

610. Topics in Botany. (2-4). Lab fee. No more than a total of 6 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

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prior to enrollment. Prerequisite: Biol. 204. A 12 610 4 0402

620. Animal Behavior. (3). A survey of animal behavior, including human, with major emphasis on the analysis of behavior as a concert of physiological processes. Students seeking graduate credit will be 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

621. Animal Behavior Laboratory. (2). 6L. Lab fee. Individual or team research projects in the area of behavior. Prerequisite or corequisite: Biol. 620. A 12 621 1 0407

630. Sociobiology. (3). A systematic study of the biological basis of social behavior. The course focuses on animal societies, their population, structure, castes and communication, and the underlying physiology. Students seeking graduate credit will be 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 Zoology. (2-4). Lab fee. No more than a total of 6 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. Prerequisites: Biol. 204. A 12 640 4 0407

650. Protozoology. (4). 2R; 6L. Lab fee. Survey of the free living and parasitic protozoa, with identification, life cycles and host-parasite relationships emphasized. Students seeking graduate credit will be expected to produce a term paper based on the technical literature on a topic chosen in consultation with the instructor. Prerequisite: Biol. 204; A 12 650 1 0411

724. Special Problems in Animal Behavior. (3). Topics such as spontaneity, drive, rhythms, instinct, behavioral plasticity, behavior genetics and the evolution of behavior receive special emphasis. Prerequisite: Biol. 620 or instructor's consent. A 12 724 0 0407

728. Physiological Basis of Behavior. (3). A modern approach to coordinatory mechanisms that stresses the essential unity of nervous and endocrine function. Prerequisite: Biol. 730 or instructor's consent. A 12 728 0 0410

730. Comparative Animal Physiology. (3). A phylogenetic examination of the homologous and analogous ways in which animals perform similar functions. Prerequisite: Biol. 534 or departmental consent. A 12 730 0 0410

770. Special Problems in Ecology. (5). 2R; 6L. Lab fee. Emphasis on conservation of natural resources, land and water use, wildlife and fisheries management, and effects of pollution. Assigned readings, individual projects and field trips are required. Prerequisites: Biol. 575 and 578 or instructor's consent. A 12 770 1 0420

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, 615, and their necessary prerequisites, including Math. 344 and Phys. 312, or their equivalents. An additional 14 credit hours of professional development courses must be taken. Courses that will satisfy this requirement are: (a) Chem. 690 and 669; (b) most elective chemistry courses above 600; (c) numerical methods: Chem. 602, Math. 551, CS 501, 675; (d) electronics: Chem. 625, Chem. 725, Engr. 492; (e) mathematics courses with Math. 344 prerequisite; (f) physics courses with Phys. 312 prerequisite; (g) foreign language: one academic year of German or French; and (h) other courses as may be approved (approval required) by student request to the Chemistry Advising Committee. At least 4 credit hours of the professional development courses must be selected from Chem. 690 and other chemistry courses above 600 (Chem. 701 is excluded).
In agreement with the American Chemical Society Committee on Professional Training, the chemistry department strongly encourages the BS student to select courses to acquire some knowledge and understanding of computer science, economics, marketing, and business and to utilize every opportunity to develop competence in technical writing and oral communication.

The curriculum for the BS in chemistry is approved by the American Chemical Society for the professional training of chemists, and students completing the program receive certification from the American Chemical Society. Students should consult with an adviser for details.

**Bachelor of Science in Chemistry—Preprofessional Option.** Students in premedical, predental, preveterinary, prepharmacy, preoptometry, or other preprofessional programs may desire this option, for which the following courses are required: Chem. 524, 532, 614, and their necessary prerequisites, which must include Math. 243 and one year of physics; 5 credit hours selected from Chem. 540, 545, 546, and 547; 5 credit hours selected from Chem. 662, 663, 664, and 665; 4 additional credit hours of chemistry courses numbered above 500 and 10 credit hours of Biol. 203 and 204 (or equivalent). The course selection must include one of the laboratory courses: Chem. 547, 613, 664, or 665.

This program is designed for students not expecting to become professional chemists and therefore does not necessarily meet standards of certification by the American Chemical Society or entry requirements for graduate work in chemistry.

**Bachelor of Science in Chemistry—Chemical Physics Option.** Students may elect to participate in this option, which is a joint program with the Department of Physics. Students participating in this option are expected to satisfy the regular BS in chemistry requirements and take 6 credit hours of upper-division physics courses from Phys. 551, 621, 631, 712, 714, or other approved courses. All students must take Chem. 642.

Students completing this option are eligible for certification by the American Chemical Society.

**Bachelor of Arts in Chemistry.** This degree 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. 614, 662, or 665.

**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. 203, 204, 416, and 584; Chem. 111, 112, 523, 531, 532, 662, 663, 664, and 665; Phys. 213 and 214; Math. 112 or 111 and 123. Also required are Chem. 360, 666, 669 (two enrollments), which are cross-listed in the Department of Biological Sciences.

**Chemistry/Business Field Major.** The Charles M. Bueess 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: Acctg. 210 and 220; Econ. 201 and 202; Admin. 300, 340, 360, 405, 435, and 608. In addition, approximately 30 hours of chemistry and mathematics are required: Chem. 111, 112, 523, 361 or 662, 531 (or 533 and 534), and Math 114 or 242. Students must also take 5 to 8 hours of chemistry courses numbered 500 or higher.
Students selecting this option should contact the chairperson of the Department of Chemistry as early as possible for advice.

**Minor.** The chemistry minor consists of at least 14 hours of chemistry courses and must include at least 4 hours from Chem. 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 DISCIPLINE REQUIREMENTS IN CHEMISTRY PROGRAMS

#### Bachelor of Science

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 111, 112</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 531, 532</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 523, 524</td>
<td>8</td>
</tr>
<tr>
<td>Chem. 545, 546</td>
<td>6</td>
</tr>
<tr>
<td>Chem. 547</td>
<td>2</td>
</tr>
<tr>
<td>Chem. 614, 615</td>
<td>4</td>
</tr>
<tr>
<td>Chem. 600-800 *</td>
<td>4</td>
</tr>
<tr>
<td>Phys. 311, 312</td>
<td>10</td>
</tr>
<tr>
<td>Math. 112, 242, 243, 344</td>
<td>18</td>
</tr>
<tr>
<td>Professional development</td>
<td>10</td>
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</tbody>
</table>

* Part of the required 14 hours of professional development courses (see description above).

#### Bachelor of Science—Preprofessional Option

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Chem. 111, 112</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 531, 532</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 523, 524</td>
<td>8</td>
</tr>
<tr>
<td>Chem. 540, 545, 546, 547 †</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 614</td>
<td>2</td>
</tr>
<tr>
<td>Chem. 662, 663, 664 †, 665 †</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 500-800</td>
<td>4</td>
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<tr>
<td>Phys. (1 yr.)</td>
<td>10</td>
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<tr>
<td>Math. 112, 242, 243</td>
<td>15</td>
</tr>
<tr>
<td>Biol. 203, 204</td>
<td>10</td>
</tr>
</tbody>
</table>

† One lab course Chem. 547, 613, 664, or 665, must be taken.

#### Bachelor of Arts

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem. 111, 112</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 531, 532</td>
<td>10</td>
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<tr>
<td>Chem. 523, 524 ‡</td>
<td>8</td>
</tr>
<tr>
<td>Chem. 545, 546 ‡</td>
<td>6</td>
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<td>Phys. (1 yr.)</td>
<td>10</td>
</tr>
<tr>
<td>Math. 112, 242, 243, 344</td>
<td>18</td>
</tr>
</tbody>
</table>

‡ Combinations of Chem. 662, 663, 664, 665 may be substituted for Chem. 524 or 546 (see description above).
### Biochemistry Field Major

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Chem. 111, 112</td>
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</tr>
<tr>
<td>Chem. 523</td>
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<tr>
<td>Chem. 531, 532</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 662, 663</td>
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<tr>
<td>Chem. 664, 665</td>
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<td>Chem. (Biol.) 360</td>
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<tr>
<td>Chem. (Biol.) 666</td>
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<tr>
<td>Chem. (Biol.) 669</td>
<td>4</td>
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<tr>
<td>Biol. 203, 204</td>
<td>10</td>
</tr>
<tr>
<td>Biol. 416</td>
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</tr>
<tr>
<td>Biol. 584</td>
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<tr>
<td>Math. 112 or 111, 123</td>
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<tr>
<td>Phys. 213, 214</td>
<td>10</td>
</tr>
<tr>
<td>Biochemistry electives</td>
<td>21</td>
</tr>
</tbody>
</table>

### Chemistry/Business Field Major

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
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<tbody>
<tr>
<td>Chem. 111, 112</td>
<td>10</td>
</tr>
<tr>
<td>Chem. 523</td>
<td>4</td>
</tr>
<tr>
<td>Chem. 533-534 or 531</td>
<td>5</td>
</tr>
<tr>
<td>Chem. 361 or 662</td>
<td>3</td>
</tr>
<tr>
<td>Chem. 500-800</td>
<td>5-8</td>
</tr>
<tr>
<td>Math. 144 or 242</td>
<td>3-5</td>
</tr>
<tr>
<td>Acctg. 210 and 220</td>
<td>6</td>
</tr>
<tr>
<td>Econ. 201 and 202</td>
<td>6</td>
</tr>
<tr>
<td>Mkt. 300, 405, 608</td>
<td>9</td>
</tr>
<tr>
<td>Fin. 340</td>
<td>3</td>
</tr>
<tr>
<td>Mgmt. 360</td>
<td>3</td>
</tr>
<tr>
<td>B. Law 435</td>
<td>3</td>
</tr>
<tr>
<td>Math. 114 or 242</td>
<td>3</td>
</tr>
</tbody>
</table>

All programs require additional courses to satisfy general education curriculum requirements and the graduation requirements in Fairmount College of Liberal Arts and Sciences.

### Lower-Division Courses

101G. The Science of Chemistry. (3).
Teaches students the basic concepts of chemistry that will aid them in understanding 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

103. General Chemistry. (5). 3R; 4L. Lab fee. An introduction to the general laws of chemistry. Atoms, molecules, chemical arithmetic, gas laws, reactions, acids, bases, titrations, phase equilibria, solutions, atomic and molecular structure, and an introduction to organic and biochemistry are included. The Chem. 111-112 course sequence is designed to meet the needs of students who may wish to take more than one course in chemistry. Students who have had good high school preparation in chemistry and mathematics should consider the alternate afforded by Chem. 123-124. Credit will not be granted for both Chem. 103 and 111. Prerequisite: one year of high school algebra or Math. 011. A 13 103 0 1905

111. General Chemistry. (5). 3R; 4L. Lab fee. An introduction to the general laws of chemistry. Atoms, molecules, chemical arithmetic, gas laws, reactions, acids, bases, titrations, phase equilibria, solutions, atomic and molecular structure, and an introduction to organic and biochemistry are included. The Chem. 111-112 course sequence is designed to meet the needs of students who may wish to take more than one course in chemistry. Students who have had good high school preparation in chemistry and mathematics should consider the alternate afforded by Chem. 123-124. Credit will not be granted for both Chem. 103 and 111. Prerequisite: one year of high school algebra or Math. 011. A 13 111 1 1905

112. General and Inorganic Chemistry. (5). 3R; 4L. Lab fee. Continuation of Chem. 111. Thermodynamics, gaseous and ionic equilibria, kinetics, nuclear chemistry, electrochemistry, qualitative
analysis and an introduction to theories of bonding are included. Prerequisite: Chem. 111 with a grade of C or better. A 13 112 1 1905

123. General and Analytical Chemistry. (5). 3R; 6L. Lab fee. An introduction to atoms, molecules, chemical arithmetic, gas laws, phase and ionic equilibria, and electrochemistry. A laboratory introduction to quantitative analysis, the course includes much of the material ordinarily presented in Chem. 523 and the use of a small digital computer in chemical computations. Students who successfully complete the Chem. 123-124 sequence are not required to take Chem. 523. Prerequisite: 1½ units of high school algebra and 1 unit of high school chemistry. A 13 123 1 1905

124. General and Analytical Chemistry. (5). 3R; 6L. Lab fee. Atomic and molecular structure, thermodynamics, kinetics and nuclear chemistry. Prerequisite: Chem. 123 with a grade of C or better. A 13 124 1 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 1 1905

281. Cooperative Education in Chemistry. (1-4). The course will permit chemistry students to participate in the Cooperative Education program. A 13 281 2 1909

Upper-Division Courses

360. Explorations in Biochemistry. (1). A course designed primarily for students who choose the biochemistry field major; it is to be taken early in the course of study. The course will acquaint students with the subject matter of biochemistry and introduce current problems and research in biochemistry. Prerequisites: Biol. 114 and Chem. 112. A 13 360 0 0414

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, solution concentration, titration, and buffers. The course begins with a study of Lewis structures of atoms, molecules, and ions. Prerequisite: inservice 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. 112 with a grade of C or better. A 13 523 1 1909

524. Instrumental Methods of Chemical Analysis. (4). 2R; 6L. Lab fee. Introduction to electroanalytical chemistry and optical methods of analysis and analysis and separation of complex mixtures, both inorganic and organic. In addition, basic computer programming is discussed as it applies to analytical chemistry. Prerequisite: Chem. 523 or 124. A 13 524 1 1909

531. Organic Chemistry. (5). 3R; 6L. Lab fee. An introduction to the study of carbon compounds, with emphasis upon reaction mechanisms, stereochemistry and spectrographic analysis. Prerequisite: Chem. 112 or 124 with a C or better. A 13 531 1 1907

532. Organic Chemistry. (5). 3R; 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 1 1907

533. Elementary Organic Chemistry. (3). Basic organic chemistry with a special emphasis on topics of importance to health related 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 will not meet the needs of chemistry majors or premed students. Prerequisite: Chem. 112 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 to fortify the survey lecture course Chem. 533. Prerequisite or corequisite: Chem. 533. A 13 534 1 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 courses (545-546), this more practically-oriented course will attempt to survey most of the important areas of physical chemistry in a heuristic and applied manner. The concentrated one semester treatment will
serve students majoring in preprofessional programs; students majoring in geology, engineering, biological sciences and physics; and field majors in biochemistry and chemistry-business. Prerequisites: Chem. 112 or equivalent, Math. 242 or equivalent and one semester of Physics. A 13 540 0 1908

545. Physical Chemistry. (3). Thermodynamics. Gases, first law, thermodynamics, second and third laws, phase equilibria, solutions, chemical equilibria, electrochemistry and surface chemistry are studied. Prerequisites: Chem. 112, Math. 344, or its equivalent and one semester of college physics. A 13 545 0 1908

546. Physical Chemistry. (3). Kinetic theory, kinetics, transport phenomena, quantum mechanics, spectroscopy and statistical thermodynamics. Prerequisites: one year of college physics and Math. 344. A 13 546 0 1908

547. Physical Chemistry Laboratory. (2). 6L. Lab fee. Physical chemistry experiments that illustrate principles learned in Chem. 545 and 546. Prerequisite: Chem. 545 or 546. A 13 547 0 1908

561. Introduction to Biochemistry. (3). A brief history of biochemistry, emphasizing the development of molecular biology; chemistry of biomolecules—proteins, carbohydrates, lipids, nucleic acids, vitamins; molecular basis of bioenergetics and metabolism; storage, transfer and control of genetic information. This course meets the needs of majors from health related programs and science education curricula. Prerequisite: Chem. 531 or 533 or one semester of organic chemistry. A 13 561 0 0414

602. Numerical Methods. (2). 1R; 3L. Applications of numerical methods to problems in chemistry and physics. Roots of equations; curve fitting; interpolation; extrapolation and smoothing of experimental data; numerical differentiation and integration and computer programming. Prerequisite: departmental consent. A 13 602 1 1905

603. Industrial Chemistry. (3). For students with an interest in practical industrial 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, patents, and communication with engineers and nontechnical persons. Cost calculations, evaluation of alternative processes, and energy consumption are discussed. Prerequisite: 18 hours of chemistry including Chem. 531 or equivalent. A 13 603 0 1905

613. Inorganic Chemistry Laboratory. (2). 6L. Lab fee. Experimental methods of inorganic chemistry. Prerequisite: Chem. 614 or concurrent enrollment. A 13 613 1 1906

614. Chemical Bonding. (2). Molecular symmetry, structure and bonding of inorganic compounds. Prerequisite: Chem. 546 or 540. A 13 614 0 1906

615. Inorganic Chemistry. (2). Periodicity and trends of the elements, coordination chemistry and properties of inorganic compounds. Prerequisite: Chem. 614. 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 to be discussed include stereochemistry, conformational analysis, organic reaction mechanisms including linear free energy relationships, kinetics, 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 by a team of chemists and physicists. 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: protein, carbohydrate, glycoprotein, lipid, nucleic acid, nucleoprotein; enzyme catalysis; biological oxidations; photosyn-
662.00414

663. Biochemistry of Cell Metabolism, Biosyntheses, Structure, Function, and Regulation of Proteins and Nucleic Acids. (3). Study of metabolism and control of carbohydrates, lipids, phosphoglycrides, spingolipids, sterols, amino acids, and proteins; synthesis of porphyrins, amides and polyanimes; synthesis and metabolism of purines, pyrimidines and nucleotides; synthesis and structure of DNAs, RNAs and proteins; organization and functioning of genes; evolution of proteins and nucleic acids; hereditary disorders of metabolism; biochemistry of endocrine glands; major nutrients and vitamins, body fluids and generalized tissues. A fundamental background of biology or microbiology is recommended but not essential. Prerequisites: Chem. 523 and 532 or equivalents. A 13 662 0 0414

663. Biochemistry Laboratory I. (2). 6L. Lab fee. Practical education in biochemical processes and procedures. Experiments include: cellular fractionation, chromatography; characterization and assay of important metabolites; application of radioisotopes in vivo biochemical pathways, assay techniques of common isotopes; structure, function, purification, and reactions of proteins, and DNA and RNA's; the use of high pressure liquid chromatography and other separation procedures in biological sciences and medicine. Recommended for students seeking admission to medical and paramedical professions or interested in graduate study in chemistry and biological sciences. Prerequisites: Chem. 523 and 532 or instructor's consent. A 13 663 0 0414

665. Biochemistry Laboratory II. (2). 6L. Lab fee. Study of advanced techniques of biochemistry for fragmentation, separation, sequencing, and assay of proteins and nucleic acids involving gel-permeation, ion-exchange, ion-exclusion, affinity chromatography, gel-electrophoresis and high-voltage electrophoresis methods. Application of radioisotopes in biological systems and radioimmunoassay for measuring unlabeled antibodies. This course should be taken concurrently with Chem. 663. Prerequisites: Chem. 523 and 532 (or Chem. 534 and 535 in place of Chem. 532) or equivalent. A 13 665 1 0414

666. Special Topics in Biochemistry. (3). A small number of current problems in biochemistry will be discussed in depth. Reading of published research in the field will be required. Prerequisites: Biol. 114 and Chem. 662 and 663. A 13 666 9 9414

669. Research in Biochemistry. (2). Students in the field major participate in a biochemistry 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 664 or 665. A 13 669 4 9414

700. Chemistry Seminar. (1). S/U grade only. Seminars are given by students on either papers recently published in the literature 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

709. Special Topics in Chemistry. (2-3). A discussion of topics of a special significance and interest to faculty and students. Offerings will be announced in advance. Repeatable for credit. A 13 709 0 1905

712. Coordination Chemistry. (3). The study of classical, organo-metallic and bioinorganic coordination complexes. Topics include nomenclature, fundamental bonding concepts, principles of synthesis, mechanisms of substitution and electron transfer reactions and of catalysis, and modes of action in biological systems. A 13 712 9 1906

723. Analytical Spectroscopy. (3). Absorption (UV, visible, IR, and atomic);
741. Quantum Chemistry. (3). Theoretical basis of atomic and molecular structure. Topics to be covered, include the postulates of quantum mechanics, exact solutions for the particle-in-a-box and the hydrogen atom, variation and perturbation techniques, electron spin, Hartree-Fock and configuration-interaction methods, molecular-orbital and valence-bond wave functions and virial and Hellmann-Feynman theorems. Prerequisite: Math. 344 or equivalent. Corequisite: Chem. 705 or equivalent. A 13 741 0 1908

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 1908

745. Chemical Thermodynamics. (3). A presentation of the basic three laws of thermodynamics in a classical framework designed to increase one'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 to be covered include polyatomic electronic atoms, time-dependent perturbation theory, vibration and rotation of diatomic molecules, vibration and rotation of polyatomic molecules, electronic spectra and magnetic resonance spectroscopy. Prerequisites: Chem. 741 or its equivalent and Chem. 705 or its equivalent. A 13 746 0 1908

761. Enzyme Mechanisms. (3). An introduction to the study of enzyme mechanisms. Modern approaches include steady-state, relaxation and chemical modification methods. Prerequisite: Chem. 662 or 663 or equivalent. A 13 761 0 0414
tion interrelationship of nucleic acids; and biochemistry of viruses. Prerequisite: Chem. 662, or 663 or equivalent. A 13 762 0 0414

763. Biophysical Chemistry. (3). A theoretical examination of the methods used in the study of biological macromolecules. Topics include ultracentrifugation, isoelectric focusing, fluorescence, circular dichroism, optical rotary dispersion and light scattering. Prerequisites: Chem. 662 or 663 and 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 to be directed by a faculty member. Repeatable for credit. A 13 890 4 1905

990. Research in Chemistry. (2-16). S/U grade only. Research for the student planning to receive the PhD. Research is to be directed by a faculty member. Repeatable for credit. A 13 990 4 1905

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

800. Introduction to Graduate Study in Communication. (3). An integrative approach to an understanding of the basic concepts and components of human communication. The interrelationship of the several communication disciplines will be examined, to include identification of special applications and differences among them. Emphasis is placed on principles of research, basic bibliographical tools and methodologies appropriate for graduate studies in communication, including pilot projects or theses. This course should be taken at the beginning of the graduate program. A 32 800 0 0601

875-876. Thesis. (2-2). A 32 875 4 0601; A 32 876 4 0601

Computer Science

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) or Bachelor of Arts (BA) degree in Fairmount College of Liberal Arts and Sciences. The computer science major under the BSE program is discussed in the College of Engineering section of the Catalog.

Major. For the Bachelor of Science (BS) in computer science, students must complete a minimum of 36 hours of computer science courses including CS 300, 340, 405, 420, 485, 501, 510, 540, and 560.

For the Bachelor of Arts (BA) degree with a major in computer science, students must complete a minimum of 30 hours of computer science courses including CS 300, 340, 405, 420, 485, 510, and 540.

In addition, candidates for either the BA or BS degree must complete a minimum of 15 hours of sequence electives. These hours must be selected by consultation with a computer science adviser and should be selected no later than the student’s sophomore year. All sequence electives must be approved, in advance, by the computer science faculty. The sequence electives are designed to expose the student to individually chosen areas of computer science application. The sequence electives can be designed to prepare the
student for graduate study, scientific applications, business applications, or many other areas of interest.

**Minor.** Students electing to minor in computer science must complete a minimum of 15 hours of computer science courses including CS 140, 200, and at least 6 hours of upper-division work. As with the computer science major, it is recommended that students consult with an adviser in computer science in selecting the courses for the minor.

### 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 Computers</td>
<td>2</td>
</tr>
<tr>
<td>Math. 112, Precalculus Mathematics (or equivalent)</td>
<td>5</td>
</tr>
<tr>
<td>Eng. 101 and 102, College English I and II</td>
<td>6</td>
</tr>
<tr>
<td>Hist. 131 or 132, History of U.S., or Pol. Sci. 121, Am. Pol</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>CS 200, Introduction to Programming</td>
<td>2</td>
</tr>
<tr>
<td>CS 202, PL/I Language or CS 212, PASCAL Programming</td>
<td>2</td>
</tr>
<tr>
<td>Math. 211, Elementary Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>Natural science elective</td>
<td>5</td>
</tr>
</tbody>
</table>

#### Sophomore Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 300, Fundamental Algorithms</td>
<td>3</td>
</tr>
<tr>
<td>CS 216, Assembly Language Programming</td>
<td>2</td>
</tr>
<tr>
<td>Math. 242 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>2</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>
</tr>
</tbody>
</table>

#### Junior Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<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. 331, 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 540, Operating Systems and Architecture I</td>
<td>3</td>
</tr>
<tr>
<td>Humanities and fine arts elective</td>
<td>3</td>
</tr>
<tr>
<td>Other elective</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Senior Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Hrs.</th>
</tr>
</thead>
<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>
</tbody>
</table>
Model Program for BA in Computer Science

Freshman Year

Course                           Hrs.
CS 140, Introduction to Computers 2
Math. 111, College Algebra (or equivalent) 3
Eng. 101 and 102, College English I and II 6
Hist. 131 or 132, History of U.S., or Pol. Sci. 121, American Politics 3
Elementary foreign language (111 and 112) 10
CS 200, Introduction to Programming 2
CS 202, PL/I Language, or CS 212, PASCAL Programming 2
Math. 211, Elementary Linear Algebra 3

Sophomore Year

Course                           Hrs.
CS 300, Fundamental Algorithms 3
CS Language 2
Speech 111, Basic Public Speaking, or 112, Basic Interpersonal Communication 3
Foreign language elective 5
Other elective 3
CS 405, File Processing Techniques 3
CS 216, Assembly Language Programming 2
Natural science elective 3-5
Humanities and fine arts elective (literature) 3
Social and behavioral science elective 3

Junior Year

Course                           Hrs.
CS 340, Computer Organization and Programming 3
Sequence electives for computer science 6
Math. 331, Discrete Mathematics 3
Social and behavioral science elective 6
Humanities and fine arts elective 3
CS 540, Operating Systems and Architecture I 3
Humanities and fine arts elective (Phil. 125 or 325) 3
Natural science elective 3

Senior Year

Course                           Hrs.
CS 510, Programming Languages 3
Sequence electives for computer science 9
Social and behavioral science elective 3
Humanities and fine arts elective 3
Other elective 6
CS 420, Concepts of Computer Science 3
CS 485, Debugging Techniques 2
Natural science elective 3

NOTE: Electives above must be carefully chosen so that all department, college, and University graduation requirements are satisfied.
Lower-Division Courses

103C. Computers: Their Uses and Abuses. (3) This course provides a broad introduction to modern computers and their use. Topics covered include: historical development, basic concepts of computer systems, principles of computer problem solving, influence on individuals and society (both positive and negative), security and privacy issues, and the outlook for our future with computers. Computer applications in various areas will be surveyed, including business, government, education, engineering, health professions, the humanities, law enforcement and the sciences. This course is not a computer skills course. Its purpose is to facilitate an understanding of computers, their capabilities, limitations and impact on the lives of individuals. A 34 103G 0 0701

140. Introduction to Computers. (2). 1R; 2L. An introduction to digital computer hardware. Topics include number systems, Boolean logic, computer components and programming. The laboratory is used for extension of the concepts introduced in lecture and for drill; however, there is no hands-on machine experience. Prerequisite: 1 unit of high school algebra. A 34 140 1 0702

150. Workshop. (1-5). Short-term courses with special focus on introducing new computer techniques. Repeatable for credit. Prerequisite: departmental consent. A 34 150 2 0701

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 component using a computer language. No other computer science language class can be taken concurrently. Prerequisites: 1 unit each of high school algebra and geometry and 12 hours of course work with a grade of C or better. A 34 190 1 0703

200. 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 computer programming languages. No “hands on” computer experience is provided in this class. Students wishing to apply the course material must enroll in a programming language laboratory course, CS 201 through 212. Prerequisites: 1 unit each of high school algebra and geometry and at least 12 hours with a grade of C or better, or departmental consent. A 34 200 0 0704

201. FORTRAN Language. (2). 1R; 2L. Fundamentals of computer programming in FORTRAN and its application to problems. Prerequisite: Math. 111 or 112 or departmental consent. Prerequisite or corequisite: CS 200. A 34 201 1 0704

202. PL/I Language. (2). 1R; 2L. Fundamentals of computer programming in PL/I and its application to problems. Prerequisite: Math. 111 or 112 or departmental consent. Prerequisite or corequisite: CS 200 or EE 199. A 34 202 1 0704

203. APL Programming. (2). 1R; 2L. Fundamentals of computer programming in APL and its application to problems. Prerequisite or corequisite: CS 201, 202, 206 or 212. A 34 203 1 0704

204. SNOBOL Language. (2). 1R; 2L. Fundamentals of computer programming in SNOBOL and its application to problems. Prerequisite: CS 202 or 212. A 34 204 1 0704

205. COBOL Language. (2). 1R; 2L. Fundamentals of computer programming in COBOL and its application to problems. Prerequisite or corequisite: CS 200 or EE 199. A 34 205 1 0704

206. BASIC Language Programming. (2). 1R; 2L. Fundamentals of computer programming in BASIC and its application to problems. Prerequisite or corequisite: CS 200. A 34 206 1 0704

212. PASCAL Programming. (2). 1R; 2L. Fundamentals of computer programming in PASCAL and its application to problems. Prerequisites: Math. 111 or 112, and CS 200 or EE 199. CS 200 may be taken concurrently. A 34 212 1 0704

213. RPG Programming. (2). 1R; 2L. Fundamentals of computer programming in RPG and its application to problems. Prerequisite or corequisite: CS 200. A 34 213 1 0704

214. LISP Programming. (2). 1R; 2L. Fundamentals of computer programming in LISP and its application to problems. Prerequisites: CS 201, 202, or 212. A 34 214 1 0704

216. Assembly Language Programming. (2). 1R; 2L. Fundamentals of computer programming in 370 BAL and its application to problems. Prerequisites: CS 140; 200 and one course numbered CS 201 through 214. A 34 216 1 0704
Upper-Division Courses

300. Fundamental Algorithms. (3). 2R; 2L. A second course in programming designed to continue building the student's knowledge of algorithm development. Topics include internal sorting and searching, stacks, queues, linked lists, string processing, recursion and matrix operations. Projects involving one or more large programs will allow the student to apply the material. Prerequisites: Math. 211 and CS 202 or 212. Math. 211 may be taken concurrently. A 34 300 1 0704

340. Computer Organization and Programming. (3). 2R; 2L. A study of basic computer architecture and programming technique required to control it. Topics include number representation, arithmetic, communication between major computer components, instruction processing cycle, addressing techniques and concepts of microprograms. Programming problems will demonstrate the concepts. Prerequisite: CS 216 or EE 228. A 34 340 1 0702

405. File Processing Techniques. (3). 2R; 2L. Extending the student's knowledge of algorithm and data structure design to include file I/O processing. Topics include file blocking, compaction, sequential access and update, external sort/merge, random access, data base, indexes, list file structure, and trees. Prerequisite: CS 300. A 34 405 1 0704

420. 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, halting problems, predicate calculus, cybernetics, and coding theory. Prerequisites: CS 140, 300, and Math. 331. A 34 420 0 0701

481. Cooperative Education in Computer Science. (1-3). 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. Prerequisite: department consent. A 34 481 2 0701

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 will apply the material by assisting other students for 3 hours each week in a debugging practicum. Prerequisites: CS 340, 405, and three courses numbered CS 201 through 216. A 34 485 1 0705

Courses for Graduate/Undergraduate Credit

501. Numerical Programming Techniques. (3). 2R; 2L. A study of the programming techniques used to solve non-linear equations, interpolate, integrate and solve systems of linear equations. The implications of finite precision floating point arithmetic are discussed. Techniques for initial and boundary value problems in ordinary differential equations are also covered. Selected algorithms are implemented on the computer. Prerequisites: Math. 243 and CS 300. A 34 501 1 0704

510. Programming Languages. (3). Formal definition of programming languages, including 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 tasks. Prerequisite: CS 300. A 34 510 0 0704

512. Systems Programming. (3). 2R; 2L. Introduction to advanced concepts of assembly language programming and their application in systems programming. Topics covered include input/output programs, macros, dynamic resource allocation and task management. The course requires one or more programming projects involving representative systems programs. Prerequisites: CS 300, 340, and 405. A 34 512 1 0704

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, asynchronous proc-
560. Data Structures. (3). The formal specification of data structures. Linear lists and arrays, orthogonal lists and multitasked structures are studied, and representation via trees and graphs and searching and sorting techniques are included. Prerequisite: CS 405. A 34 540 0 0702, A 34 541 0 0702

565. Data Base Design. (3). Principles of database 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 34 566 0 0702

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 topics are studied from several different viewpoints, ranging from the individual program statement to a large programming project. Prerequisites: CS 340, 405, and three CS courses numbered 201 through 216. A 34 580 1 0704

605. 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 34 605 1 0704

641. Small Systems Architecture. (3). A course on minicomputers and microcomputers and on how small computers are used to construct larger ones. Includes general concepts of computer architecture, particularly the differences between large computers and small computers and the special features of small computers, such as horizontal and vertical microprogramming; use of display terminals, cassettes, tapes, and discs; networks of 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, time-sharing systems. Study focuses on hardware requirements, design methodologies for application programs and data bases, and characteristics of typical operating systems. Prerequisites: CS 340, 405, and Math. 331 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

675. Numerical Methods. (3). A continuation of CS 501 emphasizing the theoretical aspects of the algorithms treated. 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

684. Applications Systems Analysis. (3). A study of the methods for analyzing business systems problems and other largescale applications of the computer. At the crossroads of computer technology, management science, and human relations, systems analysis is the keystone 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. Prerequisite: departmental consent. A 34 697 0 0701

720. Theoretical Foundations of Computer and Information Sciences. (3). This 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 finite state machines, both deterministic and non-deterministic, plus the concepts of decidability, computability and formal language theory. Topics in information science will include basic coding theory, cybernetics, models of the human brain and their relevance to machine intelligence. Prerequisite: CS 420 or graduate standing. A 34 720 0 0701

750. Workshop in Computer Science. (1-5). Short-term courses with special focus


821. Analysis of Algorithms. (3). Introduction to the techniques used to analyze both specific algorithms and classes of algorithms. Popular models including Knuth's Mix and random access machine will be covered. Specific techniques, such as divide-and-conquer, recurrence equations, and dynamic programming, will be studied. Applications to set operations, hashing, graph searching, transitive closure and partitioning will be analyzed. Prerequisites: CS 560 and either 420 or graduate standing. A 34 821 0 0702

841. Advanced Computer Architecture. (3). A study of advanced topics in computer architecture like parallel processing; stack architectures, computer performance evaluation and reliability of computing systems. Architectures of typical systems belonging to the IBM, CDC and Burroughs families of computers will be 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, related problems of intra- and inter-system communication, synchronization and integrity will be addressed. General principles of resource management as related single-processor and multiprocessor environments will be 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, interprocessor communication and centralization versus distribution. Study of the use of microcomputers in representative configurations is also included. Prerequisite: CS 540 or 641 or EE 694. A 34 843 0 0702

862. Principles of Data Base Design. (3). An advanced treatment of the principles of data base design. The following issues will be 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. Prerequisite: CS 560. A 34 862 0 0702

882. Software Testing and Reliability. (3). A study of the ingredients of software quality assurance and their interactions. Characteristics of software quality and methods of measurement, software reliability models and program testing, and tools for software development and testing. Methods for proving program correctness and comparison. Prerequisite: CS 580. A 34 882 0 0705

890. Graduate Seminar. (2). A series of seminars on topics of current research interest in computer science. Participants will be required to present one or two seminars on topic(s) to be selected with the approval of their graduate advisers. Repeatable up to 4 credit hours. Prerequisite: departmental consent. A 34 890 9 0701

891. Practicum. (3). An intensive applied learning experience, involving the analysis and solution of a significant practical problem, and appropriate documentation of the work done. Students are required to participate in a departmental seminar where their practicum experiences will be shared with other students and faculty. Graded S/U only. Prerequisite: departmental consent. A 34 891 2 0701

892. Thesis. (1-6). May be repeated for up to 6 hours of credit. Graded S/U only.
Prerequisite: departmental consent. A 34892 4 0701

893. Individual Reading. (1-5). Graded S/U only. Prerequisite: departmental consent. A 34893 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. 201, 202, 231, 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. 201 and 202, 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 30 hours, 3 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 (6 hours)
   1. Eng. 270—must be taken during first 9 hours of work in major
   2. Eng. 272 or 274

II. Area Requirements (15 hours)
   One course each from five of the following areas:
   1. Medieval literature—Eng. 350 or 521
   2. Renaissance literature—Eng. 352 or 522
   3. Restoration and 18th century literature—Eng. 354 or 524
   4. 19th century literature—Eng. 356, 526, or 527
   5. 19th century American literature—Eng. 362, 501,* or 502*
   6. Modern literature—Eng. 358, 364, 501,* 502,* 530, 531

III. Electives (9 hours)
   Eng. 101 and 102 are not counted toward an English major.
   Only 6 hours from the following will be credited toward the major—Eng. 285, 301, 303, 401, 403, 517, 518, 585, 586—except as noted below for the creative writing major.

* The acceptability of Eng. 501 and 502 depends on the content of the particular courses taken.

**Minor.** A minor consists of 15 hours and requires Eng. 270 and at least 6 hours of upper-division work. Eng. 101 and 102 are not counted toward a minor. A number of minors have been specially designed to support majors in
other fields; for further information, contact the chairperson of the English department.

CREATIVE WRITING

A student planning to major in creative writing must complete Eng. 101 and 102, and thereafter complete a total of 30 hours of course work in English, including the following courses.

I. Required Courses (6 hours)
   Eng. 270 and 285 (to be completed with a grade of B or better, or receive special departmental consent)

II. Skill Courses (at least 12 hours)
    From Eng. 301, 303, 401, 403, 517, 518, 585, 586, or University Honors English courses (1-3)

III. Critical and Interpretive (at least 3 hours)
    Selected from Eng. 274, 315, 335, 470, 512, 513, 514, 665, or 672

IV. Modern and Contemporary (at least 3 hours)
    Selected from Eng. 324, 333, 337, 358, 364, 365, 501, 502, 530, 531, or 536

V. Historical Development (at least 3 hours)
    Selected from Eng. 272, 322, 331, 332, 362, or 550

VI. Historical Era (at least 3 hours)

Minor. A minor with a creative writing sequence is available and consists of 15 hours of course work in creative writing (Eng. 285 plus 12 hours of skill courses just listed).

TEACHING

Students must file a declaration of English teaching major or minor with an assigned English-education adviser at the time they apply to the teacher education program. A 2.50 grade point average in English is required of all majors and minors applying for admission to the professional semester of student teaching in secondary school English.

Major for Students Planning to Teach English in Secondary Schools. The teaching major in either Fairmount College of Liberal Arts and Sciences or the College of Education is 51 hours, distributed as follows.

I. Language
    Eng. 315 or 667

II. Composition
    Eng. 680

III. Literature
    1. Foundations—Eng. 270, 272, and 274
    2. British and American literature—Eng. 340 and 362; 356 or 358; and 252 or 364
    3. Cross-cultural literature or language—Eng. 365, 540, 550, or 672

IV. Speech
    Speech 674 and one of these—Speech 143G or Speech 221

V. Instructional Services
    IS 616 and one foundations course or practicum in reading
VI. Electives

9 hours in English, or in certifiable minor or in approved area of competency to be selected in consultation with an English-education adviser.

Minor for Students Planning to Teach English as a Second Subject in Secondary Schools. The teaching minor requirement is 24 hours in English, including the following: Eng. 270, 340, 362, and 680; 356 or 358; 252 or 364; 274 or 315; and 272, 365, 540, 550, or 672. Twelve additional hours in English or related fields are required for certification.

COMPOSITION

Noncredit Course

011. Spelling, Punctuation, Syntax. (2).
Planned primarily for those enrolled in special sections of Eng. 101, but available to all students and teachers who wish to know "the basics" of English spelling, punctuation and syntax. Not applicable to a degree. Offered Cr/NCr only. A 14 011 0 1501

Lower-Division Courses

101-102. College English I and II. (3-3).
Communication skills (reading, listening, library skills and, especially, writing). Eng. 101 is prerequisite for Eng. 102. Eng. 101 and 102 are sequential and should be taken during the freshman year. A 14 101 0 1501; 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 will generally follow 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

courses for

Graduate/Undergraduate Credit

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 varieties and samples of school writing, and develop their own writing skills by writing, revising and evaluating their own and others' work. The course is designed especially for prospective and practicing teachers and may not be taken for credit by students with credit in Eng. 780. A 14 680 0 1501

685. Advanced Composition. (3). Designed for upper division and graduate students in all disciplines. This course in expository writing improves students' academic and professional writing skills through review of basics, intensive practice, study of standard formats for publication and presentation of research, and the study of research resources and techniques. A 14 685 0 1501

780. Advanced Theory and Practice in Composition. (3). 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

285. Introduction to Creative Writing. (3). An introductory course for students interested in the techniques and practice of imaginative writing in its varied forms. 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 6 hours of credit. Prerequisite: Eng. 285. A 14 301 0 1507

303. Creative Writing: Poetry. (3). May be repeated for up to 6 hours of credit. Prerequisite: Eng. 285. 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 polishing prose fiction. Prerequisites: Eng. 285 and
at least 3 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 and polishing poetry. Prerequisites: Eng. 285 and at least 3 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 repeatable for credit. A 14 517 0 1507 & A 14 518 0 1507

585. Writers 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 14 585 0 1507

586. Writers Tutorial: Poetry. (3). Tutorial work in creative writing in poetry with visiting writer. Repeatable for credit. Prerequisite: consent of creative writing coordinator. A 14 586 0 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. 315 or Ling. 577 or departmental consent. A 14 672 0 1505

727. Teaching English as a Second Language. (2-3). Cross-listed as Ling. 727 and CDS 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 0 1505

LITERATURE

Lower-Division Courses

220G. The Literary Heritage: English Masterpieces. (3). This course is intended to introduce to the lower division general student selections from the English masterpieces that constitute the literary heritage. A 14 220G 0 1502

223. Books and Ideas. (3). Reading, discussing and some writing about literature from all periods and cultures (fiction, poetry, drama and essays). Designed especially for non-English majors; not credited toward an English major or minor. A 14 223 0 1502

224. 20th Century British and American Literature. (3). Designed especially for non-English majors; not credited toward an English major or minor. A 14 224 0 1502

Fairmound College/English 335
230G. Exploring Literature. (3). Perceptive reading of literature in its major traditional periods and in its various genres (especially fiction, drama and poetry). The object is to deepen the appreciation and understanding of literature: what it is, what it does and how it does it. Readings are selected with careful attention to the needs and interests of non-English majors, and a cultural rather than a technical approach is employed. A 14 230G 0 1502

231G. Exploring Literature in Media. (1). 2R. An appreciation section, meeting once a week for two hours, to expand the scope and range of Eng. 230G through multimedia presentations, closely correlated with the reading in Eng. 230G. Films, panel discussions, poetry readings, recordings, small-group discussions and presentations, etc. A 14 231G 0 1502

232G. Themes in American Literature. (3). Instruction in perceptive reading through the study of representative works in American fiction, poetry, drama and the essay. Emphasis is on understanding and appreciation of central themes and dominant ideas. Multimedia presentations, which are closely correlated to the representative works being studied, will amplify the scope and range of literature per se. Media will include films, readings and recordings. A 14 232G 0 1502

252. Modern American Writers. (3). A 14 252 0 1502

270. Introduction to Literature. (3). Introduction to major literary forms; instruction in critical reading, discussion and writing through study of representative works in drama, fiction and poetry. Required of all English majors and must be taken during the student's first 9 hours as a declared major. Prerequisites: Eng. 101 and 102. A 14 270 0 1502

272. Origins of the Western Literary Tradition. (3). A study of the literary forms that first appear in classical and Biblical literature and reappear in the English literary tradition. Readings from mythology, the classics and selected books of the Bible. A 14 272 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

280. Literary Studies. (2-3). Course content varies from one semester to another. Repeatable for credit. A 14 280 0 1502

Upper-Division Courses

307G. Narrative in Literature and Film. (3). 2R; 2L. A comparative aesthetic analysis of the art of narration in literature and especially in film. A 14 307G 0 1501

310. 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 merits of this work and the way it reflects popular tastes and values. Repeatable for credit with change of content. A 14 310 0 1503

322. The Drama: Origins and Development. (3). A survey of the drama from its beginnings in ancient Greece through the mid-19th century. A 14 322 0 1502

324. Modern Drama. (3). Continental, English, Irish and American plays of the late 19th and early 20th centuries. A 14 324 0 1502

331 & 332. The Novel in England I and II. (3 & 3). The rise and development of the novel—I: Defoe through Austen; II: Scott through Hardy. A 14 331 0 1502 & A 14 332 0 1502


335. Types and Techniques of Poetry. (3). A study of the standard forms of prosody and the stylistic devices of poetry. A 14 335 0 1502

337. Contemporary Poetry. (3). A study of poetry since 1945, primarily American and British. A 14 337 0 1502

340. Major Plays of Shakespeare. (3). Designed for students who wish to study the best work of Shakespeare's career in one semester. Students who take this course may take Eng. 515 once for credit. A 14 340 0 1502

350. Chaucer and the Middle Ages. (3). Middle English poetry, prose and drama from the 12th to 15th century. A 14 350 0 1502

352. Literature of the English Renaissance. (3). A survey of English literature from 1485 to 1660. A 14 352 0 1502

354. Restoration and 18th Century Literature. (3). A survey of English literature from 1660 to 1798. A 14 354 0 1502

356. Romantic and Victorian Literature.
(3). A survey of poetry and prose from 1798 to 1900. A 14 356 0 1502

358. Modern British Literature. (3). English and Irish literature in the 20th century. A 14 358 0 1502

362. American Writers of the 19th Century. (3). From Poe to James. A 14 362 0 1502

364. Modern American Literature. (3). Major trends and representative works in American literature from 1900 to the present, with emphasis on the first 50 years of the 20th century. A 14 364 0 1502

365. Afro-American Literature. (3). A survey course designed to acquaint the student with the most significant Afro-American writers from the 1700s to the present. Lectures cover early slave narratives and early slave poetry to the Harlem Renaissance; student reading, discussion and writing begin with the Harlem Renaissance and end with the 1970s. Prerequisites: Eng. 101 and 102. A 14 365 0 1502

390. The Bible as Literature. (3). A 14 390 0 1501

400G. The Literary Imagination: Epic, Romance, Tragedy, Comedy. (3). A course designed to acquaint the general student with the major modes that have shaped the 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 nature of literary inquiry by approaching works from a variety of critical perspectives. A 14 400G 0 1502

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. Prerequisite: departmental consent. A 14 450 3 1502

470. Topics in Literary Criticism. (3). Exploration of various historical and modern approaches to literary criticism and study of issues in literary criticism. Prerequisite: Eng. 270 or departmental consent. A 14 470 0 1502

Courses for
Graduate/Undergraduate Credit

501. American Authors. (3). Subjects to be announced each semester. Repeatable for credit. A 14 501 0 1502

502. Types of American Literature. (3). Drama, fiction, poetry. Subjects to be announced each semester. Repeatable for credit. A 14 502 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. A 14 515 0 1502

521. Studies in Medieval Literature. (3). Study in authors, genres, motifs and in literature from the 12th to 15th century, with particular topics selected and announced by instructor. Repeatable with change of content. Prerequisite: none, but Eng. 350 or some familiarity with medieval literature is recommended. A 14 521 0 1502

522. Studies in Renaissance Literature. (3). Subjects to be announced each semester. Repeatable for credit. A 14 522 0 1502

524. Studies in Restoration and 18th Century Literature. (3). Subjects to be announced each semester. Repeatable for credit. A 14 524 0 1502

526. Studies in Romantic Literature. (3). Subjects to be announced each semester. Repeatable for credit. A 14 526 0 1502

527. Studies in Victorian Literature. (3). Subjects to be announced each semester. Repeatable for credit. A 14 527 0 1502

530. Studies in Modern Literature I. (3). British and/or American literature, 1900-1945. Subjects to be announced each semester. A 14 530 0 1502

531. Studies in Modern Literature II. (3). British and/or American literature, 1945 to present. Subjects to be announced each semester. A 14 531 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 work of major women

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writers, both British and American, in poetry and prose. A 14 536 0 1502

540. American Folklore. (3). Cross-listed as Amer. Stud. 540. A survey of the types and functions of unwritten traditional materials in the United States, including beliefs, tales, jokes, folk music, customs, and crafts, including some ethnic varieties: the unwritten materials that form the uniqueness of American culture. A 14 540 0 1502

545. Comparative Literature: Ancient and Pre-Renaissance. (3). A study of contrastive structures, themes, and literary conventions as found in representative works of the ancient Near East and the Western tradition. Readings may vary: epics, romances and drama, with emphasis on appreciation and on the affinity and the uniqueness of the works compared. A 14 545 0 1503

546. Comparative Literature: Renaissance and Modern Europe. (3). A study of some controlling themes and moods in Renaissance and modern European literature. Readings may vary: fiction, drama and poetry, with emphasis on appreciation, critical awareness and the real similarities and differences between works. A 14 546 0 1503

550. Comparative Literature: Myths, Ancient and Modern. (3). A study of representative man-centered myths from various traditions: classical, pre-Renaissance and contemporary, with emphasis on significant relations between individual works or contrasted traditions. A 14 550 0 1503

580. Special Studies. (1-3). Topic selected and announced by the individual instructor. Repeatable for credit. Prerequisite: departmental consent. A 14 580 3 1502

610. Old English. (3). Cross-listed as Ling. 610. A 14 610 0 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 intrinsic analysis of a literary work, the relationships of biography to literary study and the relevance of other disciplines, such as psychology, to literature; (4) the writing of interpretative and research essays. Throughout the semester a balance between 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, Surrey, 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 political events and the social, scientific 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 beginnings 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 B.C. to the decline of Roman oratory. Principal emphasis is on Isocrates, Plato, Aristotle, Quintilian, Cicero and Longinus. A 14 825 9 1502

826. Theories of Rhetoric: Medieval, Renaissance, and 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 the rhetorical systems associated with such figures as Augustine, Fenelon, Bulwer, Sheridan, Steele, Rush, John Quincy Adams, Blair, Campbell and Whately. 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 forms, techniques and history of poetry. A 14 834 9 1502

840. Graduate Studies in Criticism. (3). Selected topics in the theory and practice for 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. Prerequisite: departmental consent. A 14 855 3 1502

860. Graduate Seminar in Special Topics. (3). Intensive study of selected texts, writers or literary problems. Seminar discussions, reports and research projects. Repeatable for credit with departmental consent. A 14 860 9 1502

870. Master's Essay. (2-3). A 14 870 4 1502

875. MFA Essay. (3-6). A 14 875 4 1502

French (See Romance Languages)

Geology

The Bachelor of Science (BS) in geology provides in-depth training for professional work in industry or government as well as for graduate study. The Bachelor of Arts (BA) in geology provides training for graduate study or teacher preparation background. A number of 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 are also recommended in high school.

Geology Major. A major with the BA requires a minimum of 33 hours in geology, including the following:

1. Geol. 111, 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. 111 or 123, and Phys. 213 and 214 (or 311 and 312)
   b. Chem. 111 and 112 (or 123 and 124) and Phys. 213 or 311
A major with the BS requires a minimum of 45 hours in geology, including the following:

1. Geol. 111, 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 and above.

Required supporting sciences for the BS degree are:

1. All those courses listed for the BA degree
2. Chem. 112 (or 124) or Physics 214 (or 312), to complete a one-year sequence each in chemistry and physics

BA candidates must meet the language requirements of Fairmount College of Liberal Arts and Sciences. BS candidates must elect on the following options: (a) 10 hours of modern language, (b) an additional 9 hours of computer science/mathematics, or (c) an additional 9 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 12 hours of upper-division courses.

Geography Minor. A minor in geography consists of at least 15 hours including Geog. 125 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. 111, 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

101. Science and Environment. (3). 2R; 1L. The study of the physical environment. Basic concepts in the physical sciences and current problems with which physical scientists are concerned. A 16 101 1 1901

111. General Geology. (3). 2R; 3L. 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 into the earth laboratory are required. A 16 111 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

302. Earth and Space Science. (3). 2R; 2L. Lab fee. A general survey of man's physical environment, including elements of geology, geography, meteorology, climatology, oceanography and astronomy. Field trips are required. Not open to students who have taken Geol. 111 or Geog. 201. A 16 302 1 1917

312. Historical Geology. (3). 2R; 3L. Lab fee. 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 is the origin and evolution of life. Field trips are required. Prerequisite: Geol. 111 or 302 or equivalent. A 16 312 1 1914

320. Mineralogy. (3). 1R; 6L. Lab fee. Elementary crystallography. A study of the origin, composition, and structure of the rock-forming minerals with laboratory emphasis on recognition of their typical forms, occurrences, associations, and identification. Field trips are required. Prerequisite: Geol. 111. A 16 320 1 1914

324. Petrology. (3). 1R; 6L. Lab fee. Description, classification, and analysis of plutonic and volcanic igneous rocks; granulose and foliated metamorphic rocks; fossiliferous, clastic and chemical sedimentary rocks; and well cuttings with the petrographic microscope. Prerequisite: Geol. 320. A 16 324 1 1914

410. Honors in Geology. (3). Senior thesis for departmental honors. The independent study project on a topic of the student's choice must be original research or creative work. Repeatable to a maximum of 6 credit hours. Prerequisite: acceptance by the Emory Lindquist Honors Program and departmental approval. A 16 410 4 1914

430. 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 locality and content differ. Where appropriate, travel, lodging, and board costs will be charged. A 16 430 2 1914

Courses for Graduate/Undergraduate Credit

501. Raw Materials of Antiquity. (3). 2R; 2L. Lab fee. Nature of common rocks, minerals, and metallic ores used in prehistory and ancient times. Also included are weathering, sedimentation, and soil forming processes; elements of stratigraphy; geologic history of the Pleistocene and Recent epochs; relative and absolute age dating; mineralogy of clays and ceramics; 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). 1R; 6L. Lab fee. Optical properties of amorphous and crystalline materials in polarized light. Use of the petrographic microscope in the quantitative determination of rock-forming minerals and mineraloids in thin section is used, and immersion oil methods are introduced. Prerequisite: Geol. 320. A 16 520 1 1914

523. Igneous and Metamorphic Geology. (3). 2R; 3L. The evolutions of igneous and metamorphic rocks, their structures and the physiochemical processes controlling their origin. Petrochemical calculations, systematic petrographic examination and classification of igneous and metamorphic minerals and rock suites. Field trips are required. Prerequisite: Geol. 520. A 16 523 1 1914

524. Petrography. (3). 1R; 6L. Lab fee. Description, classification, and analysis of plutonic and volcanic igneous rocks; granulose and foliated metamorphic rocks; fossiliferous, clastic and chemical sedimentary rocks; and well cuttings with the petrographic microscope. Prerequisite: Geol. 520. A 16 524 1 1914

526. Sedimentary Geology. (3). 2R; 3L. Lab fee. Origin, classification, primary structures, and physiochemical processes controlling deposition of sedimentary rocks, especially carbonates. An analysis of modern and ancient sedimentary depositional environments is included, as is a systematic petrographic study of sedimentary rocks in thin section, insoluble residues, and heavy-mineral analysis. Field trips are required. Prerequisite: Geol. 324. A 16 526 1 1914

540. Field Mapping Methods. (3). 9L. Lab fee. Field mapping methods, with special reference to use of level, compass, barometer, alidade, and airphotos. Field trips are required. Prerequisite: Geog. 201 or Geol. 111. A 16 540 1 1914

544. Structural Geology. (3). 2R; 3L. Lab fee. Field mapping methods, with special reference to use of level, compass, barometer, alidade, and airphotos. Field trips are required. Prerequisite: Geog. 201 or Geol. 111. A 16 540 1 1914
fee. Stress-strain theory and mechanics of rock deformation, description, and genesis of secondary structural features in crustal rocks resulting from diastrophism, elements of global tectonics, and laboratory solution of geologic problems in three dimensions and time. Field trips and field problems are required. Prerequisites: Math. 112 or 123 and Geol. 552 (or taken concurrently) A 16 544 1 1914

552. Physical Stratigraphy. (3). 2R; 3L. Lab fee. Description, classification, correlation, and relative ages of stratigraphic rock units, and the origin of primary structures of elastic sedimentary rocks. Laboratory emphasis is on binocular microscopic examination and physical properties of unconsolidated sediments and elastic sedimentary rocks. Field instruction in stratigraphic mapping methods is required. Prerequisites: Geol. 312, 320, and 540 or equivalent. A 16 552 1 1914

560. Geomorphology. (3). 2R; 3L. Lab fee. Identification and interpretation of the genesis of landforms and a critical examination of processes producing the landforms, including elements of quantitative geomorphology. Field trips are required at the option of the instructor. Prerequisite: Geol. 111. A 16 560 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. Prerequisite: Geol. 560 or instructor's consent. A 16 562 0 1914

564. Map and Airphoto Interpretation. (3). 2R; 3L. Lab fee. Elements of map and aerial photograph composition; interpretation and application of maps and photos in geology, geography, urban planning, land-use inventory, and engineering works. Remote-sensing methods are introduced. Field trips are required at the option of the instructor. Prerequisite: Geol. 111, Geog. 201 or equivalent. A 16 564 1 1914

570. Biogeology. (3). 2R; 3L. Lab fee. Systematic survey of major fossil biogeological materials, analysis of the origin, and evolution of life and paleoecological interpretation of ancient environments and climates. Handlenses and binocular microscopic examination is made of major fossil biogeological materials. Application of analyzed fossil data to the solution of problems in biogeochronology, paleoecology, paleoclimatology, and paleography is included. Examples are cited from fields of invertebrate, vertebrate and micropaleontology, and palynology. Museum and field trips are required. Prerequisite: Geol. 312 or 552. A 16 570 1 1918

574. Special Studies in Biogeology. (3). 2R; 3L. Lab fee. A systematic study in selected areas of biogeology and paleontology. Course content differs, upon demand, to provide in-depth analysis in the fields of: (a) invertebrate paleontology, (b) vertebrate paleontology, (c) micropaleontology, (d) palynology, and (e) paleoecology. Appropriate laboratory instruction is given in the systematics, taxonomy, and biogeological relationships within the selected fields listed. Field trips are required. Repeatable for credit to cover all five areas listed. A 16 574 1 1918

581. Numerical Geology. (3). Treatment of numerical data in geology including univariate and bivariate statistics and elementary programming in FORTRAN. A study of geological data and computer techniques used to analyze them as well as case histories of applications are emphasized. Prerequisites: Geol. 111, Math. 370, CS 200/201, or permission of instructor. A 16 581 1 1914

620. Geochemistry. (3). The chemistry of earth materials and the important geochemical processes and cycles operating on and within the earth through time. Prerequisites: Geol. 324 and Chem. 112. A 16 620 1 1915

630. Field Studies in Geology. (2-6). Off-campus, systematic field study in a selected area of geological significance. The course is given upon demand and may be repeated for credit when course locality and content differ. Where appropriate, travel, lodging, and board costs will be charged. A 16 630 2 1914

640. Field Geology. (6). Field investigation of sedimentary, igneous, and metamorphic 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 (including weekends). Preparation of geologic columns, sections, maps, and an accompanying professionally written report are due on campus during the sixth week. Prerequisite: 12 credits of advanced geology, preferably including a field methods mapping course, or instructor's consent. Offered jointly with Kansas State University and Fort Hays State University. A 16 640 1 1914

650. Geohydrology. (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 water law. Prerequisites: Geol. 552 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 scientific 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


680. Economic Geology. (3). 2R; 3L. Evaluation, and mapping methods. Field trips are required. Prerequisite: Geol. 324. A 16 680 1 1914

682. Petroleum Geology. (3). 2R; 3L. Lab fee. Occurrence of metallic and nonmetallic economic mineral deposits and the physiochemical principles governing their origin. Included also are a laboratory examination of common ores and industrial minerals and elements of mineral beneficiation. Field trips are 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 mapping methods. Field trips are required at the option of the instructor. Prerequisites: Geol. 540 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 differs and is repeatable for credit. Laboratory work or field trips might be required at the option of instructor. Offered on demand. Prerequisite: instructor's consent. A 16 690 2 1914

698. Independent Study in Geology. (1-3). Independent study on problems in the field of geology: (a) general, (b) mineralogy, (c) petrology, (d) structural, (e) paleontology, (f) economic geology, (g) sedimentation, (h) petroleum, (i) stratigraphy, and (j) geophysics. A written final report is required. Prerequisite: instructor's consent. A 16 698 3 1914

701. Seminar. (1). Current topics in geology. Reports on current 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) petroleum, (i) stratigraphy, and (j) geophysics. A written final report is required. Prerequisite: consent of sponsoring faculty. A 16 800 4 1914

808. History of Geology. (1-3). Selected events and personalities in geology that have led to our present understanding of geology's place in science. Prerequisite: permission of instructor. A 16 808 9 1914

810. Advanced Graduate Studies in Geology. (1-6). Systematic study in a selected topic of professional or applied geology. The course is given upon demand and may be repeated for credit when course content differs. Field trips may be required. Prerequisites: graduate standing, consent of instructor, and two years of professional postgraduate practice in geology. A 16 810 9 1914

820. Geochronology. (3). Lab fee. Theory of age-dating techniques for geological and archaeological materials. Stratigraphic chronology; radiometric, geologic, chemical, and biological-role processes; evolutionary processes; and phenomenological dating techniques. Prerequisite: graduate standing in geology or anthropology (archaeology). A 16 820 0 1914

823. Igneous and Metamorphic Petrology. (3). 1R; 6L. Lab fee. Mineral paragenesis, bulk chemical compositions, physical-chemical relationships, textures, structures, origins, and classifications of igneous and metamorphic rocks. Thin-section studies to facilitate rock identifications and determination of petrogenetic relationships. Field trips are 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. Determinations of mineral compositions, textures, structures, fabrics, and petrogenetic relationships are facilitated by the use of thin sections, peels, and geochemical analyses. Field trips are required. Prerequisite: Geol. 526. A 16 826 1 1914

Fairmount College/Geology 343
830. Field Studies in Geology. (2-6). Off-campus, systematic field study in a selected area or region of geologic significance. The course is given upon demand and may be repeated for credit when course locality and content differ. Where appropriate, travel, lodging and board costs will be charged. Prerequisites: summer field geology (or equivalent) and instructor’s consent. A 16 830 2 1914

840. Geotectonics. (3). Physical and geological 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 are 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 sources and current research investigations. Field problem and field trips are required. Prerequisite: Geol. 544 and 552, or instructor’s consent. A 16 852 1 1914

870. Advanced Biogeology. (3). 2R; 3L. Lab fee. Paleoeological reconstruction of ancient plant/animal communities and environments, with emphasis on community structure, biostratigraphy, synthesis of total raw data, and problem solving. Field trips are required. Prerequisite: a course in biogeology or equivalent. A 16 870 1 1918

880. Mineral Deposits. (3). 2R; 3L. Lab fee. An advanced treatment of the occurrence, classification, and origin of metalliciferous ore deposits; applied petrography of selected ore and host-rock suites; mineralogy of opaque ore minerals and their textures. Field trips are required. Prerequisite: Geol. 680. A 16 880 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

125. Principles of Geography. (3). An introductory course emphasizing the relationship between human activities and natural environment. A 16 125 0 2206

150. Workshop in Geography. (1-4). Short-term courses with special focus on geographical problems. Prerequisite: instructor’s consent. A 16 150 2 2206

201. Physical Geography. (3). 2R; 3L. Lab fee. Emphasis upon the physical basis of geography, including climate, terrain, soils, landforms and the seas; economic resources; cartographic elements; introduction to regional studies. Field trips are required at the option of the instructor. A 16 201 1 1917

210. World Geography. (3). A general survey of world geography, including an analysis of the physical, political, economic, historic, and human geography of the major world regions. A 16 210 0 2206

235. Meteorology. (3). 2R; 2L. Lab fee. An introductory study of the atmosphere and its properties and the various phenomena of weather. A brief survey of important principles of physical, dynamic, synoptic and applied meteorology is included. This course does not apply toward a major or minor in geography. Field trips are required at the option of the instructor. Prerequisite: instructor’s consent. A 16 235 1 1913

262. Cultural Geography. (3). An introduction to cultural geography emphasizing man’s geographical distributions, the spatial aspects of his cultural activities, the sources and techniques of his livelihood and the relationships to his environment. A 16 262 0 2206

Upper-Division Courses

320. Field Studies in Geography. (1-6). 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. Where appropriate, travel, lodging, and board costs will be charged. A 16 320 2 2206

362. Maps and Man. (3). An examination of cartography in relation to culture and civilization. Not a course in how-to-do cartography, but a study of how maps reflect man’s cultural activity and the history of civilization. Maps are studied as a select group of communications media. A 16 362 0 2206

Courses for Graduate/Undergraduate Credit

510. World Geography. (3). A general survey of world geography, including an analysis of the physical, political, economic, historic, 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 metals, 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 locality and content differ. Where appropriate, travel, lodging, and board costs will be charged. A 16 620 2 2206

630. Geography of Mexico. (3). Physical, human, and cultural 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; the 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 keystone events of civilization from prehistory through the 19th century. The role of mineral wealth in the affairs of man from prehistorical Grand Pressigny, through 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; to the development of the American west for 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 might 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 locality and content differ. Where appropriate, travel, lodging, and board costs will be charged. Prerequisite: instructor's consent. A 16 820 2 2206

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 441, 524, 577, and at least 6 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

Fairmount College/German 345
support of other professional pursuits. Students must take Ger. 301, 324, 341 or 441, 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 in either Fairmount College of Liberal Arts and Sciences or in 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. Students must also include one of the three options:

1. Complete at least 21 hours in a second language
2. Complete at least 15 hours from one or more of the following related fields: English, history, linguistics, philosophy, or political science (courses must be chosen in consultation with the teacher education adviser)
3. Obtain a totally separate second major as prescribed in the Catalog.

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 2.75 or above
2. Special departmental approval based on demonstrated competencies 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, 441, 577, or 641.

**GERMAN**

**Noncredit Course**

010. German for Graduate Reading Examination. (3). A reading course designed to prepare students to fulfill departmental requirements of a reading knowledge of German for the Master of Arts or Master of Science. No previous knowledge of German is required. This course will not count toward a degree. Offered Cr/NCr 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

220. 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 17 220 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. 220 or 223. May be taken concurrently with Ger. 223. 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 17 301 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. The emphasis is on 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

344. Intermediate German II. (3). Readings in German civilization accompanied by extensive studies of selected literary works. Prerequisite: Ger. 223 or equivalent. A 17 344 0 1103

441. 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. Will not count toward fulfillment of language requirement. A 17 441 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 Standard 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 1505

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 one major author, or a literary movement or trend of a 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

RUSSIAN

There is no major or minor in Russian.

Lower-Division Courses

111. Elementary Russian. (5). Lab fee. A presentation of the sounds and structure of Russian, with the purpose of developing the four basic skills of understanding, speaking, reading and writing. A 17 111 0 1106

112. Elementary Russian. (5). Lab fee. A continuation of Russian 111 in order to complete the presentation of elementary Russian grammar and enhance the four basic skills. Prerequisite: Russian 111 or equivalent. A 17 112 0 1106

210. Intermediate Russian. (5). Cultural readings and grammar review presented audiologically 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 Course

300. Russian Literature in Translation. (3). Consideration of the works of one or two major authors, or a literary movement or trend, or of 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

CHINESE

Lower-Division Courses

111. Elementary Chinese I. (5). Lab fee. This course is an introduction to the Chinese language with an emphasis on the basic elements of learning the fundamentals of pronunciation, 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 in learning the fundamentals of pronunciation, speaking, understanding, reading, and writing the language. Prerequisite: Chinese 111 or an equivalent learning experience. A 17 112 0 1107

JAPANESE

Lower-Division Courses

111. Elementary Japanese I. (5). Lab fee. 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. Prerequisite: Japanese 111 or an equivalent learning experience. A 17 111 0 1108

112. Elementary Japanese II. (5). Lab fee. This course is a continuation of introductory Japanese language with an emphasis on learning the fundamentals of pronunciation, speaking, understanding, reading, and writing. Prerequisite: Japanese 112 or departmental consent. 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 1107

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. 100, 303, 404, 501, 513, 518, and 12 hours of electives approved by the gerontology program adviser from the listed courses.

The bachelor’s degree minor in gerontology requires at least 15 hours, including Geron. 100; 9 hours selected from Geron. 303, 404, 513, and 518; and 3 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 is tailored to the student’s career interest.
ASSOCIATE OF ARTS

The Associate of Arts is awarded to students who complete the 64-hour, two-year program. The requirements for the degree are summarized in the table.

I. General Education Course Requirements (30 hours)
   1. Eng. 101, College English I, 3 hours
   2. Eng. 102, College English II, 3 hours
   3. Speech 111, Basic Public Speaking, or Speech 112, Basic Interpersonal Communication, 3 hours
   4. Humanities, 6-9 hours
   5. Social sciences, 6-9 hours
   6. Science or mathematics (including one laboratory course), 6-9 hours

II. Professional Curriculum (15 hours)
   1. Geron. 100, Introduction to Gerontology, 3 hours
   2. Soc. 212, Introduction to Social Research, 3 hours
   3. SW 200, Explorations in Social Welfare, 3 hours
   4. At least 6 additional hours of gerontologically relevant course work approved by an adviser in the gerontology program

III. Elective Hours (19 hours)

Lower-Division Courses

100. Introduction to Gerontology. (3). Introduction to the field of gerontology, including basic concepts, issues and approaches. P 15 100 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

404. Psychology of Aging. (3). Cross-listed as Psych. 404. P 15 404 0 2209

430. Concepts of Loss. (3). Cross-listed as Nurs. 430. P 15 430 0 1203

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 weekly with the field placement supervisor. Repeatable for credit not to exceed a total of 6 hours. Prerequisite: instructor’s consent. P 15 501 2 2201

502. Older 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 new roles is examined. Prerequisite: Soc. 211 or instructor’s consent. P 15 502 0 2208


512. Issues in Minority Aging. (3). Cross-listed as Min. Stud. 512. Prerequisites: Min. Stud. 100, Geron. 100, 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


537. The Social Consequences of Disability. (3). Cross-listed as Soc. 537. P 15 537 0 2208

550. Selected Topics in Gerontology.
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 applied areas of gerontology as they relate to an emerging area of research and application. Repeatable up to 6 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 6 hours. Prerequisite: 12 hours of gerontology credit or adviser’s consent. P 15 698 3 2201

731. Growth and Development IV: Adults and Aging. (3). Cross-listed as IS 731. P 15 731 0.0822

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

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 2201

Courses for Graduate Students Only

800. Seminar in Gerontology I. (3). Advanced study of the theories of aging from a multidisciplinary perspective with emphasis upon social gerontology. Prerequisite: Geront. 798 or 12 hours of gerontology or instructor’s consent prior to registration. P 15 800 0 2201

801. Seminar in Gerontology II. (3). Repeatable for credit up to 9 hours. Study of selected problems in gerontology such as current issues in aging research, mental health and aging, physical health and the elderly, and social policy and aging, with intensive library and classroom study of particular bodies of literature. Prerequisites: Gerontology 798 or 12 hours of gerontology or instructor’s consent prior to registration. P 15 801 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. Prerequisite: 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 4 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. 101 plus one additional lower-division course
2. Modern European history—requires Hist. 102 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. 131 or 132 plus one additional lower-division course
5. General history—requires 8 lower-division hours.
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 6 of these hours must be upper-division hours that are not in the area of specialization. Hist. 108G and Hist. 330G 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 3 upper-division hours.

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 & 106. The Way It Was: Western Civilization in Film. (4 & 4). Departmental fee. 105: an examination of selected topics in the history of Western civilization from antiquity to the 17th century through the use of commercial motion pictures and lectures and discussions on the topic(s) dealt with in the films. 106: continuation from the 17th century to the present. Not open to history majors or to those with credit in Hist. 101G & 102G. A 18 105 0 2205 & A 18 106 0 2205

109G. A History of Lost Civilizations. (3). A comparative examination of lost civilizations of both the Old World and New World, including the Sumerians, Hittites, Minoans, Mycenaeans, Etruscans, Mohenjo-Daro, Khymers, Incas, Mayas and Aztecs. A 18 109G 0 2205

111 & 112. History of Latin America. (3 & 3). 111: a study of Spanish and Portuguese colonization of America. 112: an examination of the national period from the wars of independence to the present. A 18 111 0 2205 & A 18 112 0 2205

113 & 114. English History. (3 & 3). 113: from the earliest times to the beginning of the Stuart period, emphasizing the origin and development of institutions, customs and nationalism. 114: from the beginning of the Stuart period to the present. A 18 113 0 2205 & A 18 114 0 2205

131 & 132. History of the United States. (4 & 4). 131: survey from the colonial period through the Civil War. 132: survey from Reconstruction to the present. A 18 131 0 2205 & A 18 132 0 2205

150. Workshop in History. (2-3). A 18 150 2 2205

200. Women Throughout Western Civilization. (3). Cross-listed as WS 200. A survey of the position women have occupied within their societies and civilizations from the beginnings of Western civilization to the present time. A 18 200 0 2205

220. Armchair 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 18 220 0 2205

225. Your Family in History. (3). A course designed to bridge the gap between history and genealogy through demonstrations of the kinds of research techniques available to those who are interested in creating a family history. Students will demonstrate understanding of these techniques in a family history project. A 18 225 0 2205

Upper-Division Courses

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. (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 the practice of engineering from the 4th millenium B.C. to the 20th century A.D. The contribution of engineers to the growth of civilization is examined, and the impact of their particular technological innovations is analyzed in light of their political, social and economic implications. 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


Fairmount College/History 351
Courses for Graduate/Undergraduate Credit

501. The American Colonies. (3). Colonization of the New World, with emphasis on the British peoples and their development. A 18 501 0 2205

502. The American Revolution and the Early Republic. (3). Examination of selected phases of the revolutionary, confederation and federal periods. A 18 502 0 2205

503. The Age of Jefferson and Jackson. (3). Political, economic and cultural development of the United States from the election of Thomas Jefferson to the end of the Mexican War with emphasis on the growth of American nationalism. A 18 503 0 2205

504. Civil War and Reconstruction. (3). A 18 504 0 2205

505. America's Gilded Age, 1877 to 1900. (3). Emphasis on roots of urban problems, foundations of dissent, policy toward minority groups and evaluation of imperial expansion. A 18 505 0 2205

506. The United States: the 20th Century, 1900-1929. (3). The Progressive Era, World War I, the postwar period and the twenties. A 18 506 0 2205

507. The United States: the 20th Century, 1929-1945. (3). The Great Depression, the New Deal and World War II. A 18 507 0 2205

508. The United States: the 20th Century, Since 1945. (3). The history of the United States from the Truman through the Nixon administrations. A 18 508 0 2205

513. American Popular Culture. (3). Cross-listed as Amer. Stud. 513. An examination of popular culture from colonial times to the present, with special emphasis on the media explosion since the Civil War. This course looks at the American past through the eyes of mass-man, suggesting that mass-man experienced the past differently from what traditional surveys indicate. Such topics as popular music, cinema, pulp magazine literature, comics, television, cult heroes, stereotyping of public issues, family life, fashion and familiar items of household technology are treated seriously rather than as side shows to the more serious business of politics and finance. A 18 513 0 2205

515. Economic History of the United States. (3). Cross-listed as Econ. 627. A 18 515 0 2205

516. Origins of the Industrial State. (3). Cross-listed as Econ. 626. 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. A 18 516 0 2205

517 & 518. Constitutional History of the United States. (3&3). 517: the evolution of the American constitutional system from English and colonial origins through the Civil War. 518: American constitutional development from Reconstruction to the present. A 18 517 0 2205 & A 18 518 0 2205

519. Social History of the U. S. to 1865. (3). Survey of American thought and society to the end of the Civil War. A 18 519 0 2205

520. Social and Intellectual History of the United States. (3). The significant social and intellectual currents from the middle of the 19th century to the present, with special reference to the interaction between ideas and social structure. A 18 520 0 2205

521 & 522. Diplomatic History of the United States. (3&3). 521: from independence through the Spanish American War. 522: continues to present. A 18 521 0 2205 & A 18 522 0 2205

523. History of Modern China. (3). History of China from the Ch'ing dynasty (Manchu) to present, with emphasis on geography, religion, ethics, politics, international relations and the impact of foreign ideologies on Chinese society. A 18 523 0 2205

524. History of Modern Japan. (3). The history of modern Japan from the establishment of the Tokugawa Shogunate in 1601 to the modern postwar period. A 18 524 0 2205

529. Indians of Kansas. (3). History of Indian occupation of the Kansas region from initial white contact to the present. Emphasis is given to Indian-white relations in the nineteenth century, forced removal of the emigrant tribes, inter-tribal and intra-tribal relations, and consequent legal and cultural problems. A 18 529 0 2205

530. The American Woman in History. (3). Cross-listed as WS 530. Examination of the history, status and changing role of women in American society. A 18 530 0 2205

531. Afro-American History. (3). Afro-American life, culture and history from the 17th century to the present. A 18 531 0 2205
533. The American City: from Village to Metropolis. (3). A study of urbanization and urban life from colonial times to the present—changing life styles and thought patterns, urban architecture, ethnic assimilation, emergence of the suburb, political and ecological adjustments, and the influence of new technology and forms of business organization. A 18 533 0 2205

534. History of the Old South. (3). An examination of Southern civilization prior to the American Civil War. A 18 534 0 2205

535. History of Kansas. (3). History of the Kansas region from Spanish exploration to the present, with principal emphasis on the period after 1854. A 18 535 0 2205

537. The Trans-Mississippi West. (3). Spanish, French and Anglo-American penetration and settlement west of the Mississippi River from the 16th century to about 1900. A 18 537 0 2205

539. Indian-White Relations in North America. (3). Indian life, culture and history from the early 16th century to the present, with emphasis upon the impact of federal Indian policy since 1800. A 18 539 0 2205

540. Recent Indian Policy in the United States. (3). History of the American Indian since the General Allotment Act. Emphasis is given to tribalization, revival of the 1830s, the politics of reform, the termination controversy, Native American protest and contemporary legal problems. A 18 540 0 2205

541. Modern France. (3). History of the major trends in French history from Napoleon to deGaulle with emphasis upon French attempts to adjust politically, socially, economically and culturally to the changing conditions of modern industrial society. A 18 541 0 2205

545. Neither War Nor Peace: The World Since 1945. (3). A 18 545 0 2205

553. Republic of Mexico. (3). Mexico from the independence movement to the present. A 18 553 0 2205

558. The Ancient Near East. (3). Political and cultural history of ancient Mesopotamia, Iran, Egypt, Palestine, Syria and Asia Minor to the death of Alexander the Great. A 18 558 0 2205

559 & 560. Greek History. (3&3). 559: the Hellenic world from prehistoric times to the end of the Peloponnesian War. 560: the 4th century and the Hellenistic period. A 18 559 0 2205 & A 18 560 0 2205

562 & 563. Roman History. (3&3). 562: the Roman Republic. 563: the Roman Empire. A 18 562 0 2205 & A 18 563 0 2205

565. Byzantine History. (3). Survey of Byzantine history from its origins in the late Roman world to its fall in 1453, with an investigation of its major institutions and foreign relations. A 18 565 0 2205

566 & 567. Medieval History. (3&3). 566: the history of Europe from the fall of the Roman Empire through the Crusades, 500 to 1200. 567: history of Europe, 1200 to 1500. A 18 566 0 2205 & A 18 567 0 2205

568. Medieval Social and Intellectual History. (2). Survey of the social and intellectual history of Europe from the 4th to the 15th century. A 18 568 0 2205

569. Medieval England. (3). An examination of the political, social, economic and intellectual history of the British Isles from the 1st century B.C. to the 15th century A.D. A 18 569 0 2205

574. History of Christianity to the Reformation. (3). The rise of the early Church, its development in late antiquity and its growth in the medieval centuries. The emphasis, in the early period, will be on the relation between the Church and the Roman state and, in the medieval era, on the growth of the papacy and the Church's role in society. A 18 574 0 2205

575. The Italian Renaissance. (3). Italian history from the 14th through the 16th century, with an emphasis on cultural achievements. A 18 575 0 2205

576. The Reformation. (3). Cross-listed as Rel. 476. The great religious changes in the 16th century in the political, social and intellectual contexts. A 18 576 0 2205

579. Europe Under the Old Regime, 1648-1787. (3). The aristocratic Old Regime, societies in confrontation with modern forces of royal absolutism. Enlightenment, ideology and economic change. A 18 579 0 2205

580. Europe in the Age of Revolution, 1787-1815. (3). Unrest under the Old Regime, processes of revolution and counter-revolution in France, revolutionary and Napoleonic imperialism, and institutional and cultural change. A 18 580 0 2205

581. Europe, 1815-1870. (3). A 18 581 0 2205

582. Europe, 1870-1914. (3). A 18 582 0 2205

583. Europe, 1914-1945. (3). A 18 583 0 2205

Fairmount College/History 353
590. History of Russia. (3). Political and cultural history of Kiev, Muscovite and Imperial Russia. A 18 590 0 2205

591. History of the Soviet Union. (3). A survey of Soviet history from the Bolshevik Revolution to the present. A 18 591 0 2205

595. History of Eastern Europe. (3). The development of the Bulgar, Czech, Magyar, Polish, Romanian and Yugoslav peoples. A 18 595 0 2205

596 & 597. History of Russian Thought. (3&3). A 18 596 0 2205 & 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, the divided Germany of 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

617. The Holocaust. (3). The origins and development of the concentration camp system in Nazi Germany and its transition into a death camp system. A 18 617 0 2205

620. Armchair 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 developments in English history from 1485 to 1714. A 18 630 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

680 & 681. History of Science. (3&3). 680: ancient and medieval science from its beginnings in the Near East to the end of the Middle Ages. 681: rise of modern science from its first formative steps in the medieval world to the 20th century. A 18 680 0 2205 & A 18 681 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 Tze 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

729. Seminar in American History. (3). Repeatable for credit. Prerequisite: departmental consent. A 18 729 0 2205
730. Seminar in American History. (3). Repeatable for credit. Prerequisite: departmental consent. A 18 730 9 2205
733. Seminar in European History. (3). Repeatable for credit. Prerequisite: departmental consent. A 18 733 9 2205
734. Seminar in European History. (3). Repeatable for credit. Prerequisite: departmental consent. A 18 734 9 2205
750. Workshop in History. (1-3). Repeatable for credit but will not satisfy requirements for history majors. A 18 750 2 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 4 hours. A 18 810 3 2205

Interdisciplinary Liberal Arts and Sciences Program

Lower-Division Course
100. 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, society, philosophy, religion, politics, and the economics of each country. The course is taught by a team of instructors from several departments. A 10 100 0 4901

Upper-Division Courses
281. 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. Individualized programs must be formulated in consultation with and approved by appropriate faculty sponsors. May be repeated. A 33 281 2 4903
398. Travel Seminar. (1-4). An interdisciplinary travel seminar: a study of culture that includes observations of art and architecture; lectures and discussions of political, social and economic problems; and visits to various historic places of interest. A 10 398 9 4903

Courses for Graduate Students Only
875. Thesis. (1-6). A course for students who are finishing the Master of Arts in Liberal Studies (MALS). The student writing a thesis must be enrolled in this course until the thesis is completed and all thesis requirements have been satisfied. Prerequisite: consent of student's degree committee chairperson and instructor. A 33 875 4 4999
885. Terminal Project. (2-6). A course for students who are near the end of their MALS program and involved in a Terminal Project. The Terminal Project may have many aspects such as field work, practicum, internship, research report, or any other individualized activity, but the scope of it must be approved by the student’s advisory committee. The student involved in a project must be enrolled in this course until the project is completed and all project requirements have been satisfied. A 33 885 4 4999

Italian (See Romance Languages)

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 6 hours in upper-division journalism and speech electives
3. Advertising—Public Relations—Journ. 115, 325, 350, 510, 525, 550, 560, 611, 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, 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

115. Introduction to Mass Communication. (3). A survey of the media of mass communication and the role each plays in society. Special consideration is given to the freedom and responsibilities of the mass media. A 19 115 0 0601

150. Journalism Workshop. (1-3). A course designed to provide specialized instruction, using a variable format, in a journalistically 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 achieving accuracy and good writing. Reasonable typing competence is required. Prerequisite: Eng. 102. A 19 200 1 0602

240. Introductory Photojournalism. (3). 2R; 3L. Lab fee. Basic photographic theory and technique, 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 handled 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 pack-

aging. 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 0602

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 planning and evaluating communication, and specialized publics. Prerequisite: Journ. 200. A 19 350 0 0604

380. History of Communication. (3). Research into the development of mass media, with emphasis on the development and presentation of original research papers. Course includes bibliography and criticism in mass communication. Prerequisite: Journ. 200. A 19 380 0 0601

440. Advanced Photojournalism. (3). 3R; 3L. Lab fee. Advanced photographic theory and technique, with emphasis on the feature page photo essay, advertising photography for daily news publications, and the photojournalists' personal viewpoints and philosophies. Using the student's personal 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/NCr only. A 19 481 2 0602

Courses for Graduate/Undergraduate Credit

500. Advanced Reporting I. (3). 1R; 4L. A course for juniors and seniors on the techniques of reporting and writing the more complex and important types of news stories. Covers police beat stories, sports and economic reporting, and includes the study and practice of journalistic interviewing. Prerequisites: junior standing, Journ. 200 and either 300 or 322. A 19 500 1 0602
501. Investigative Reporting. (3). 1R; 4L. Study and application of the techniques of reporting and writing complex news stories involving the less obvious aspects of local and state government, education, and various court proceedings. The lab will be by arrangement to permit independent investigation into the news of government or public affairs that is not easily obtainable. Prerequisites: Journ. 500 for majors; departmental consent for graduate students. 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 press releases, speeches and popularizations of complex documents. Techniques learned in this course are valuable in writing grant proposals, committee reports, pamphlets and journal articles. Prerequisite: 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. Covers copy editing, rewriting, 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 both print and broadcast forms. Emphasis is on terse, precise writing that evokes response sought by advertiser. Prerequisite: Journ. 325 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 editorial page features, and a study of research materials available to editorial writers. Prerequisites: junior 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. Introduces the 1st Amendment and covers such topics as libel, privacy and copyright. Prerequisites: junior standing and Journ. 200. 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 patterning articles to fit the needs of specific magazines. Prerequisite: Journ. 200 or departmental consent. A 19 571 0 0602

611. Media Management. (3). A study of the business and management operations of the mass media designed to give journalism students an understanding of the interrelationships in mass media enterprises. Prerequisite: junior standing or departmental consent. A 19 611 1 0602

645. Special Topics in Journalism. (1-3). Directed individual research in various aspects of journalism and mass communication or related topics: communications theory, news, editorials, 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 or 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 freedom and cross-cultural communication. Prerequisite: senior standing. A 19 715 0 0601

720. Dimensions of Mass Communication. (3). A detailed study of the mass media, their role as social institutions, their control, support, content and audience, and their effects. Prerequisite: senior standing. A 19 720 0 0601

750. Journalism Workshop. (1-3). A course designed to provide specialized instruction, using a variable format, in a journalistically relevant subject. A 19 750 2 0699
Latin and Greek (See Romance Languages)

Linguistics

**Major.** A major in linguistics consists of a minimum of 24 hours from the courses listed below, including at least 9 hours from Group A and at least one phonetics course—Ling. 218, Ling. 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 3 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 6 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

218. Linguistics. Phonetics: Theory and Application. (3). 3R; IL. Cross-listed as CDS 218. A 10 218 0 1220

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; phonemic 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**


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

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

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 4R; 2L means 4 hours of lecture and 2 hours of lab.
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 Span. 505. A 10 505 0 1105

535. French and Spanish. Introduction to Romance Linguistics. (3). Cross-listed as Fr. 635 and Span. 635. A 10 635 0 1105

579. German. Linguistics in the Teaching of German. (3). Cross-listed as Ger. 579. A 10 579 0 1505

Group C—Areas of Contact Between Linguistics and Other Disciplines

Lower-Division Courses

220. CDS. Developmental Psycholinguistics. (3). A 10 220 0 0815

301. Philosophy. Language and Philosophy. (3). Cross-listed as Phil. 301. A 24 301 0 1509

325. Philosophy. Formal Logic. (3). Cross-listed as Phil. 325. A 24 325 0 1509

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

202. 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 2 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 2 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

MATHEMATICS

Major. For the Bachelor of Arts (BA) 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) 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 adviser 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 3 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 1½ units of high school algebra. Not applicable to degree. A 20 011 0 1701

**021. Plane Geometry.** (3). Offered Cr/NCr only. For students without high school credit in plane geometry. This course may be used to meet departmental prerequisites in place of 1 unit of high school geometry. Prerequisite: 1 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

**101. Mathematics Appreciation.** (3). Elementary 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 20 101 0 1701

**109. College Algebra with Review.** (5). Topics covered include real numbers, algebraic expressions, exponents and radicals 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 112. (Only 3 hours applies toward a Wichita State University degree.) Prereq-

**110. Technical Algebra and Trigonometry.** (5). The standard topics of college algebra and trigonometry oriented toward the needs and interests of technical students. Applications to technical problems are stressed. No credit for students who have previously received credit in Math. 109, 111, 112 or 123. Prerequisites: 1 unit of high school algebra or Math. 011, and 1 unit of high school geometry or Math. 021, and enrollment in the Engineering Technology Program or consent of department. A 20 110 0 1703

**111. College Algebra.** (3). A survey of functions, theory of equations and inequalities, complex numbers and exponential and logarithmic functions. Prerequisites: 1½ units of high school algebra, or Math. 011, and 1 unit of high school geometry, or Math. 021. Credit is allowed in only one of the three courses: Math. 109, 111 or 112. 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. Prerequisites: 1½ units of high school algebra, or Math. 011, and 1 unit of high school geometry, or Math. 021. Credit is allowed only in one of the three courses: Math. 109, 111 or 112. A 20 112 0 1701

**123. College Trigonometry.** (3). A study of the trigonometric functions with applications. Prerequisite: Math. 111 or 109, or
equivalent high school preparation. 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 242 is not allowed. Prerequisite: Math. 109 or 111 or 112, or equivalent high school preparation. A 20 144 0 1701

150. Workshop in Mathematics. (1-3). Topics of interest to particular students and not elsewhere available in the curriculum. May be repeated for a total of 6 hours credit with departmental consent. Prerequisite: departmental consent. A 20 150 2 1701

211. Elementary Linear Algebra. (3). Linear algebra and related topics. Prerequisite: 1 unit of high school algebra or Math. 011. A 20 211 0 1701

242. 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 C or better, or 2 units of high school algebra, and 1 unit of high school geometry and 1/2 unit of high school trigonometry, or Math. 123 and either 109 or 111 with a C or better in each. A 20 242 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. 242 with a C or better. A 20 243 0 1701

251-252. Technical Calculus I and II. (3-3). Standard topics of calculus, including differentiation and integration, with applications to engineering technology. Not open to students with credit in Math. 242 or 144. Prerequisites: Math. 110, or equivalent, and enrollment in the Engineering Technology Program. A 20 251 0 1703; A 20 252 0 1703

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 will be studied. This is not a mathematical skills course. 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 Math. 311. Prerequisite: Math. 344 or concurrent enrollment. A 20 311 0 1701

331. Discrete Mathematics I. (3). A study of some of the basic topics of discrete mathematics that will include 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 20 331 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 C or better. A 20 344 0 1701

450. Individual Projects. (1-5). Repeatable up to 10 hours. Prerequisite: departmental consent. A 20 450 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 major and a passing score on a qualifying examination. A 20 501 0 1701

503-504. Topics in Modern Mathematics I and II. (3-3). An investigation of the newer 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

545. Integration Techniques and Appli-
cations. (3). A study of the basic integration techniques used in applied mathematics. Included are the standard vector calculus treatment of line and surface integrals, Green's Theorem, Stokes' Theorem, and The Divergence Theorem. In addition, the study of improper integrals with application to special functions is included. Prerequisite: Math. 344 with 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 C or better. A 20 547 0 1701

550. Ordinary Differential Equations. (3). An investigation of integrating factors, separation of variables, critical points, linear differential equations with constant coefficients, variation of parameters and existence and uniqueness for initial value problems and systems. Prerequisite: Math. 344 with a C or better. A 20 550 0 1703

551. Numerical Methods. (3). Approximating roots of equations, interpolation and approximation, numerical differentiation and integration, and the numerical solution of first order ordinary differential equations. Some use of the computer. Prerequisites: CS 201, 202 or 203 and Math. 344 with C or better, or departmental consent. A 20 551 0 1703

553. Mathematical Models. (3). This course will cover case studies from the fields of engineering, technology, and the natural and social sciences. The emphasis will be to describe a problem and then develop the mathematics necessary to solve the problem. The case studies will be selected to illustrate several of the topics from among: linear algebra, differential and integral equations, stochastic processes, statistics and combinatorics. Each student will be required to participate in a term project which will 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 careful treatment of duality. 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 programs and classical methods in nonlinear optimization. Prerequisite: Math. 511. A 20 557 0 1703

550. 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 6 hours credit with departmental consent. Prerequisite: departmental consent. A 20 580 0 1701

590. Introduction to Mathematical Logic. (3). A study of symbolic logic and an axiomatic development of propositional calculus. Boolean algebra, switching circuits, predicate calculus and formal languages are covered, with emphasis on formalizing mathematical systems. Prerequisite: Math. 511 or departmental consent. A 20 590 0 1701

615. Elementary Number Theory. (3). Properties of the integers studied by elementary means. Prerequisites: Math. 144 and upper division standing or Math. 344 or departmental consent. A 20 615 0 1701

621. Elementary Geometry. (3). A study of the structure of Euclidean geometry. Prerequisite: Math. 144 or 243. A 20 621 0 1701

640. Advanced Calculus II. (3). An examination of the calculus of functions of several variables and line and surface integrals. Prerequisites: Math. 511 and 547 with a C or better in each. A 20 640 0 1701

651. Engineering Mathematics I. (3). A survey of some of the mathematical techniques most often needed in engineering. The course includes vector analysis, linear algebra, Legendre functions and Bessel functions. No credit given toward a major in mathematics. Prerequisite: Math. 550 with a C or better. A 20 651 0 1703

713. Abstract Algebra I. (3). A treatment of the standard basic topics in abstract algebra. Prerequisite: Math. 513 or departmental consent. A 20 713 0 1701

714. Applied Mathematics. (3). Cross-listed as Phys. 714. Prerequisite: Math. 550 or instructor's consent. A 20 714 0 1703

720. Modern Geometry. (3). A study of fundamental concepts of geometry. Prerequisite: Math. 513 or departmental consent. A 20 720 0 1701

725. Topology I. (3). An investigation of point set and algebraic topology. Prerequisite: Math. 547 or departmental consent. A 20 725 0 1701

743. Real Analysis I. (3). A study of the foundations of analysis and the fundamental results of modern real analysis. Prerequisite: Math. 547 or departmental consent. A 20 743 0 1701

Prerequisite: Math. 545, 547 or 651, or departmental consent. A 20 745 0 1701

750. Workshop. (1-3). Topics appropriate for mathematics workshops that are not in current mathematics courses. May be repeated to a total of 6 hours credit with departmental consent. Prerequisite: departmental consent. A 20 750 2 1701


753. Ordinary Differential Equations. (3). Existence, uniqueness, stability and other qualitative theories of ordinary differential equations. Prerequisite: either 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 20 800 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 3 1701

881. Individual Reading. (1-5). Prerequisite: departmental consent. Repeatable up to a maximum of 5 hours with departmental consent. A 20 881 3 1701

885. Thesis. (1-4). May be repeated to a maximum of 4 hours credit. Prerequisite: departmental consent. A 20 885 4 1701

Fairmount College/Mathematics 363
STATISTICS

No major or minor in statistics is available, but a BS with emphasis in statistics is offered as described under the mathematics section. Statistics courses satisfy general education requirements. As part of the 124 semester hours required for graduation, students may take up to 15 semester hours of statistics courses in addition to the 45 or 50 semester hours of course work allowed in mathematics.

Lower-Division Course

170. 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 20 170 0 1702

Upper-Division Courses

360. Elementary Probability. (3). Probability functions, random variables and expectation of finite sample spaces. Prerequisite: Math. 111, 112 or 351. A 20 360 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 1702

571-572. Statistical Methods I 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 topics in 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 costs. Applications will involve problems from the social and natural sciences, business and other disciplines. Prerequisite: any elementary course in statistics, such as Stat. 370, Soc. 501 or Psych. 442. 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 will involve problems from engineering, medicine, education, social and natural sciences, and other disciplines. Prerequisite: any elementary statistics course such as Stat. 370, Soc. 501 or Psych. 442. 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. Prerequisite: Math. 344 with C or better. A 20 661 0 1701

762. Applied Stochastic Processes. (3). A study of random variables, expectation, limit theorems, Markov chains and stochastic processes. Prerequisite: Stat. 661 or 771 or departmental consent. A 20 762 0 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 C or better or departmental consent. A 20 771 0 1702; A 20 772 0 1702

Courses for Graduate Students Only

878. Special Topics. (2-3). Repeatable with departmental consent. Prerequisite: departmental consent. A 20 878 0 1702

879. Individual Reading. (1-5). Prerequisite: departmental consent. A 20 879 3 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. Minority studies also offers experiences that allow students to explore their own uniqueness and provides methods for interacting favorably with other people.

Major. The major in minority studies consists of at least 24 hours, including Min. Stud. 210; any two of Min. Stud. 240, 331, 332, 333, or 334; Min. Stud. 337, 338, or 399; 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 adviser may be counted toward a major. These courses may not count for more than 6 hours.

Minor. A minor in minority studies consists of at least 15 hours. The courses are to be approved by the student’s adviser in the department and must include Min. Stud. 210; any two of 240, 331, 332, 333, or 334; 337, 338, or 399; and 380.

Lower-Division Courses

100. Introduction to Minority Studies. (3). Orientation to the nature and scope 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 30 100 0 2299

210. 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 also is made. A 30 210 0 4999

240. Minority Women in America. (3). Cross-listed as WS 240. An examination of the lives, talents 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, sensitivities and emotions. A 30 240 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. Class delves into the social concepts of prominent American minorities through the coverage of popular novels, biographies, autobiographies, rhetoric, etc. Prerequisite: Min. Stud. 100. 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. The relationship between their particular ethnic group's language and behavior also is explored. Prerequisite: Min. Stud. 210. 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. 210. 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. 210. 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. 210. 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. Reading 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—Indi­

350. Multiracial Cross-Cultural Communications. (3). A special laboratory group experience for advanced students. Leadership styles, group development skills and interpersonal competence in a multietnic setting are developed. Prerequisite: Min. Stud. 337 or 338. A 30 380 0 4999

Courses for Graduate/Undergraduate Credit

512. Issues in Minority Aging. (3). Cross-

540. Advanced Multiracial Cross-Cultural Communications. (3). An advanced study on special topics in human relations. Prerequisite: 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 such as current issues, theory of structured exercises and laboratory planning; 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 designs that can gather legitimate data on specific ethnic groups. The setting up and design of a research prospectus is fundamental. Also evaluative research will be studied. Prerequisite: Min. Stud. 545 or concurrent enrollment. A 30 548 2 4999

550. 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. A 30 580 3 2299

725. Concepts of Cross-Cultural Communications. (3). A critical survey of the concepts of cross-cultural communications. An in-depth examination of the rationale used to evaluate different ethnic groups, language and behavior. This course provides a conceptual understanding of special implications and necessary adaptations of communications to, between and among diverse ethnic groups in our society. Selections from scholars such as Prosser, Smith, Jahn, Giffin, Patton, Power, Gofman, Rogers and Aranguren will be 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 cross-examination of some alternative styles of behavior to deal with problems peculiar to minority people in the United States is undertaken. A 30 750 2 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: graduate standing and instructor’s consent. A 30 860 0 4990

Music

See College of Fine Arts section for requirements and curriculum.

Philosophy

The study of philosophy is relevant to all aspects of life and can be pursued fruitfully at many levels. Philosophical thought may direct itself to such diverse topics as the nature of reality, the conditions of knowledge, the justifications for political authority, the reality of sub-atomic 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 will be 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 will 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 will 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 interpretations of the distinguishing intentions, characteristic procedures, and essential functions of the philosophic endeavor, this 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 as a diverse and self-critical historical enterprise. A 24 100G 0 1509

121. Introduction to Philosophy. (3). A study of philosophical questions about ethics, religion, politics, human nature, knowledge, and reality. The course attempts to assist students in developing their own views and the ability to respond intelligently to philosophical questions. A 24 121 0 1509

125. Thinking Straight. (3). This course deals with the uses of logical concepts and techniques in evaluating and criticizing ordinary inferences and arguments. Some elementary systems of formal logic are studied. Considerable class time is spent on the analysis and evaluation of arguments found in such diverse fields as law, politics, education, advertising, and religion. A 24 125 0 1509

129. University Experience. (3). An examination of the structure, process and problems of university education in the contemporary setting. This course attends especially to the personal, moral, and spiritual problems and opportunities presented by the modern university experi-
ence. It seeks to provide clarification and guidance in understanding the university and in choosing one's own future. A 24 129 0 1509

144. Moral Issues. (3). An introduction to philosophical thought about ethics. A number of contemporary moral issues will be discussed and various philosophical approaches to their solutions considered. A 24 144 0 1509

177. Philosophy of Work. (3). This course examines the role of work as it relates to various philosophical concepts of the nature of man and society, with special attention being paid to metaphysical and ethical issues. In addition to an overview, specific topics such as the right to work, the obligation to work, affirmative action, and the relationship between work and the economic system are examined. A 24 177 0 1509

281. Cooperative Education in Philosophy. (1-4). The goal of this course is to provide the student with a field placement that integrates philosophy with a planned and supervised professional experience designed to complement and enhance the student's academic program. Instructor's approval is required for enrollment. Each student's program must be formulated in consultation with and be approved by appropriate faculty sponsors. A 24 281 0 1509

Upper-Division Courses

300G. Science and the Modern World. (3). The aim of this course is to develop an understanding of the methods and accomplishments of science and how these have affected the way people understand themselves, society, and the universe. The approach is both historical, with respect to the re-creation of the pre-scientific world view and the developments of science, and analytic, with respect to understanding the goals, methods and limits of contemporary science. No prerequisite but prior completion of general education requirements in science is desirable. 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 will focus 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

303. Nineteenth Century Philosophy. (3). A study of selected nineteenth century philosophers or systems of thought such as Fichte, Schelling, Hegel, Schopenhauer, Marx, Mill, Bradley, Kierkegaard, Peirce, Nietzsche, Comte; Dilthey, Schleiermacher, idealism, materialism, positivism, empiricism, and pragmatism. A 24 303 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 will be devoted to such topics as the ethical implications of investment, production/distribution, the nature and extent of corporate social responsibility, 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 will be examined in both classical and modern thought. Thinkers such as Socrates, Sextus Empiricus, Hume, Montaigne and Hallie will be 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 will 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 relationship between morality and legality, the justifiability of civil disobedience, the limits of legal constraints on the individual and the nature and justification of punishment. Attention will be given both to classical and contemporary readings, and both the natural-law and positivist legal traditions will be emphasized. A 24 311 0 1509

313. 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 will be discussed. A 24 313 0 1509
315. Late Modern Philosophy. (3). A study of philosophical thought in the eighteenth century with selections from philosophers such as Berkeley, Hume, Reid, Adam Smith, Butler, Hutcheson, Wolff, and Kant, and movements such as empiricism, rationalism, the Scottish common sense school, and idealism. A 24 315 0 1509

320. Philosophy of Science. (3). A study of the methods, goals and world views of the sciences, with attention to such topics as the structure and evaluation of scientific theories, the nature of explanation, the dynamics of scientific revolutions and the impact of science on human society and values. A 24 320 0 1509

322. Early Modern Philosophy. (3). A study of philosophical thought in the period from the Renaissance through the seventeenth century with selections from philosophers such as Pico, Vico, Galileio, Cusanus, Telesio, Erasmus, More, Hobbes, Bacon, Machiavelli, Descartes, Spinoza, Leibniz, Malebranche, and Locke. A 24 322 0 1509

325. Formal Logic. (3). Cross-listed as Ling. 325. A study of systems of formal logic including sentential and predicate logic. The uses of these systems in the analysis of arguments is emphasized. A 24 325 0 1509

327. Philosophy of Health Care. (3). An examination of the philosophical and ethical issues generated by the development and expansion of the health care professions. Topics such as the concept of health, rights of patients, the medical team, professional rights and responsibilities, behavior control, euthanasia and institutional care will be examined. This course is designed for the layman as well as for the medical professional. A 24 327 0 1509

331. Ancient Greek Philosophy. (3). An examination of the development of Greek philosophy in its major phases, including an exploration of the Milesian and Eleatic traditions, Pythagoras, the Atomists, the Pluralists, the Sophists, Socrates, Plato and Aristotle. A 24 331 0 1509

338. Philosophy of Feminism. (3). Cross-listed as WS 138. An exploration of philosophical issues raised by the feminist movement, with emphasis on conceptual and ethical questions. A 24 338 0 1509

346. Philosophy of Religion. (3). Cross-listed as Rel. 346. An examination of some basic religious problems such as the nature and grounds of religious belief, religious language, the existence and nature of God, human immortality and the problem of evil. A 24 346 0 1509

360. Ethical Theory. (3). A study of selected topics in ethics. Issues such as the meaning and justification of moral judgments, the nature of morality, the relations between normative categories and the concept of justice, and the problem of revolution in moral schemes will be selected for investigation. Prerequisite: one course in philosophy. A 24 360 0 1509

366. Philosophy of Literature. (3). An exploration of the philosophic themes present in literature. Special attention is devoted to literature as an aesthetic phenomenon and the associated problems of the essential nature of literature as a particular art form, the author’s intentions, the criteria of aesthetic appreciation and literature as knowledge. Emphasis on the special type of literature—poetry, drama, the novel, the short story—is the instructor’s choice. A 24 366 0 1509

375. Philosophy of the Arts. (3). An intensive examination of one or more fundamental problems or themes in the philosophy of art or in the special aesthetics of painting, music, sculpture, literature, drama, movies, etc. Some topics are: the problem of tragedy, the character of the aesthetic attitude, the function of the arts, the legitimacy of general art theory, the presuppositions of specialized art theory, the creative act, art and truth, art and life, and the nature and function of art criticism. A 24 375 0 1509

481. Cooperative Education in Philosophy. (1-4). See Phil. 281. A 24 481 0 1509

Courses for Graduate/Undergraduate Credit

505. Philosophy of Education. (3). An examination of educational concepts with an emphasis on the implication of such 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). Cross-listed as Amer. Stud. 318. Examination of philosophical ideas and movements in recent British and American philosophy. Movements such as logical positivism, pragmatism, ordinary language philosophy and analytic philosophy will be discussed. Readings will be selected from figures such as Russell, Wittgenstein, Pierce, Dewey and Quine. A 24 518 0 1509

519. Empiricism. (3). A study of the philosophical views that emphasize sensory
of language and the character of some basic topics in the theory of reality. A 24 519 0 1509

540. Theory of Knowledge. (3). A critical examination of the nature of knowledge and of the philosophical problems concerning skepticism; knowledge of the self; material objects; other minds; the past, present and future; universals; and necessary truths. Selections from both historical and recent writings are included. Prerequisite: Phil. 121 or equivalent. A 24 540 0 1509

546. Rationalism. (3). A study of the philosophical views that emphasize reasoning rather than sensory experience as the source of knowledge, with particular attention paid to the philosophies of Descartes, Spinoza and Leibniz. A 24 546 0 1509

549. Topics in Ancient Philosophy. (3). In each offering, this course explores one decisive issue in philosophy from the time of Thales through the Stoics. The examination of an issue may confine itself to one period within the total span of ancient philosophy or it may trace the issue throughout the span, indicating its contemporary treatment. Some of the issues treated are: the nature of what is, the concept of the sacred, the meaning of truth, the relation of invariance and process, the existence of universal standards of thought and conduct, the problem of knowledge, skepticism, the nature of language and the character of philosophical inquiry. A 24 549 0 1509

550. Metaphysics. (3). An exploration of some basic topics in the theory of reality. Issues include such notions as space, time, substance, causality, particulars, universals, appearance, essence and being. Prerequisite: Phil. 121 or equivalent. 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 sound 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, philosopher, or movement in contemporary European philosophy. Philosophers considered will include such figures as Husserl, Heidegger, Jaspers, Gadamer, Habermas, Marcuse, Adorno, Bergson, Sartre, Merleau-Ponty, Bachelard, Lacan, Derrida, Foucault, and Ricoeur. Philosophical movements examined will include such tendencies as phenomenology, idealism, existentialism, structuralism, process philosophy, hermeneutics, and Marxism. A 24 557 0 1509

585. Studies in a Major Philosopher. (3). A concentrated study of the thought of one major philosopher announced by the instructor when the course is scheduled. Repeatable for credit. Prerequisite: instructor's consent. A 24 585 0 1509

650. Major Seminar. (3). Topic to be announced. The student will participate in the departmental faculty seminar. Prerequisite: departmental invitation. A 24 650 0 1509

699. Directed Readings. (2-3). A course designed for the student interested in doing independent study and research in a special area of interest. Repeatable for credit. Prerequisite: departmental consent. A 24 699 3 1509

Physics

Major. The following courses are required for a physics major: Phys. 213-214 or 313-314-315-316, 551, 621, 631-632, and 711; Math. 550 and 545, 547 or 651; and 5 hours of chemistry.

For the Bachelor of Arts (BA), 2 hours of Phys. 516 or 517 are required. Six additional hours of upper-division physics are also required.

For the Bachelor of Science (BS), 4 hours of Phys. 516, 2 hours of Phys. 517, 8 additional hours of upper-division physics, and 5 additional hours of chemistry are required. Ten 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 the BS or BA requirements in
physics, with Phys. 642 chosen as an elective, plus 6 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 6 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 will acquaint 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 Phys. 214, 312 or 314. Offered Cr/NCr only. Prerequisite: one year of high school algebra. A 21 101 0 1902

**111. 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 to be included are mechanics, heat, electricity and magnetism, wave phenomena, and modern physics. Not open to students who can meet prerequisites for Phys. 311. Prerequisite: one year of high school algebra. A 21 111 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. The choice of topics, the emphasis on problems and the detailed applications will all be directed toward the special uses of physics in the health sciences. 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 the question: Why do things happen the way they do? Individual topics which may be included are: comparison of the planets, stars and black holes, galaxies and quasars, and the expansion of the universe. A 12 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 count as a laboratory science. Field trips are required. 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 will be 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 course schedule for topic each semester. A 21 198 0 1911

**213. 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 21 213 1 1902

**214. General College Physics II. (5).** 4R; 3L. Lab fee. Electricity, light and modern physics. This course is a continuation of Phys. 213. Prerequisite: Phys. 213 or 311. A 21 214 1 1902

### Upper-Division Courses

**313. 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 will not be given for both Phys. 213 and 313. Co-requisite: Math. 243. A 21 313 0 1902

**314. 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. 316, that accompanies this course. Credit will not be given for both Phys. 214 and 314. Prerequisites: Math. 243 with a grade of C or better and Phys. 213 with a grade of B or better, or Phys. 313. A 21 314 0 1902


400. Special Studies in Physics. (1-2). Repeatable but total credit may not exceed 2 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 for credit up to 2 hours but may not be counted for credit toward a minor in physics. Prerequisites: completion of, or concurrent enrollment in, an upper-division physics course and instructor's 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: in-service 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 methods and experimental techniques. The experiments are open-ended projects requiring individual study. Repeatable up to a maximum of 8 credit hours. Corequisite: Phys. 551. A 21 516 1 1902

517. Electronics Laboratory. (2). 1R; 3L. Lab fee. Experiments in electronics that treat some of the applications of electronics in scientific research. Experiments will cover the uses of vacuum tubes, transistors, IC, and digital circuits. Prerequisite: Phys. 312. 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 for their explanation. Prerequisite: Phys. 214 or 312 or 314 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. 214 or 312 and Math. 344. A 21 555 0 1902

601. Special Topics in Astrophysics. (1-2). Several topics in astronomy and astrophysics will be studied in depth. Lectures, independent readings and student projects may be assigned. May be repeated up to 6 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. 214 or 312 with a grade of C or better and Math. 344 with a grade of C or better. A 21 621 0 1902

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 21 625 1 1909

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. 214 or 312 with a grade of C or better and Math. 344 with a grade 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. Thermophysics. (3).* The laws of thermodynamics, distribution functions, Boltzmann equation, transport phenomena, fluctuations and an introduction to statistical mechanics. Prerequisites: Phys. 214 or 312 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 nuclear physics, solid state physics, 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 Schroedinger 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 to be covered 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 3 hours. Prerequisites: 30 hours of physics and departmental consent. A 21 800 3 1902

801. Selected Topics in Physics. (2-3). Repeatable for credit up to 6 hours. Prerequisite: departmental consent. A 21 801 0 1902

807. Seminar. (1). Review of current periodicals; reports on student and faculty research. Repeatable for credit up to 2 hours. Prerequisite: 20 hours of physics. A 21 807 9 1902

809. Research. (1-3). Repeatable for credit up to 6 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


* Course may not be counted for credit toward a graduate physics major.
Political Science

Major. A major consists of Pol. Sci. 121 and 30 additional hours, including at least one course in four of the five groups below.

Minor. A minor consists of Pol. Sci. 121 and 12 additional hours, at least 6 of which must be in upper-division courses.

Group 1, Political Theory and Philosophy—Pol. Sci. 300, 345, 444, 547, or 549
Group 2, American Politics—Pol. Sci. 315, 316, 317, 318, 319, 354, 358, 540, 551, or 552
Group 3, Comparative Politics—Pol. Sci. 226, 228, 320, 330, 523, 524, or 525
Group 4, International Politics—Pol. Sci. 335, 336, 338, or 534
Group 5, Public 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 also will be prepared to undertake a more professional course of study.

A major with a public administration option consists of 36 hours, including Pol. Sci. 121, 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 C (6 hours)—Econ. 201, Principles of Economics I, and 3 hours in any of the following: Soc. 501, Sociological Statistics; Econ. 231, Introductory Business Statistics; Admin. 370, Quantitative Methods and Research; Math. (Statistics) 360, 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 problems. Some of the major ideas will include the following: the rulers and the ruled, liberty versus order, the right of dissent, political obli-
gation and issues of conscience. In addition, current policies developed will cover sex 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 103G 0 2207

121. American Politics. (3). An analysis of the basic patterns and structure of the American political system, with emphasis on policies and problems of American politics. A 22 121 0 2207

150. Political Science Workshop. (1-3). Prerequisite: instructor’s consent. A 22 150 2 2207

153. Model United Nations. (2-4). A workshop to prepare students to participate effectively in various model United Nations, especially the Midwest Model UN in St. Louis. A 22 153 0 2207

155. 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 assigned 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 22 155 0 2207

216. The Governments of Kansas. (3). An examination of the structure and function of state and local governments in Kansas. Emphasis upon policy formation and administration, finance and intergovernmental relations. A 22 216 0 2207

226. 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 22 226 0 2207

228. Autocracy, Dictatorship and Totalitarianism. (3). Nazi Germany, Fascist Italy and Communist systems receive special attention as major prototypes and variations of the systems being examined. More traditional dictatorships and one-party states also receive attention. Topics emphasized are conditions giving rise to these regimes, leaderships, ideology, terror, the party, revolutionary personalities, revolutionary takeovers, and problems and policies of these regimes. A 22 228 0 2207

232. Basic Ideas in Political Theory. (3). The purpose of the course is to show the direct relationship between political philosophy and practical political structures 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 22 232 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

315. The Presidency. (3). The presidency focuses upon the evolution of the presidential office, the recruitment of presidents and the nature of presidential power. A 22 315 0 2207

316. The Congress. (3). Focuses on the Congress, with particular attention to interest articulation at both state and national levels. A 22 316 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 political solutions, 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 institutions 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 colonialism 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 the roles and status 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 dissidents and uses of terror; lives of the elites and the masses; evolution and development of the Communist party of the Soviet Union; leadership selection; treatment of minorities; judicial systems; and problems and policies. A 22 330 0 2207

335 & 336. International Politics and Institutions. (3-3). 335: Focuses on interaction between actors in the international system. Covers nature of conflict and conflict resolution. Either 335 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 22 335 0 2207 & A 22 336 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 aims; and execution of 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 over two thousand years. The changes in emphasis that occurred in this tradition are traced through the Roman Stoics and the religious philosophers of the Middle Ages. Familiarity with these early political ideas is a major contribution to understanding subsequent political philosophies. A 22 345 0 2207

353. Model United Nations. (2-4). A workshop to prepare students to participate effectively in various model United Nations, especially the Midwest Model UN in St. Louis. A 22 353 0 2207

354. Judicial Process and Behavior. (3). Focuses upon the behavior and policymaking 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 assigned 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

358. American Political Thought. (3). Consideration of selected topics in the development of political ideas in the United States. A 22 358 0 2207

390. Special Topics in Political Science. (1-3). An analysis of selected titles in political science in a seminar setting. Content varies depending upon the instructor. Repeatable for credit. A 22 390 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 3207

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 sixteenth century. Major philosophers studied 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 American political system. Marx, a political thinker who moved strongly in the direction of twentieth century political philosophy, is also studied. Philosophers of this period have collectively had a profound impact on political life in this century. A 22 444 0 2207

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. 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 make decisions 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 Geron. 501. This course will focus on the role of the elderly as competitors in the political arena. In assessing the elderly’s strengths and weaknesses, we will analyze the following: the effects of aging on political behavior; strategies of the aging—both individual and collective; and the responses of the political system. A 22 506 0 2207

523. 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 22 523 0 2207

524. Politics of Modern China. (3). Emphasis is on study of China’s political system since 1949 in terms of non-Western goals and ideas of social organization. Themes of political integration and political development are used to minimize distortion or cultural bias. Study encompasses the roots of the political system, the system as it is now and the goals China is striving to realize. Some assessment is made about the future development of communism in China. Topics include Chinese communism and the ideological heritage; political culture; political leadership; leadership succession; political participation; the Chinese Communist Party; political communications and socialization; legal developments; policy choices; and major events, such as the Hundred Flowers Campaign, Great Leap Forward and the Proletarian Cultural Revolution. A 22 524 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 cleavage patterns, stability-instability, party systems and comparative policy analysis. 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). Examines 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 existent data. Emphasis is given to the development and presentation of an original research paper. 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 Darwin’s theory of evolution, the doctrine of historicism, and the growth of modern science and to explore their impact upon political thought. Although the multiplicity of 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

* Prerequisite may be waived with departmental consent.
Science. (3). A comparative study of representative conceptual frameworks to give the undergraduate student of politics an appreciation of the work of the professional scholar, its possibilities and limitations. An emphasis is placed on critical evaluation of such approaches. A 22 549 0 2207

551. Public Law. (3). An analysis of the role of appellate courts—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 U. S. 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 of use to students desiring to work in an urban planning agency or who will be involved in planning issues as an administrator at the city, county, state or federal level. It is also of value to students seeking an understanding of the complex process of urban-related life. The role of planning in solving human and environmental problems is examined. Emphasis is given to the relationship between specialists, citizens and elective 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 laws governing public personnel management and to the unique merit, equal employment opportunity, productivity, unionization and collective bargaining problems found 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 of comparative analysis and to the relationships between administrative institutions and their environmental settings. 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 expenditure and revenue systems. Introduction to urban financial administration. A 22 655 0 2207

687. Introduction to Urban Affairs. (3). Cross-listed as Econ. 687 and Soc. 687. An introduction to the study of the metropolis as a social, political and economic system. Prerequisites: Econ. 202 and a course in sociology or political science or instructor's consent. A 22 687 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). Emphasizes philosophy of science and methodology (as distinguished from method and technique) and exposes the student to recent works of methodological import in the various subfields within the discipline. Prerequisite: departmental consent. A 22 701 0 2207

702. Statistical Applications. (3). Emphasizes applications of data in political science. Prerequisite: departmental consent. A 22 702 0 2207

703. Proseminar in Political Science. (3). An examination of predominant concepts, theories and ideas of the discipline and its constituent subfields; required of degree-status graduate students upon entrance. Prerequisite: departmental consent. 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 schools of thought underlying the field and identification of issues shaping the future development of the field. A 22 710 0 2214

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 selected aspects of the politics and institutions of foreign governments. Prereq-


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 policy formulation, organization, planning, budgeting, staffing, coordination, communications and administrative responsibility. Prerequisite: departmental consent. A 22 810 9 2207

821. The Budgetary Process. (3). Analysis of the development and utilization of the budgetary process in government administration, with special attention given to the budget in relation to its role in policy formulation. Prerequisite: departmental consent. A 22 820 9 2207

835. Seminar in International Relations. (3). Analysis of special problems in, and approaches to, the study of international relations. Prerequisite: departmental consent. A 22 835 9 2207

841. Seminar in Urban Politics. (3). An intensive analysis of urban politics, with emphasis on individual research projects. Prerequisite: departmental consent. A 22 841 9 2207

842. Administration in Local Government. (3). Examination of administrative processes and problems in local government, including the role of the professional chief executive. Problems examined are drawn from the following: labor-management relations, program evaluation, county government reform, governmental decentralization, citizen participation, grant-in-aid programs, interlocal cooperation, affirmative action requirements and service contracting. Prerequisite: Pol. Sci. 317. A 22 842 9 2214

845. Seminar in Political Theory. (3). Detailed study of the relevant works of a major political philosopher and his/her contribution to contemporary thought. Prerequisite: departmental consent. A 22 845 9 2207

851. Seminar in Public Law and Judicial Behavior. (3). Analysis of special problems in and approaches to the study of legal systems. Emphasis is given to developing the student's awareness of research in the field. Prerequisite: departmental consent. A 22 851 9 2207

855. Seminar in Public Finance Systems. (3). An analytical study of selected topics in the politics and administration of revenue, expenditure and borrowing policies of governmental organizations. Prerequisite: departmental consent. A 22 855 9 2207

856. Seminar in American Politics and Institutions. (3). Analytical study of selected topics in American political behavior, with emphasis on individual research. Repeatable for credit when content differs substantially. Prerequisite: departmental consent. A 22 856 9 2207

874. Internship. (3-6). S/U grade only. An intensive applied learning experience supervised by a university department or committee. To receive credit, a student must secure approval of a written report from his/her own department. Prerequisite: departmental consent. A 22 874 2 2207

875. Research Design. (3). S/U grade only. Requires the development of a research design for the thesis. The design must be submitted to a departmental committee for evaluation and approval. Prerequisite: departmental consent. A 22 875 4 2207

876. Thesis. (1-3). A 22 876 4 2207

Psychology

Courses are designed for (1) students who elect to study particular aspects of psychology while majoring in other disciplines; (2) students who plan to major in psychology, but do not plan for graduate study in the discipline; and (3) students who plan to major in psychology and go into graduate study in psychology. Students planning graduate study should check with the department for recommended undergraduate course sequences for preparation in particular emphases in graduate study.

Major. The major for the Bachelor of Arts (BA) consists of a minimum of 30 hours in psychology. Psych. 111 is prerequisite for all higher number psychology courses. All BA majors are required to take Psych. 111, 401, 411, and 211 or 601. In addition, 6 hours must be taken from each of the groups listed below.
Minor. The minor consists of a minimum of 15 hours selected in consultation with the student's major adviser.

Lower-Division Courses

101. Stress and Stress Management. (3). This course is designed to introduce to the student the theory of stress and to survey the major stress management techniques. Two components of the course will be featured: in-class discourse focusing on understanding the concept and impact of stress, and participation in laboratory modules for the development of techniques. The students will attend class meetings as well as participate in some or all of those training sessions. A 23 101 0 2001

111. General Psychology. (3). An introduction to the general principles and areas of psychology. A 23 111 0 2001


211. Advanced General Psychology I. (3). A more intensive study of topics from Psych. 111: history and classical schools of psychology, contemporary systems, theories and research in basic areas of psychology. Prerequisite: Psych. 111. A 23 211 0 2001

Upper-Division Courses


304. Social Psychology. (3). A psychological study of the individual in the social situation. Prerequisite: Psych. 111. A 23 304 0 2005

306. Psychology of Work. (3). A broad array of psychology and work topics will be covered, including some relevant history, worker selection, training, the psychological impact of menial work, management theory, job enrichment, morale and motivation, organization communication and contemporary problem-solving research in worker satisfaction and productivity. A 23 306 0 2001

314. Child Psychology. (3). The infant and child with special reference to their behavioral development. Prerequisite: Psych. 111. A 23 314 0 2009

322. Physiological Psychology. (3). Physiological factors in behavior. Prerequisite: Psych. 111. A 23 322 0 2001

324. Psychology of Personality. (3). Theoretical concepts, factors in development and methods of assessing personality. Prerequisite: Psych. 111. A 23 324 0 2001


401. Psychological Statistics. (3). Emphasizes basic quantitative techniques in measurement and evaluation of behavior. Prerequisites: Psych. 111 and Math. 111 or 112. A 23 401 0 2007

402. Psychology of Consciousness. (3). Consciousness (and its varied states) as a psychological process, explored through theoretical, experimental and experiential points of view. Prerequisite: Psych. 111. A 23 402 0 2001

404. Psychology of Aging. (3). Cross-listed as Geron. 404. An exploration of current research on the individual's behavioral response to the processes of aging focusing on changes in attitudes, emotions, personality, psychopathology, intellectual skills and achievement after physical maturity. Prerequisite: Psych. 111. A 23 404 0 2009


411. Research Methods in Psychology. (3). 2R; 2L. A research course required of all majors. Recitation will cover the philosophy of the experimental approach, experimental design, appropriate data analysis techniques, and historical trends and developments in experimental psychology. Laboratory will expose students to representative experimental tech-
niques in the major subdivisions of psychology. All students will design, conduct, and report an independent experiment. Prerequisite: Psych. 401. A 23 411 1 2001

416. Psychology and Problems of Society. (3). A study of psychological research and principles applied to various contemporary social issues and problems. Prerequisite: Psych. 111. A 23 416 0 2005

421. Field Work in Psychology. (3). Special projects and practicums under supervision in public and/or private agency settings. Psychological study, observation, service and/or research may be undertaken with prior approval by the department. Repeatable for a maximum of 6 credit hours, but only 3 hours may be earned per semester. Prerequisites: Psych. 111 and departmental consent. A 23 421 2 2005

446. Introduction to Applied Behavior Analysis and Social Learning. (3). A study of the basic assumptions, principles and issues of behavior therapy and social learning and of current applications of this general approach to problems in living in a variety of settings such as mental hospitals, prisons, institutional and group home treatment for juvenile delinquents, classrooms for normal and special children, marital conflict, parenting skills, drug abuse, obesity, social skills, and depression. Prerequisites: Psych. 111 and departmental consent. A 23 446 0 2003

481. Cooperative Education. (1-3). This course is designed to provide the student with practical experience, under academic supervision, that will complement the student's academic program. Consultation with and approval by an appropriate faculty sponsor is necessary. A 23 481 2 2005

Courses for Graduate/Undergraduate Credit

502. Comparative Psychology. (3). Psychological and ethological analysis of behavior. The evolution and ontogenetic development of behavior are stressed. Lectures are supplemented by field trips and ethological projects. This course does not carry graduate credit for psychology majors. Prerequisite: one of Group One. A 23 502 0 2001

504. Advanced Social Psychology. (3). An intensive review of selected contemporary issues in social psychology. Prerequisite: Psych. 304. A 23 504 0 2005

508. Psychology Tutorial. (3). See WS

560. Selected topics in psychology. Repeatable for a maximum of 6 hours of credit. Prerequisites: Psych. 111 and departmental consent. A 23 508 2 2001

512. Primatology. (3). A survey of the primates (including humans) and their behavior. Topics covered 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. 111 and instructor's consent. A 23 512 0 2001


532. Psycholinguistics. (3). Cross-listed as Ling. 545. Survey of psychological, linguistic and informational analyses of language. Prerequisites: Psych. 111 and departmental consent. A 23 532 0 2001


544. Introduction to Psychopathology. (3). Individual differences and their relation to "normal" behavior. Prerequisite: Psych. 324 and 446, or instructor's consent. A 23 544 0 2001

546. Practicum in Applied Behavior Analysis and Social Learning. (3). 1R: 4L. The goals of this course are to train the student in the basic procedures of applied-social behavior analysis: designing data collection systems and applying behavior change strategies to an individual who is currently experiencing a problem in living. Training will occur in the departmental clinic or in community agencies under the supervision of faculty/agency staff. Repeatable once. This course does not carry graduate credit for clinical-experimental graduate students. Prerequisites: Psych. 446 and departmental consent. A 23 546 2 2001
556. Introduction to Clinical Psychology. (3). Application of psychological principles to the field of problem behavior. Prerequisite: Psych. 324. A 23 556 0 2003

568. Computer Applications to the Behavioral Sciences. (3). 2R; 2L. This course is an introduction to computer applications to the behavioral sciences. Included are 1) data techniques of analyzing experimental data, 2) statistical applications, 3) interactive computing directed at managing experimental data, 4) "canned" statistical programs, 5) word processing, and 6) other current computer applications. Prerequisites: 9 hours in the social sciences including Introduction to Statistics or instructor's consent. A 23 568 1 2003

56B. Computer Applications to the Behavioral Sciences. (3). 2R; 2L. This course is an introduction to computer applications to the behavioral sciences. Included are 1) data techniques of analyzing experimental data, 2) statistical applications, 3) interactive computing directed at managing experimental data, 4) "canned" statistical programs, 5) word processing, and 6) other current computer applications. Prerequisites: 9 hours in the social sciences including Introduction to Statistics or instructor's consent. A 23 568 1 2003

560. Systems and Theories in Psychology. (3). An intense review of systems and theories in psychology designed to consolidate particular areas of psychology into a more comprehensive view of the discipline. Prerequisite: 15 hours of psychology or instructor's consent. A 23 601 0 2001

604. Developmental Psychology. (3). Cross-listed as Geron. 604. Selected topics in psychological development from the perspective of issues and crises across the entire life span from birth to death. The format of the course includes individual projects. Prerequisites: Psych. 314 and 404. A 23 604 0 2009

606. History of Psychology. (3). Psychological theory and experimentation from ancient to modern times. Prerequisite: 9 hours of psychology or instructor's consent. A 23 606 0 2001

608. Special Investigation. (1-3). Cross-listed as Geron. 656. Upon consultation with the instructor, advanced students with adequate preparation may undertake original research in psychological problems. Repeatable for a maximum of 6 hours. Prerequisites: 9 hours in psychology and departmental consent. A 23 608 4 2001

616. Operant Conditioning Laboratory. (3). 6L. Experimental laboratory stressing analysis of behavior by operant techniques. Prerequisite: Psych. 302. A 23 616 1 2002

648. Advanced Behavior Therapy/Social Learning. (3). Further study of selected topics, such as problem solving, systems analysis, cognitive-behavior therapy, token economies, biofeedback and ethics of control of human behavior. With instructor's consent, advanced practicum or a research project may also be undertaken in departmental clinic or community agencies. This course does not carry graduate credit for clinical-experimental graduate students. Prerequisites: Psych. 546 and departmental consent. A 23 648 9 2001


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

Courses for Graduate Students Only


811. Seminar in Cognitive-Behavioral Assessment. (3). Rationale and methods of assessing interaction between the individual and the environment. Prerequisite: instructor's consent. A 23 811 9 2003

814. Interviewing and Assessment Practicum. (3). Development of interviewing skills, practical experience in the use of various data collection strategies, and experience in the analysis of these collected data. Prerequisite: instructor's consent. A 23 814 2 2003

815. Clinical Research and Practice. (3). Designed to give the student further experience in clinical skills and clinical research. Enrollment is required both semesters of the second year for students concentrating in the clinical area for a maximum of 6 hours. Prerequisite: instructor's consent. A 23 815 2 2003

817. Assessment of Personality and Human Interaction. (2). Rationale and methods of assessing personality as manifested in patterned regularities of interactive behavior with particular reference to behavior disorder and psychotherapeutic relationships. Prerequisites: Psych. 802 and instructor's consent. A 23 817 9 2003

818. Personality and Human Interaction Practicum. (2). 4L. Research and practicum experience in the measurement and control of human interaction patterns. Prerequisites: Psych. 817 or concurrent enrollment in 817, and instructor's consent. A 23 818 2 2003

820. Graduate Research Seminar. (3). Advanced experimental procedures. Prereq-
826. Seminar in Behavior Therapy. (4). A critical review of theory, research and practice in behavior therapy. Prerequisites: Psych. 302, or equivalent, and 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. Prerequisite: instructor’s consent. A 23 830 9 2005

831. Research in Community Psychology. (3). Special topics and group field research projects in community psychology. 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, para-professional training and preventative programs in community agencies and organizations. Repeatable for a maximum of 6 credit hours. Prerequisites: Psych. 830, 831 and instructor’s consent. A 23 832 2 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 0 2005

834. Psychological Counseling. (3). An in-depth examination and application of counseling and interviewing theories and techniques. Prerequisite: instructor’s consent. A 23 834 0 2005


844. Seminar in Personality and Psychosocial Disorders. (3). Relationship of normal behavior development and maladjustment and also a critical review of theory and research. Prerequisites: Psych. 544, or equivalent, and instructor’s consent. A 23 844 9 2005

851. Seminar in Physiological Psychology. (3). Intensive study of theory and research in physiological factors in behavior. Prerequisites: Psych. 322, or equivalent, and instructor’s consent. A 23 851 9 2001

852. Research Design in Clinical Psychology. (3). Analysis of variance for various single and multi-factor designs, analysis of covariance, multiple comparisons 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. Prerequisite: Psych. 842 or instructor’s consent. A 23 852 9 2001

853. Research Design in Community Psychology. (3). Multivariate methods, techniques, and designs in psychological research including multiple regression, discriminant analysis, profile similarity, factor analysis and other selected topics. Also included is 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


870. Seminar in Current Developments. (3). See WS 870. Intensive study of current issues, techniques, research and application. Repeatable for different topics for a maximum of 6 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 ontogenetic development of behavior. An ethological project is required. Prerequisites: Psych. 502, or equivalent, and instructor’s consent. A 23 872 9 2001

873. Seminar in Motivation and Emotion. (3). Intensive study of theory and research in motivational and emotional processes. Prerequisites: Psych. 312, or equivalent, and instructor’s consent. A 23 873 9 2001

875-876. Thesis. (2-2). Required of all graduate majors. Prerequisite: adviser’s consent. A 23 875 4 2001; A 23 876 4 2001

885. Seminar in Perception. (3). Intensive study in theory and research in perceptual processes. Prerequisites: Psych. 332, or equivalent, and instructor’s consent. A 23 885 9 2001

Fairmount College/Psychology 383
Religion

The Department of Religion offers students an opportunity to inform themselves about the major religious traditions of the world and to think critically and constructively about religion as a dimension of human experience and a mode of human expression. The curriculum includes courses on major religious traditions, significant issues in religion, and methods of studying religion.

Students contemplating a major or minor in religion should discuss their academic program with a member of the department. Each student declaring 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 6 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 6 hours may be taken at the 100 level.

Distribution. For both majors at least 9 hours must be selected from “traditions” courses; 3 from comparative or theory courses; and 3 from constructive 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 6 may be taken at the 100 level.

Lower-Division Courses


120G. 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 and analytic, not confessional. It culminates with a survey of the roles played by the Bible in contemporary American culture. A 15 120G 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 will be paid to similarities and differences between Biblical ideology and views current in neighboring religious traditions. A 15 125 0 1510

130. Introduction to Religion. (3). An introduction to the major religious traditions and problems, both Eastern and Western, with some emphasis on the methods used in the study of religion. A 15 130 0 1510

131G. Traditional Religion and the Modern World. (3). A study, both of some of the traditional religious systems (Buddhist, Hindu, Confucian, Taoist, Judaic and Christian) and of several of the important modern criticisms of religion with a view to confronting the problem of whether traditional religion can be significant in the modern world. A 15 131G 0 1510

stressing the incidents in the life of Christ. A 15 145 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 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

220. 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 15 220 0 1510

221. Hinduism and Buddhism. (3). Hinduism and Buddhism are closely related, both growing out of a unique critical period in the history of India's ancient Vedic tradition. The world view from which they arise is sharply different from that which has been characteristic in the West; one of its consequences has been the direct investigation of consciousness by sophisticated meditation techniques, a type of religiousity for which India has become famous. This course will investigate the formation of that world view and explore the diverse ways in which it has been elaborated and interpreted as a way of life and path of spiritual cultivation in the Hindu and Buddhist tradition. A 15 223 0 1510

222. Christianity. (3). An overview of Christianity from New Testament times to the present, stressing historical developments in religious life and theology. Catholic, Protestant and Orthodox Christianity are treated; contemporary trends and problems are explored. A 15 224 0 1510

223. Hinduism and Buddhism. (3). Hinduism and Buddhism are closely related, both growing out of a unique critical period in the history of India's ancient Vedic tradition. The world view from which they arise is sharply different from that which has been characteristic in the West; one of its consequences has been the direct investigation of consciousness by sophisticated meditation techniques, a type of religiousity for which India has become famous. This course will investigate the formation of that world view and explore the diverse ways in which it has been elaborated and interpreted as a way of life and path of spiritual cultivation in the Hindu and Buddhist tradition. A 15 223 0 1510

224. Hinduism and Buddhism. (3). Hinduism and Buddhism are closely related, both growing out of a unique critical period in the history of India's ancient Vedic tradition. The world view from which they arise is sharply different from that which has been characteristic in the West; one of its consequences has been the direct investigation of consciousness by sophisticated meditation techniques, a type of religiousity for which India has become famous. This course will investigate the formation of that world view and explore the diverse ways in which it has been elaborated and interpreted as a way of life and path of spiritual cultivation in the Hindu and Buddhist tradition. A 15 223 0 1510

225. Eastern Religions. (3). An introduction to the religions of India and China. Religions studied and contrasted include Hinduism, Buddhism, Jainism, Taoism and Confucianism. An attempt is made to understand the religious life and texts of these ancient and dynamic cultures from the vantage point of the believers themselves. A 15 225 0 1510

226. Psychic Phenomena. (3). Spiritual traditions have everywhere and at most times appeared in a triple world: natural, divine, and intermediate. The intermediate world of the psychic, the occult, the astral, will be the subject of philosophical/psychological investigation. Topics include psychic out-of-body states, ESP, clairvoyance, telepathy, ethereal bodies in Hinduism, and the Tibetan Bardos. Lecture, discussion, and student reports. Visits by persons with expertise in psychic reading, out-of-body states, Kirlian photography, ESP. A 15 226 0 1510

230. Jewish/Christian Relations. (3). An exploration of the significant historical and ideological aspects of Jewish/Christian religions through the writings of major religious thinkers such as St. Augustine, Martin Luther, and Martin Buber. Themes include Law and Gospel, the concept of the Messiah, the True Israel, 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 religious 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

250. Eastern Religions. (3). An introduction to the religions of India and China. Religions studied and contrasted include Hinduism, Buddhism, Jainism, Taoism and Confucianism. An attempt is made to understand the religious life and texts of these ancient and dynamic cultures from the vantage point of the believers themselves. A 15 250 0 1510

255. Zen and Taoism. (3). Zen is a form of Buddhism that emphasizes spontaneity and the ultimacy of the here and now, employing startling nonintellectualist methods to free minds of the routine world of distinctions, plurality, and linear time. It represents a vision that is at once Buddhist and deeply Chinese; its most distinctive features may in fact be best understood as a Buddhist development of ideas, values, and orientations found in China's ancient Taoist tradition. The Taoist view of the universe as a harmonious organic unity in which man fittingly participates by selfless spontaneity rather than calculated intervention is radicalized in Zen; at the same time, it is the Taoist sensibility that leads to the Zen departure from more traditional Buddhist approaches to enlightenment. This course will trace these developments, beginning with a consideration of Taoism and then tracing the transformation of Buddhism in China to its culmination in the unique methods and teachings of Zen. A 15 255 0 1510

260. Special Studies. (3). A concentrated
examination of a significant figure, event
or issue in religion or the study thereof.
Repeatable for credit. Prerequisite: de-
partmental option. A 15 280 0 1510

281. Cooperative Education. (1-4). Of-
ffered on a Cr/NCr basis. A 15 281 2 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, historio-
sophy, and wisdom. A 15 311 0 1510

321. New Testament Topics. (3). An in-
depth study of a major facet of the religion
of the New Testament, such as the synop-
tic traditions, Johannine theology, Pau-
line theology, apocalyptic, and canoniza-
tion. A 15 321 0 1510

323. Protestantism. (3). This course will
trace the development of the Protestant
Christian tradition and analyze its dis-
tinctive themes. After a historical survey
of this family of Christianity, we shall take
up distinctly Protestant themes, such as jus-
tification by faith, the primacy of in-
dividual conscience, and the primacy of
scripture, integrating them with current
phenomena. A 15 323 0 1510

324. Catholicism. (3). This course will
trace the development of the Catholic
Christian tradition and analyze its dis-
tinctive themes. After a historical survey,
the course will stress such distinctively
Catholic theological emphases as the no-
tion that grace perfects nature, that a sac-
ramental life is essential for faith, and that
reason and faith should interlock harmon-
iously, integrating them with current
phenomena. A 15 324 0 1510

327. Primitive Religion. (3). Cross-listed
as Anthro. 327. A 15 327 0 1510

331. Modern Protestant Theologians. (3).
Critical study of how Protestant theolo-
gians in the 19th and 20th centuries
responded to modern thought. Includes
selections from such theologians as Schleiermacher, Troeltsch, Kierkegaard,
Barth, Bultmann, H. R. Niebuhr, Reinh-
hold Niebuhr, and Tillich. A 15 331 0
1510

333. Women and Religion. (3). Cross-
listed as WS 333. An examination of past
and present images and roles of women in
religious traditions. The course looks at
women in the Bible and religious history,
as well as contemporary criticisms of
patriarchal religion and resources for
change. A 15 333 0 1510

346. Philosophy of Religion. (3). Cross-
listed as Phil. 346. A 15 346 0 1510

362. Modern Judaism. (3). A survey of the
varieties of Judaism that have arisen since
the Enlightenment. The course examines
the origins, beliefs and practices of mod-
ern Orthodox, Conservative, Reconstruc-
tionist and Reform Judaism. In what ways
are these different forms of Judaism par-
ticularly "modern"? In what ways are they
continuations of an older tradition? A
15 362 0 1510

364. Zionism and Israel. (3). An examina-
tion of the national element in Judaism
and the movement that has arisen in rela-
tionship to this nationalism in the 19th
and 20th centuries. The course will con-
clude with an investigation into the rela-
tionship between Zionist ideals and the
modern state of Israel. A 15 364 0 1510

410. Comparative Religion. (3). An ob-
servation and analysis of the patterns
found in the characteristic religious phen-
ona (e.g., myths, symbols, rites, institu-
tions), with a view to a systematic un-
derstanding of man's religious life as it
has expressed itself throughout history. A
15 410 0 1510

419. Modern Atheists. (3). An examinCltion
and critical evaluation of some of the sem-
nal 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. 521. A 15 421 0 1510

442. Greek and Roman Religion. (3). The
transformations in the religious of the Mediterraenian world and the Near East
between the conquests of Alexander the
Great and the triumph of Christianity
under Constantine. The course covers the
traditional forms of Greek and Roman re-
ligion, 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 Chris-
tianity within the Roman Empire. At its
most inclusive level, the course deals
with the particular religious synthesis
lying at the basis of Western civilization:
the fusion of Jewish, Greek and Roman
patterns of thought in the Christian world
of late antiquity. A 15 442 0 1510

446. Violence. (3). A critical examination of
the relationship between religion and
violence as expressed in war, revolution,
criminality, and interpersonal relation-
ships. Special attention is given to the ways religions have justified, tried to limit, or ameliorate violence. A 1 4 4 6 0 1 5 1 0

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 1 4 6 1 0 1 5 1 0

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 1 4 6 6 0 1 5 1 0

476. The Reformation. (3). Cross-listed as Hist. 576. A 1 4 7 6 0 1 5 1 0

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 1 4 8 0 0 1 5 1 0

481. Cooperative Education. (1-4). Offered on a Cr/NCr basis. A 1 4 8 1 2 1 5 1 0

490. Independent Work. (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 1 4 9 0 3 1 5 1 0

**Courses for Graduate/Undergraduate Credit**

750. Workshop in Religion. (2-4). A 1 7 5 0 0 1 5 1 0

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 1 7 9 0 0 1 5 1 0

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**Romance Languages**

**FRENCH**

**Major.** A major in French consists of a minimum of 30 semester hours beyond Fr. 112, or its equivalent, and must include the following courses: Fr. 220, 223, 227, 300, 526, and 530, or equivalents. In addition to the above courses 12 hours must be selected from the following courses: Fr. 515, 541, 623, 630, 631, 632, 633, 634, 635. No fewer than 9 hours must be in literature.

**Related Fields.** In addition to the above courses, it is strongly recommended that French majors take courses in related fields such as other foreign languages, art history, English, history, and philosophy.

**Student Teachers.** Students who plan to teach French should consult with the department's professor in charge of teacher education early in their college careers. In addition to the courses listed under Major students must take:

1. At least 21 hours in a second language or
2. At least 15 hours from one or more of the following related fields: other foreign languages, art history, English, history, or philosophy (these courses must be chosen in consultation with the teacher education adviser) or
3. A totally separate second major as prescribed by the Catalog.

Strongly recommended are Fr. 525 and 623.

Requirements for entering this program are:

1. Grade point average of 2.75 or higher in French
2. Special departmental approval based on demonstrated competencies 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 442F.

**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 2 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 knowledge of French for the Master of Arts or Master of Science. No previous knowledge of French is required. The course will not count toward a degree. A 26 060 0 1102

Lower-Division Courses

111-112. Elementary French. (5-5). Lab fee. Covers speaking, reading and writing, including grammar essentials. Daily classroom and laboratory work is required. A 26 111 0 1102; A 26 112 0 1102

150. Workshop in French. (2-4). Repeatable for credit. A 26 150 2 1102

210. Intermediate French. (5). French review, with emphasis on conversation, folklore, and modern culture. Prerequisite: 2 units of high school French, or Fr. 112, or departmental consent. A 26 210 0 1102

215. Study Abroad. (3-6). Transfer of credit from a French-speaking university in (a) grammar, (b) conversation, (c) reading. A 26 215 0 1102

220. Intermediate French Grammar and Composition. (3). Prerequisite: Fr. 112 or departmental consent. A 26 220 0 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 general education literature requirement. Prerequisite: Fr. 112 or equivalent. A 26 223 0 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 0 1102

Upper-Division Course

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 general education literature requirement. Prerequisite: Fr. 223 or equivalent. A 26 300 0 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 215b or equivalent. A 26 325 0 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.

515. Major Topics. (1-4). Special studies in (a) language, (b) literary reports, (c) commercial French, (d) the 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, dialogs and work in the language laboratory. Prerequisite: Fr. 325 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

530. Introduction to French Literature.
(3). Survey of French literary history from the Middle Ages to the present. Prerequisite: Fr. 300. A 26 530 0 1102

540. Special Studies in French Literature in English Translation. (3). May be used to satisfy the general education literature requirement but does not count toward a French major or minor. A 26 540 0 0312

541. Black French Literature 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 26 541 0 0312

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 9 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

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

350. Classical Culture. (3). Study of representative masterpieces of Greek and Latin literary, historical and philosophic literature in the wider context of classical culture including art, mythology, religion, and political and private life. All works will be 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 26 350 0 1110

Courses for Graduate/Undergraduate Credit

515. Special Studies. (1-4). Topic announced by instructor. Repeatable for credit. Prerequisite: instructor's consent. A 26 515 0 1110

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). Lab fee. 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: Ital. 112 or equivalent. A 26 220 0 1104

223-224. Selected Italian Readings. (3-3). Intensive reading of Italian literary works. Discussions in Italian, as well as oral and written summaries, are featured. Prerequisite: Ital. 112 or 2 units of high school Italian for Ital. 223, Ital. 223 or 3 high school units for Ital. 224. A 26 223 0 1104; A 26 224 0 1104.

225. Intermediate Conversation. (2). Prerequisite: Ital. 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, humanistic civilization—reflections and divergences in the 14th, 15th and 16th centuries are all included. A knowledge of Italian is not a prerequisite, and the course does not count toward an Italian minor. A 26 540 0 0312

Major A. A major in Latin consists of a minimum of 24 hours beyond Latin 112, or its equivalent, and must include at least 9 hours of upper-division courses. Courses in Greek, 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, and:
1. At least 21 hours in a second language or
2. At least 15 hours from one or more of the following related fields: English, history, linguistics, philosophy, or political science (these must be chosen in consultation with the teacher education adviser) or
3. A totally separate second major as prescribed by the Catalog. 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 2.75 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 1109; A 26 112 0 1109

150. Workshop in Latin. (2-4). Repeatable for credit. A 26 150 2 1109

210. Intermediate Latin Reading and Review. (5). Latin review and readings of prose and poetry illustrative of Roman life and culture. Prerequisites: Latin 112, 2 units of high school Latin or departmental consent. A 26 210 0 1109

223. Intermediate Latin. (3). General review of grammar 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 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

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. No previous knowledge of Portuguese required. Will not count toward a degree. A 26 060 0 1120

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, 224, 225, 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: 505, 515 or 622 (1 hour minimum), 550, 555, 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, 6 of these chosen from the language major and 6 from the literature major. Span. 623a may substitute for 526.

To complete the teaching major, the student must add one of the following options:
1. At least 21 hours in a second language or
2. At least 15 hours in any acceptable teaching field (see the teacher education adviser for acceptable fields) or
3. A totally separate second major as prescribed by the Catalog.

Students who wish to enter the student teaching program must have a 2.75 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 623a. 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 2 units of high school Spanish should consult with an adviser 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

210. Intermediate Spanish. (5). Spanish review, with emphasis on conversation and cultural readings. Not open to students with previous credit in Span. 221 (dropped). Designed primarily for students wishing to fulfill the liberal arts language requirement. It is recommended that prospective majors and minors go directly into Span. 223, 225 or 220. Prerequisite: Span. 112, or 2 units of high school Spanish, or departmental consent. A 26 210 0 1105

215. Intermediate Spanish II. (5) Intensive review of Spanish with special emphasis on conversation. Course offered only in Puebla, Mexico. Prerequisite: Span. 112 or 2 units of high school Spanish or departmental consent. A 26 215 0 1105

220. Intermediate Spanish Grammar and Composition. (3). Prerequisite: Span. 112 or 2 units of high school Spanish. A 26 220 0 1105

223-224. Selected Spanish Readings I-II.
(3-3). Intensive reading of Latin American and Spanish literary works. Also includes outside readings and reports. This course may be used to meet the General Education literature requirement. Prerequisite: Span. 112 or 2 high school units of Spanish for 223; Span. 223 or 3 high school units of Spanish for 224. A 26 223 0 1105; A 26 224 0 1105

225. Spanish Conversation I. (2). Prerequisite: Span. 112 or 2 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. 224. A 26 281 2 1105

Upper-Division Courses

324. Introduction to Literary Criticism. (3). An introduction to the basic elements of literary criticism: form, theme, point of view, characters, plot, language, etc. Prerequisite: Span. 224 or departmental consent. A 26 324 0 1105

325. Spanish Conversation II. (2). Continuation of Spanish Conversation I with continued emphasis on fluency 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) commercial Spanish, (d) the language laboratory, (e) music, (f) composition, (g) problems in teaching Spanish, (h) 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. 224 or departmental consent. A 26 531 0 1105

532. Survey of Spanish Literature. (3). Spanish literature from the beginning to 1700. Prerequisite: Span. 224 or departmental consent. A 26 532 0 1105

534. Contemporary Spanish Theater. (3). Prerequisite: Span. 224 or departmental consent. A 26 534 0 1105

536. Contemporary Spanish Novel. (3). Prerequisite: Span. 224 or departmental consent. A 26 536 0 1105

543. Contemporary Chicano Literature. (3). A study of modern and contemporary Chicano writers in the United States, including such writers as Alurista, Ernesto Galbarza, Rudolfo Anaya, José Villarreal and Corky Gonzalez. Knowledge of Spanish is helpful but not necessary. This course does not count toward a Spanish major or minor. A 26 543 0 1105

550. Career Communications in Spanish. (3). A continuation of Span. 325 and 525 with emphasis upon technical vocabulary needed in selected professional fields. Prerequisites: Span. 325 and 525 or departmental consent. A 26 550 0 1105

555. Readings in Hispanic Periodicals. (3). A continuation of Span. 224 with continued emphasis upon the other three skills: writing, speaking and listening comprehension. Prerequisites: Span. 224 or departmental consent. A 26 555 0 1105

560. Spanish Play Production. (1-3). In-depth study of a play as a work of literature, to be followed by the actual production of the work for the general public. Repeatable for credit. Prerequisite: Span. 224 or departmental consent. A 26 560 0 1105

620. Survey of Latin American Literature. (3). Main currents of Latin American literature from 1500 to 1800. Prerequisite: Span. 224 or departmental consent. A 26 620 0 1105

621. Survey of Latin American Literature. (3). Main currents of Latin American literature from 1800 to present. Prerequisite: Span. 224 or departmental consent. A 26 621 0 1105

622. Special Studies. (1-4). Topic for study chosen with aid of instructor.
peat a ble for c redi t. Prerequisit e: imtruc­ Span . 224 or departm e ntal co ns e nt. A 26 623 9 1105

623. Seminar in Spanish. (1-5). Special studies in (a) language, (b) Spanish and Spanish-American literature, (c) Spanish and Spanish-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 9 1105

625. Contemporary Spanish-American Novel. (3). Prerequisite: Span. 224 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 also is considered. A 26 626 0 1105

627. Ibero-American Civilization. (3). Intensive study of Ibero-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 from 1940 to present. Prerequisite: Span. 224 or departmental consent. A 26 628 0 1105

629. Latin American Essay. (3). Study of nineteenth and twentieth century Latin American writers dealing with the Latin American essay. Prerequisite: Span. 224 or departmental consent. A 26 629 0 1105

630. Society and the Artist in Latin America. (3). Latin American culture, social structure, and the role of the artist in modern Latin America. Prerequisite: Span. 224 or departmental consent. A 26 630 0 1105

631. Latin American Short Story. (3). Study of the main writers in contemporary Latin American literature. Prerequisite: Span. 224 or departmental consent. A 26 631 0 1105

632. Latin American Poetry. (3). Study of contemporary poets: Neruda, Guillén, Parra, Mistral, Paz, Vallejo, Cardenal. Prerequisite: Span. 224 or departmental consent. A 26 632 0 1105

635. Introduction to Romance Linguistics. (3). Cross-listed as Fr. 635 and Ling. 635. An introduction primarily to the historical phonology and morphology of the romance languages, with particular emphasis on French and Spanish. Prerequisite: departmental consent. A 26 653 0 1105

750. Workshop in Spanish. (2-4). Repeatable for credit. A 26 750 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, literary critiques and special projects in linguistics are included. A 26 805 3 1105

826. Grammar and Stylistics. (3). Intensive study of advanced grammar and stylistic usage. A 26 826 0 1105

831. Seminar in Spanish Literature. (3). (a) Middle Ages, (b) Renaissance, (c) Golden Age theater, (d) Cervantes, (e) modern novel, (f) Generation of '98, (g) contemporary novel, (j) 20th century theater, (k) Spanish romanticism, (l) 20th century poetry and (m) literary criticism. A 26 831 9 1105

832. Seminar in Spanish-American Literature. (3). (a) colonial period, (b) contemporary novel, (c) short story, (d) poetry, (e) modernism, (f) essay and (i) theater. A 26 832 9 1105

Sociology/Social Work

Major. A major consists of at least 30 hours, including Soc. 211, 212, 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 6 hours of such courses may be included. With the exception of SW 200 and 500, social work courses do not count toward the major.

Minor. At least 15 hours of sociology, including Soc. 211, and a minimum of 6 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 (12 hours)
Soc. 211, Introduction to Sociology (3 hours)
Soc. 212, Introduction to Social Research (3 hours)
Soc. 510, Field Research Methods or Soc. 511, Applied Quantitative Research (3 hours)
Soc. 645, History of Sociological Thought or Soc. 646, Principles and Concepts of Sociology (3 hours)

Option Courses (12 hours)
Soc. 500, Socialization and the Life Cycle (3 hours)
Soc. 316, The American Male or Soc. 516, Sociology of Sex Roles (3 hours)
Soc. 315, Courtship and Marriage or Soc. 515, Sociology of the Family (3 hours)
Soc. 513, Sociology of Aging (3 hours)

Sociology Electives (6 hours)
Soc. 315, 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 340, Rel. 215, Psych. 361, 365, 371, or 661 as well as courses in related fields such as instructional services, women’s studies, and anthropology.

SOCILOGY

Lower-Division Courses

200G. Sociology and Everyday Life. (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. 211. A 25 212 0 2208

211. 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 25 211 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. 211. A 25 212 0 2208

220. Contemporary Social Problems. (3). An analysis of contemporary American social problems, with an emphasis on urban social problems. A 25 220 0 2208

226. Race Relations. (3). The nature of race, ethnic groups confused with races, interrelations of ethnic groups in the United States and other countries, processes of change and action programs. Prerequisite: Soc. 211. A 25 226 0 2208

Upper-Division Courses

315. 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 courtship process through an examination of social class, sex roles, dating and human sexuality. Marital
interaction, parenthood, marital dissolution and the future of marriage constitute the emphasis for the latter half of the course. Prerequisite: Soc. 211. A 25 315 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. Particularly emphasized are social variations in environment usage, effects of overpopulation, resource utilization, pollution and possible solutions to environmental problems. Prerequisite: Soc. 211. A 25 318 0 2208

322. Deviant Behavior. (3). The structure, dynamics and etiology of those behavior systems 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. 211. A 25 322 0 2208

330. 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. 211. A 25 330 0 2208

333. Sociology of the Future. (3). The future is viewed within the sociological perspective of planned and possible alternatives. A body of literature is presented including theory and field studies of alternative social outcomes, and what indicators are presently available as options for social planners, social critics, as well as the general citizenry. Prerequisite: Sociology 211 or 220. A 25 333 0 2208

338. 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 marital status. Considers changing social standards for health and the stigma given to poor health. Socially created risks to health and organized efforts to change unhealthy environments are examined. The demedicalization of society is investigated. Prerequisite: Soc. 211 or departmental consent. A 25 338 0 2208

350. Social Interaction. (3). Group effects on the individual. Symbolic interaction theory in sociology with special emphasis on research and findings will be studied. Prerequisite: Soc. 211. A 25 350 0 2208

Courses for Graduate/Undergraduate Credit

500. Socialization and the Life Cycle. (3). This course examines the development of social self in the child, and the establishing, sustaining, altering and destroying of various social selves during life. Topics range from mating and dating to becoming parents, entering the world of work and dying. Attention is devoted to stages of an adult's life and how various crises affect self and relations with others. Prerequisite: Soc. 211. A 25 500 0 2208

501. Sociological Statistics. (3). Generally offered only in the fall semester. Statistical application to sociological problems including parametric measures and non-parametric measures (such as binomial expansion and chi-square). Prerequisites: Soc. 211 and Math. 331, 111 or equivalent. A 25 501 0 2208

502. Older People and Organizations. (3). Cross-listed as Geron. 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 is examined. Prerequisite: Soc. 211 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 will be involved in direct field observation in natural social environments. Prerequisite: Soc. 211. A 25 510 0 2208

511. Applied Quantitative Research. (3). Emphasis is placed on applying quantitative designs to sociological problems including survey design, sampling, collection of data and interpretation of results. Prerequisite: Soc. 212 or a course in statistics. A 25 511 0 2208

513. Sociology of Aging. (3). Cross-listed as Geron. 513. Analysis of the social dimensions of old age, including changing demographic structure and role changes and their impact on society. Prerequisite: Soc. 211. 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. 211. A 25 533 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 consequent ambiguities and conflicts. Prerequisite: Soc. 211. A 25 516 0 2208

521. Sociology of Religion. (3). Cross-listed as Rel. 421. The function and role of religious belief and religious organization in human societies, with special reference to American society. The relation of religious belief and organization to other aspects of the social structure and to social change is discussed. Prerequisite: Soc. 211. A 25 521 0 2208

523. Sociology of Law. (3). The study of law and legal institutions within their social context. Prerequisite: Soc. 211. A 25 523 0 2208

525. Formal Organizations. (3). Characteristics of complex organizations and factors relating to their effectiveness with emphasis on research methods and findings. Prerequisite: Soc. 211. A 25 525 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 development and maintenance of viable democratic political structures, and bureaucratic organization and power. Prerequisite: Soc. 211. 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: Soc. 211. A 25 527 0 2208

531. Population. (3). The size, composition, distribution and recent trends in the population of the world and the United States and the relation of population to world problems. Prerequisite: Soc. 211. A 25 531 0 2208

533. 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 those relationships, as well as the community's place within society. Prerequisite: Soc. 211. A 25 533 0 2208

534. Urban Sociology. (3). Urban population, urban organization, urban institutions and programs of city planning. Prerequisite: Soc. 211. A 25 534 0 2208

535. Sociology of Work and Occupations. (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 and tensions are highlighted. Prerequisite: Soc. 211. A 25 535 0 2208

537. The Social Consequences of Disability. (3). Cross-listed as Geron. 537. An eclectic survey of the social aspects of disability, showing the impact of social values, institutions and policies upon adults with disabilities. Appropriate for both students of sociology and the service professions. 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 and medical personnel and social research and theory relevant to the health professions. Prerequisite: Soc. 211. A 25 538 0 2208

539. Juvenile Delinquency. (3). The factors related to juvenile delinquency and the measures of treatment and prevention. Prerequisite: Soc. 211.* A 25 539 0 2208

540. Criminology. (3). The extent and nature of criminal behavior and societal reactions to it. Prerequisite: Soc. 211.* 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: Soc. 539 or 540.* 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 2 2208

600. Selected Topics in Sociology. (3). Study in a specialized area of sociology, with emphasis on student research projects. Areas covered include deviant behavior, political sociology, the family and others. Repeatable for a maximum of 6 hours credit. Prerequisites: Soc. 211, 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: 8 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 relationship to systematic theory. Prerequisite: 8 hours of sociology. A 25 646 0 2208

651. Directed Research. (3). Designed to give the student further research skills in an area of special interest. All students are under the direction of a member of the graduate faculty who will guide them in developing research skills. Prerequisites: Soc. 510 or 511 and instructor's consent. A 25 651 9 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 3 2208

687. Introduction to Urban Affairs. (3). Cross-listed as Pol. Sci. 687 and Econ. 687. An introduction to the study of the metropolis as a social, political and economic system. Prerequisites: Econ. 201 and Soc. 211 or a course in political science. A 25 687 0 2208

750. Sociology Workshop. (1-3). A course designed to provide specialized instruction, using a variable format, in a sociologically relevant subject. A 25 750 2 2208

Courses for Graduate Students Only

800. Research Methods in Sociology. (3). The application of research methods to sociology data. Included are research design, collection of data, development of questionnaires, schedules and scales, interviewing methods, analysis of data and summary. 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 various field research methods in sociology. Included are participant observation, in-depth interviewing, disguised observation and unobtrusive measures. Prerequisites: Soc. 800 and 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. Prerequisites: Soc. 515 and 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: Soc. 525 or 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 sociopolitical 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. Prerequisites: Soc. 530 and 526. 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, recent research, delinquency vis-à-vis this justice system, juvenile law and juvenile corrections. Special interest is given to the changing face of delinquency in America today. Student research, through utilization of community resources, is encouraged. Prerequisite: Soc. 539. 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 process research and outcome research. Prerequisite: Soc. 541. A 25 841 9 2208

* Prerequisite may be waived with departmental consent.

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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 18th, 19th and 20th centuries, and concluding with the works of representative contemporary theorists. Prerequisite: Soc. 645 or 646. A 25 845 9 2208

847. Seminar in Recent Developments in Sociology. (3). Major issues, new theories, new techniques of research, new areas of research and new applications. Repeatable for credit but not to exceed 6 hours. Prerequisites: 15 hours of sociology and departmental consent. 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. Prerequisites: Soc. 800 and instructor's consent. A 25 851 4 2208

860. Proseminar—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). Advanced systematic reading in a topical area under the tutelage of a member of the graduate faculty. Repeatable for credit not to exceed 6 hours. Prerequisite: departmental consent. A 25 870 3 2208

875-876. Thesis. (3-3). 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.

Major. A major in social work requires at least 42 hours (33 hours in social work courses and 9 hours in related departments) as follows: SW 200, 500, 501, 550, 560, 601, 602, 603, 604, and 605. This required curriculum includes 9 hours in field instruction (practicum) courses: SW 602 and 605. Requirements in related departments include Soc. 212 and 6 hours from a list of social and behavioral science courses approved by the social work faculty and selected in consultation with a social work adviser.

Minor. A minor in social work requires at least 19 hours in social work courses as follows: SW 200, 500, 501, 550, 601, and 602. This required curriculum includes 4 hours in the field instruction (practicum) course SW 602.

Lower-Division Courses

100. Explorations in the Helping Professions. (3). An introduction to the helping professions as they relate to the whole person. This multidisciplinary course emphasizes the common helping processes of each profession, how they developed and how they differentially relate to human problems. A 25 100 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 together with SW 750. A 25 150 2 2104

200. Explorations in Social Welfare. (3). Introduction to the social welfare system and to the social work profession with special emphasis on the helping process and selected social problem areas. Fifty
hours of community service in selected social welfare agencies is required. Prerequisites: Soc. 211 and Psych. 111. A 25 200 0 2208

340. 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, alternate life styles, birth control, values and sexuality, and cultural components of sexuality. A 24 340 0 0506

Courses for Graduate/Undergraduate Credit

500. Social Welfare Policy and Services I. (3). Descriptive approach to the social welfare system, emphasizing its structural and value base. The course focuses on the service component with special attention to the local community service-delivery system. Prerequisites: SW 200 and Soc. 212. A 25 500 0 2104

501. Social Work Practice I. (3). Focus on social work helping methods including: historical development of the social work profession, identification of basic social work theory and introduction to social work practice methodology. In addition to the didactic component, a 4-hour practicum is required in which practice skills are emphasized. Prerequisites: SW 200 and Soc. 212. A 25 501 0 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 alternative methods 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 6 hours. Prerequisite: 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 in the social environment, and the relationship of those entities to beginning professional social work practice. Prerequisites: SW 200 and 6 hours from a list of social and behavioral science courses approved by the social work faculty and selected in consultation with a social work 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 enhance 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 6 hours. Prerequisite: instructor's consent. A 25 570 2 2104

601. Social Work Practice II. (3). Advanced practice theory, with special emphasis on becoming both knowledgeable and skillful in applying theory to practice. The focus of this class will be 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. Prerequisites: SW 501 and departmental consent. A 25 601 0 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 skills 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. Prerequisites: SW 501 and departmental consent. A 25 602 2 2104

603. Topics in Social Work. (2-3). Selected topics in practice, research, administration, social policy and human behavior in the social environment. Prerequisites: SW 200 and instructor's consent. A 25 603 0 2104

604. Seminar on Practice Issues. (3). A critical look at practice and professional issues, including 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 0 2104

605. Practicum II. (5). Placement in community social welfare agencies for super-
vised 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 Geron. 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, human service practice, and demography as the total life cycle is conceptualized. Prerequisite: Geron. 100, SW 200, Soc. 212, or departmental consent. A 26 610 0 2104

750. Social Work Workshops. (1-5). Specialized instruction using a variable format in a social welfare relevant subject. This course may be offered together with SW 150. Prerequisite: instructor’s consent. A 25 750 2 2104

Spanish (See Romance Languages)

Speech Communication

A major in the Department of Speech Communication requires a minimum of 30-39 hours with a specialization in one of the following areas:

1. Rhetoric and Communication (36 hours)—Speech 111, 112, 211, 213, 221 or 222, 228, 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 forensic activities.

2. Theater (39 hours)—Speech 180, 221, 243, 244, 253, 254, 259, 380, 623, 624, 628, plus at least 12 hours of electives chosen with the area adviser’s consent from other theater courses. All theater majors are expected to participate in some area in the production of the University Theatre plays after consulting with the staff.

3. Radio-Television-Film (30 hours)—Speech 114, 214, 215, 221 or 222, 332, 504, 607, and at least 10 hours of electives chosen with the area adviser’s consent from radio-television-film courses or related fields.

Students specializing in speech and/or theater who intend to teach at the secondary level must meet the following requirements for their area of specialization:

1. Rhetoric and Communication (36 hours)—Speech 111, 112, 211, 213, 221, 222, 228, 650, 661, plus 9 hours elected with the area adviser’s consent from rhetoric and communication courses.

2. Theater (39 hours)—Speech 180, 221, 243, 244, 253, 254, 259, 380, 623, 624, 628, 650, 661, plus 6 hours elected with the area adviser’s consent from theater courses.

3. Combined Theater and Rhetoric and Communication (39 hours)—Speech 111, 112, 211, 213, 221, 228, 243, 244, 259, 650, 661, plus 6 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 Fairmount College of Liberal Arts and Sciences must meet the graduation requirements for both Fairmount College and the College of Education.

Fairmount College/Speech Communication 401
Broadcast-Journalism Combined Major. Students planning to major in the combined broadcast-journalism program must meet the following requirements: Speech 114, 214, 221 or 222, 322, 522, 606, and Journ. 200, 500, plus 6 hours of upper-division speech or journalism electives. Students must have a concentration (or minor) of not fewer 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 6 of the 15 hours must be upper-division courses. Students interested in a radio-television-film minor must take Speech 114, 214, and 332, plus at least 6 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 listening as applied to public speaking. The course is designed for students wishing to enhance leadership potential by improvement in traditional public speaking situations. Course is not counted toward a speech communication major. (The University’s requirement in oral communication may be fulfilled by completion of either Speech 111 or 112. For especially qualified students, an exemption 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 especially qualified students, an exemption 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 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 once for credit. Prerequisite: departmental consent. Credit/No Credit. 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 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 once for credit. Prerequisite: departmental consent. Credit/No Credit. A 27 481 2 1506

Courses for Graduate/Undergraduate Credit

650. Instructional Communication. (3). The study and practice of communication concepts, processes, technologies, and strategies related to formal instruction and learning outcomes. By means of structured experiences, students develop competencies in (1) determining appropriate instructional goals, (2) designing instructional strategies to achieve learning outcomes, (3) utilizing visual, vocal, and verbal communication skills to implement instructional strategies, and (4) assessing the proficiency 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

660. 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 forensic programs (debate and individual events). The future teacher is made aware of the literature and 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 health and educational 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, 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

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

504. Television Production and Direction. (3). Basic principles, procedures and techniques of TV production including operation of studio equipment and direction of TV programs. Prerequisite: instructor’s consent or Speech 214. A 27 504 2 0603

509. Directed Projects in Instructional Television. (2). Practical assignments in instructional television and cablecasting. Activities include 6 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

Fairmount College/Speech Communication  403
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 504 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 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 "stagefright" 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 will have both observational and experiential opportunities to discover the variety of patterns used by humans to symbolically interact with themselves, each other and entire cultures. 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 4 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

213. Argumentation and Advocacy. (3). A study of the principles of effective rational discourse, oral and written, dealing with controversial issues in public deliberative, forensic and educational areas. Includes valid and fallacious reasoning as well as tests of evidence. A 27 213 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 anatomy 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

226. 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 27 226 0 1506

228. 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 27 228 0 1506

Upper-Division Courses

312. Nonverbal Communication. (3). A study of theory and research in nonverbal communication. Students explore dif-
ferent aspects of nonverbal communication and engage in original research and study in the field of nonverbal communication. Emphasis is given to the application of nonverbal communication to the total human communication process. Prerequisite: Speech 111 or 112. A 27 312 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 oral communications. A 27 325 0 1506

335. Development of Rhetorical Theory. (3). Review of the rhetorical foundations of contemporary communication theory from the perspective of selected individuals and works encompassing Graeco-Roman, Medieval English and American rhetorical thought. A 27 335 0 1506

402. 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 4 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 other 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 verbal language behavior. Analysis of language usage that leads to conflict, confusion, and misdirection and development of methods of accuracy and precision in language usage. 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, speeches of goodwill, tribute, keynote and courtesy. A 27 636 0 1506

637. Theories and Effects of Mass Persuasion. (3). An analysis of the classical, contemporary and homeostatic theories of mass persuasion. Mass-communicated persuasion compared to persuasion in other audience settings. Conceptual models, typological effects and contributory agents of mass persuasion. Differential persuasive powers and advantages attributed to the several media. Effects of message content on mass audiences are explored. A 27 637 0 1506

672. Practicum in Audience Measurement. (3). Application of research techniques to practical problems in audience measurement. Also included are the identification of specific problems, the construction of measuring instruments (e.g., questionnaires), sampling techniques, collection of data, tabulation, analysis and reports of findings. Prerequisite: Speech 770 or departmental consent. A 27 672 2 1506

712. Advanced Interpersonal Communication. (3). Advanced exploration of concepts and variables in interpersonal communication through the study of different theories as well as practical experiences in dyadic and small-group communication. Prerequisite: Speech 112 or instructor’s consent. A 27 712 0 1506

770. The Audience. (3). Analysis of speech audiences, including those of radio, television, public address and theater. Demographic and psychosociological dimensions and characteristics, quantitative and qualitative techniques of audience measurement, and evaluations thereof are included. A 27 770 0 1506

THEATER

Lower-Division Courses

143G. The Art of the Theater. (3). An in-
roduction to the theater as an art form, with emphasis on critical appreciation from the viewpoint of the audience. The course is not counted toward a theater major. A 27 143G 0 1007

180. Theater Practicum. (1). Practical training in the organization and presentation of plays in the University Theatre program. The practicum may be organized in the following areas: design and construction of scenery, costumes, or properties; the design and execution of stage lighting or makeup; and the organization and practice of theater management. May be repeated once for credit. A 27 180 2 1007

221. Oral Interpretation. (3). The development of the mental, vocal and analytical techniques essential to the oral interpretation of literature. A 27 221 0 1007

243. Acting I. (3). Emphasis on the internal techniques of acting, on characterization and on the actor's analysis of the play and the role. A 27 243 0 1007

244. Stagecraft. (3). R; L arr. Theory and practice of making, painting and using scenery for the stage. Practical work on University Theatre and Experimental Theatre productions. A 27 244 1 1007

253. Costuming for the Stage. (3). R; L arr. Basic principles of costume design and construction; pattern making, material selection, wardrobe management and organization; and practical experience with University Theatre and Experimental Theatre productions. A 27 253 1 1007

254. Stage Makeup. (1). Study and practice of the basic application of stage makeup. Also includes character analysis, anatomy, materials and special makeup techniques and problems. A 27 254 1 1007

259. Directing I. (3). R; L arr. Basic theories and principles of stage directing and problems of producing the play, with practical experience gained by use of the project methods. Prerequisite: Speech 243 or departmental consent. A 27 259 1 1007

Upper-Division Courses

375. Directed Projects in Theater. (2-4). Independent research or practical and creative projects in the various areas of theater, including performance, design, technical theater, management and dramatic literature. Repeatable for credit to a maximum of 4 hours. Prerequisite: departmental consent. A 27 375 2 1007

380. Theater Practicum. (1). Practical training in the organization and presentation of plays in the University Theatre program. The practicum may be organized in the following areas: design and construction of scenery, costumes, or properties; the design and execution of stage lighting or makeup; and the organization and practice of theater management. May be repeated once for credit. A 27 380 2 1007

Courses for Graduate/Undergraduate Credit

516 & 517. Playwriting I and II. (3 & 3). Cross-listed as Eng. 517 and 518. The writing of scripts for performance. Emphasis is on both verbal and visual aspects of playwriting. If possible, the scripts will be 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 243, with additional emphasis on contemporary vocal and movement techniques. Prerequisites: Speech 243 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: 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, water-color perspective, scaled model and a complete set of work drawings. Prerequisite: Speech 244. A 27 544 0 1007

559. Directing II. (3). R; L arr. Staging and rehearsal techniques, 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, the techniques of ef-
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 performing skills. Enrolled students, functioning as a company, produce and perform for various disciplines on campus. Repeatable once for credit. A 27 662 2 1007

623. 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 27 623 0 1007

624. Development of the Theater II. (3). From the 17th century to the present. A 27 624 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 623 or 624 or departmental consent. A 27 625 0 1007

628. Playscript Analysis. (3). The course is designed to develop students' ability 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 theatre directors, teachers, and critics. Collective analysis and individual projects are part of the course work. Prerequisite: Speech 623 or 624, or English 324. A 27 628 0 1007

643. Styles in Acting. (3). Training in, and development of, the special techniques required for period or stylized plays, with special emphasis on Greek, Shakespearean, Restoration and modern nonrealistic styles. Prerequisites: Speech 243, 542 and junior standing. A 27 643 0 1007

644. Scene Design. (3). Fundamentals of scene design. Practical work on University Theatre and Experimental Theatre productions is included. A 27 644 1 1007

645. Stage Lighting. (3). R; L arr. Lighting equipment and light design and its relation to scenery design. Emphasis is upon the problems in schools and colleges. Practical work on University Theatre and Experimental Theatre productions is included. Prerequisite: Speech 244 with a grade of C or better. A 27 645 1 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 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 6 hours. A 27 820 3 1599

823. History of Dramatic Criticism. (3). A survey and analysis of major critical 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 1850. Emphasis is on both literary and physical elements of styles. A 27 824 0 1007

830. Theories of Rhetoric: Classical. (3). Cross-listed as Eng. 825. An intensive study of the rhetorical theories of classical writers from 466 B.C. to the decline of Roman oratory. Principal emphasis is on Isocrates, Plato, Aristotle, Quintilian, Cicero and Longinus. A 27 830 0 1506

831. Theories of Rhetoric: Medieval, Renaissance and Modern. (3). Cross-listed as Eng. 826. A study of the emerging patterns of rhetoric from the Second Sophistic to modern times. Analysis is made of the rhetorical systems associated with such figures as Augustine, Felenon, Bulwer, Sheridan, Steele, Rush, John Quincy Adams, Blair, Campbell and Whately. A 27 831 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 9 1599
Urban Affairs

Several graduate programs are offered in urban affairs, as described in the Wichita State University Graduate School Bulletin.

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 public 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. Sci. 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 analysis 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 Urban Affairs students. May be repeated if topics are different. Prerequisite: instructor's consent. P 13 755 0 2214

Courses for Graduate Students Only

875-876. Thesis. (3-3). Prerequisite: adviser's consent. P 13 875 0 2214; P 13 876 0 2214

890. Urban Affairs Internship. (3-6). 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 3 to 12 months. As a part of the internship experience, the intern is required to submit and be examined upon an internship paper. Prerequisites: completion of all urban affairs core courses and 6 hours of additional graduate credit courses. 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 will address 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 coursework. P 13 898 4 2214
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 in the past, her activities in the present, and 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 387, 388, and 589. In addition, appropriate courses may be selected from such fields as philosophy, sociology, history, literature, anthropology, religion, minority studies, psychology, speech, and administration of justice. Courses counted toward a major or minor in another field may not be included. The minor consists of 15 hours, including WS 387 and 388. In addition to the courses listed below, the following courses are also applicable toward a major or minor in women's studies: Biographies and Autobiographies of Great and Notable Women (Honrs. 301E), Discovering Regional Women (Wom. St. 539), Issues in Gender Role Counseling (SPG 752K).
Lower-Division Courses

150A. Current Concerns of Women. (1-3). A 10 150A 0 4903

150B. Reentry Woman. (1). This course focuses on the special needs of women returning to school and preparing for employment. Sessions include career and life planning, decision making, and dealing with role conflicts. A 10 150B 0 4903

150C. Assertion Training for Women. (1). This course is designed to teach women to develop assertive skills. It examines the barriers that prevent women’s assertiveness and explores strategies to overcome these barriers. A 10 150C 0 4903

150D. Feminism and the Church. (1). This course is designed to study the effect of the women’s movement upon the contemporary church in America. It examines the role of women in the history of the church, issues being raised by feminists within the church today, and new models of feminine spirituality. A 10 150D 0 4903

150E. Women in Pop Culture. (1). This course will examine popular American culture as it defines and reflects images of women through movies, television, fiction, advertising, fashion, and song. A 10 150E 0 4903

150F. The Working Woman. (1). This course will focus on the needs and interests of currently employed women and those considering returning to the world of work. It examines working conditions, male-female relationships in work settings, and strategies for self-development. A 10 150F 0 4903

163. Women in Business. (3). Cross-listed as Mgmt. 163. B 12 163 0 0506

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 2208

325. Women in the Political System. (3). Cross-listed as Pol. Sci. 325. A 22 325 0 2207

338. Philosophy of Feminism. (3). Cross-listed as Phil. 338. An exploration of philosophical issues raised by the feminist movement, with emphasis on conceptual and ethical questions. A 10 338 0 4902


380. Special Topics. (1-3). This course will focus 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

387. 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 will also be considered, as will feminist visions of the future. (Course not available for credit to students who have taken Humanities 3 8 9.) A 10 387 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, day care, working women, the future of marriage); agencies for change; theories of social change; and the relationship of women’s rights to human rights. (Not available for credit for students who have taken Humanities 389.) A 10 388 0 4903

390. Motherhood: Myths and Realities. (3). This course focuses on the nature of motherhood as 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/his 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 the course. A 10 390 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. A 10 481 3 4999

The following abbreviations are used in the course descriptions: R stands for lecture and L for laboratory. For example, 3R; 4L means 3 hours of lecture and 4 hours of lab.
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). Cross-listed as Am. Stud. 533. 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 will also be given to women in the field of law, such as lawyers and legislators. A 10 533 0 0313


536. Writing by Women. (3). Cross-listed as Eng. 536. A 10 536 0 1502

542. Women in Other Cultures. (3). Cross-listed as Anthro. 542. A 10 542 0 2202

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 3 4903

580. Special Topics. (1-3). This course will focus on advanced topics of interest to women's studies. A 10 580 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

635. Leadership Techniques for Women. (3). Cross-listed as Speech 635. A 10 635 0 1599

750. Current Concerns of Women. (2-3). Workshop. P 14 750 0 4903
— Nearly 70% of the faculty members hold the doctorate or terminal degrees
— Over half are new to WSU since 1974
— Average faculty age is 44
UNIVERSITY FACULTY—FALL, 1982

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 (1968). BA, University of Kansas; 1964; MA, 1966; PhD, 1968.

Adamson, Carl L., Assistant Professor and Chairperson of Department of German (1965, 1971). BA, Wichita State University, 1963; MA, Washington University, 1967; PhD, 1975.


Adkins, Russell F., Assistant Professor of Educational Technology and Associate Dean for Media Resources Center (1974). BA, University of Kentucky, 1968; MS, Clarion State College, 1974.

Ahlberg, Clark D., University Professor and President (1968). BA, Wichita State University, 1939; MA, Syracuse University, 1942; PhD, 1951; LLD, 1969; LHD, St. Lawrence University, 1981.

Alcerreca-Joaquin, Carlos, Assistant Professor of Finance (1983). BBA, National University of Mexico, 1971; MBA, 1975.


Alexander, David R., Associate Professor of Physics and Director of Lake Afton Public Observatory (1971). BS, Kansas State University, 1967; AM, Indiana University, 1968; PhD, 1971.


Allegreucci, Robert L., Assistant Professor of Sociology (1967). BS, Pittsburg State University, 1959; MA, 1960; PhD, University of Missouri, 1969.

Allen, Anneke S., Associate Professor of Chemistry (1964). Candidate Ryksuniversiteit Groningen Netherlands, 1952; PhD, Tulane University, 1955.


Alley, Robert D., Professor of Secondary Education and Associate Dean of Education (1967). BS, Iowa State University, 1957; ME, University of Montana, 1960; EdD, Arizona State University, 1967.


Anderson, Robert E., Professor of Educational Administration and Director of Educational Field Services (1967). BA, University of Iowa, 1952; MA, 1953; EdD, University of Nebraska, 1963.

Arteaga, Lucio, Professor of Mathematics (1968). BA, University of Zaragoza, Spain, 1942; MS, Dalhousie University, 1959; PhD, University of Saskatchewan, 1964.


Bair, Sue F., Assistant Professor of Physical Education (1966). BA, Wichita State University, 1961; ME, 1967.
Bajaj, Prem N., Associate Professor and Coordinator of Graduate Program in Mathematics (1968). BA, Punjab University, 1951; MA, 1954; MS, Case Western Reserve University, 1967; PhD, 1968.

Ballenger, Marcus T., Associate Professor of Elementary Education (1970). BS in Ed, North Texas State University, 1959; MEd, Texas Tech University, 1963; EdD, 1970.

Bardo, John W., Associate Professor and Chairperson of Department of Sociology/Social Work (1973). BA, University of Cincinnati, 1970; MA, Ohio University, 1971; PhD, Ohio State University, 1973.

Barnes, Arloa K., Assistant Professor and Clinical Coordinator of Physical Therapy (1982). BS, Wichita State University, 1977; MS, University of Kansas, 1978.


Bartel, Peter S., Assistant Professor of Physics (1965). AB, Bethel College, 1943; MA, University of Iowa, 1953.


Bastida, Elena M., Assistant Professor of Sociology (1981). BA, Kansas State University, 1970; MA, 1972; PhD, University of Kansas, 1979.

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, 1967.


Beckman, Steven, Assistant Professor of Economics (1982). BA, University of California, Santa Barbara, 1975; MA, 1978; PhD, 1982.


Belt, John A., Associate Professor of Management (1971). BA, University of Southern California, 1966; PhD, Texas Tech University, 1971.


Benningfield, Lloyd M., Professor of Electrical Engineering and Dean for Graduate Studies and Research (1967). BSEE, Oklahoma State University, 1951; MSEE, University of Missouri, 1957; PhD, Purdue University, 1965.

Benson, Doris J., Assistant Professor of Student Personnel and Guidance (1982). BA, Herbert Lehman College, 1972; MS, St. John’s University, 1974; PhD, University of Pittsburgh, 1979.

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, 1940; PhD, 1942.


Bernard, David E., Professor of Printmaking (1949). BFA, University of Illinois, 1939; MFA, University of Iowa, 1949.

Bernhart, Walter D., Professor of Aeronautical Engineering (1954, 1964). BSCE, Kansas State University, 1950; MS, Wichita State University, 1959; PhD, Oklahoma State University, 1964; Licensed Professional Engineer—Kansas.


Billings, Dorothy K., Assistant Professor of Anthropology (1968). BA, University of Wisconsin, 1955; PhD, University of Sydney, 1972.

Bish, John T., Assistant Professor of Biological Sciences (1963). BS, Wichita State University, 1962; MS, 1965.
Blake, Leslie M., Professor of Speech Communication (1940). BS, Kansas State University, 1937; MS, 1939.


Blakeslee, Donald J., Associate Professor and Interim Chairperson of Anthropology (1976). BA, University of Nebraska, 1969; MA, 1971; PhD, University of Wisconsin-Milwaukee, 1975.

Blazicek, Donald L., Assistant Professor and Acting Chairperson of Administration of Justice (1976). BA, Northern Illinois University, 1967; MA, 1970; PhD, Michigan State University, 1976.

Blythe, Jack G., Professor of Geology (1949, 1957). BA, Wichita State University, 1947; MS, Northwestern University, 1950; PhD, University of Oklahoma, 1957.


Born, John D., Jr., Associate 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 and Chairperson of the Department of Psychology (1965). BS, Northwestern University, 1953; AM, University of Missouri, 1958; PhD, 1968.


Bousfield, Brenda, Assistant Professor of Humanities Librarian (1980). BA, Earlham College, 1960; MA, Indiana University, 1966; PhD, 1971.


Bowman, Barbara E., Assistant Professor of Biological Sciences and Assistant Dean of the College of Engineering (1966). BS, University of Utah, 1954; MSE, Wichita State University, 1966; PhD, University of Kansas, 1979.

Boyd, John David, Associate Professor of Studio Arts (1972). BA, California State University, Long Beach, 1968; MFA, Cranbrook Academy of Art, 1971.

Brady, Stephen W., Associate Professor of Mathematics (1967). AB, Indiana University, 1963; AM, 1965; PhD, 1968.

Brandhorst, Armin L., Assistant Professor of Engineering and Director of Physical Plant (1964). BSME, Kansas State University, 1959; MSME, Oklahoma State University, 1964.

Bravo-Elizondo, Pedro, Associate Professor of Spanish (1975). Universidad Tecnica del Estado, Chile, 1957; MA, Education, Catholic University, Valparaiso, Chile, 1964; MA, University of Iowa, 1971; PhD, 1974.

Breazeale, John B., Professor of Physics, Vice President for Academic Affairs and Dean of Faculties (1959). BS, Millsaps College, 1947; MS, University of Alabama, 1951; PhD, University of Virginia, 1955.

Bredchoft, Theodore C., Associate Professor of Physical Education and Director of Athletics (1972). BS, Cornell College, 1954; MS, University of Washington, 1959.

Brewer, Jeneva J., Associate Professor of Mathematics (1949). BA, Wichita State University, 1946; MA, 1949.

Brinkman, Sidney E., Assistant Professor of Accounting (1958, 1965). BA, Wichita State University, 1956; MS, 1966; CPA Certificate—Kansas.

Britton, Clark V., Jr., Professor of Printmaking and Chairperson of Department of Graphic Design (1957). BAA, Auburn University, 1952; MAA, 1955.

Brooks, Nancy F., Assistant Professor of Sociology (1972, 1975). BA, Wichita State University, 1965; MA, 1967.

Brown, Janet D., Instructor and Reference Librarian (1980). BA, Wichita State University, 1974; MLS, Emporia State University, 1975.

Brown, Karen Lee, Assistant Professor of Biological Sciences (1982). BA, Miami University-Oxford, Ohio, 1974; MS, 1976; PhD, University of Georgia, 1981.

Brown, Michael S., Instructor and Executive Associate Director of Admissions (1972). BA, Henderson State University, 1967; MEd, Wichita State University, 1975.


Buell, Gregory J., Assistant Professor and Coordinator of Clinical Services (1975). BS, University of Iowa, 1968; MA, Southern Illinois University, 1972; PhD, 1975.


Burr, Kenneth W., Professor of Communicative Disorders and Sciences (1971). BA, University of Iowa, 1953; MA, University of Kentucky, 1955; PhD, Purdue University, 1962.


Campuzano, Mary K., Instructor and Director of Special Clinical Program, Nursing (1979). BA, Florida International University, 1975; MN, Wichita State University, 1979.

Cardenas, Anthony J., Associate Professor of Spanish (1975). BA, University of New Mexico, 1968; MA, University of Wisconsin, 1969; PhD, 1974.


Carrithers, Joe A., Assistant Professor of Medical Technology (1981). BA, Sterling College, 1971; MS, Kansas State University, 1980.

Carroll, Jeri Ann, Assistant Professor of Instructional Services (1982). BME, University of Kansas, 1965; MS, 1973; PhD, 1980.

Cathers, Robert E., Assistant Professor of Chemistry and Coordinator of General Chemistry (1965). BS, Wichita State University, 1961; MS, 1963; PhD, Texas Tech University, 1966.

Cavarozzi, Joyce Pennington, Associate Professor of Speech Communication and Theater (1965). BS in Ed, Ohio University, 1953; MA, Ohio State University, 1963.

Cesar, James J., Endowment Association Distinguished Professor of Music, Professor of Violin (1949). BM, Cleveland Institute of Music, 1940; BS, Case Western Reserve University, 1947; MA, 1949.

Chaffee, Leonard M., Professor of Education and Dean of College of Education (1967). BA, Hiram College, 1951; MEd, Kent State University, 1952; PhD, Ohio State University, 1961.


Chambers, Ronald Dean, Assistant Professor of Communicative Disorders and Sciences (1968). BA, Wichita State University, 1964; MA, 1968; PhD, 1980.

Chang, Dae H., Professor of Administration of Justice (1975). BA, Michigan State University, 1957; MA, 1958; PhD, 1962.

Cheng, Le-Chung, Associate Professor of Mechanical Engineering (1976). BS, National Taiwan University, 1965; MS, North Dakota State University, 1968; PhD, University of Illinois, 1971; Licensed Professional Engineer—Kansas.

Chesnut, Claire M., Assistant Instructor and Director of University Preschool Program (1972). AB, Washburn University, 1956.

Childs, David T., Associate Professor of Music Theory and Chairperson of Department of Musicology-Composition (1965). BM, Houghton College, 1960; MM, George Peabody College for Teachers, 1961; BD, Vanderbilt University; 1965; PhD, George Peabody College for Teachers, 1971.

Cho, Dong Woo, Associate Professor of Economics (1972). BA, Seoul National University, Seoul, Korea, 1965; MA, Wayne State University, 1969; PhD, University of Illinois, 1973.

Chopra, Dharam Vir, Professor of Mathematics (1967). BA, Punjab University, India, 1950; MA, 1953; MA, University of Michigan, 1961; AM, 1963; PhD, University of Nebraska, 1968.

Chorba, Frank J., Associate Professor and Coordinator of Cooperative Education (1982). BA, West Liberty College, 1965; MA, West Virginia University, 1968; PhD, Southern Illinois University, 1975.

Christ, Ronald, Assistant Professor of Studio Arts (1976). BFA, Kansas City Art Institute, 1972; MFA, Indiana University, 1974.

Christian, Robert V., Jr., Professor of Chemistry (1946). BS, Wichita State University, 1940; PhD, Iowa State University, 1946.


Chung, Kae H., Professor and Chairperson of Department of Management (1970). BA, Seoul National University, Seoul, Korea, 1959; MBA, Louisiana State University, 1963; PhD, 1968.

Ciboski, Kenneth N., Associate Professor of Political Science (1968). BA, University of Kansas, 1961; MA, 1965; PhD, University of Washington, 1971.

Clark, James E., Assistant Professor of Economics (1976). BA, Michigan State University, 1969; MA, Northwestern University, 1971; PhD, 1976.

Clark, Mary Ann, Assistant Professor of Dental Hygiene (1973). BS, University of Missouri at Kansas City, 1967; RDH, 1967; MS, 1972.

Clausen, Rene King, Assistant Professor of Choral Music and Voice (1978). BA, St. Olaf College, 1974; MM, University of Illinois, 1977.


Coleman, John B., Associate Professor of Health Administration and Education (1980, 1982). BSME, University of Connecticut, 1966; MSIE, University of Massachusetts, 1968; PhD, 1975.

Collins, George W., Associate Professor of History (1968). BS, Northwestern University, 1948; MA, 1950; PhD, University of Colorado, 1965.

Collison, Brooke B., Associate Professor of Student Personnel and Guidance (1969). BS, University of Kansas, 1956; MEd, 1962; PhD, University of Missouri, 1969.

Colvin, Deltha Q., Assistant Instructor and Assistant Dean of Students—Special Programs (1980). BA, Wichita State University, 1972.


Conway, Raymond, Assistant Professor of Engineering Technology (1982). BME, National University of Ireland, 1966; MS, University of London (Imperial College of Science & Technology), 1973; MBA, University of Dublin (Trinity College), 1974.

Copeland, Ann, Assistant Professor of Medical Technology (1982). BS, University of Oklahoma, 1961; MS, University of Oklahoma Medical Center, 1967; PhD, University of California-Davis, 1971.
Corbett, Donald L., Associate Professor of Music Education and Coordinator of Graduate Music Studies (1971). BME, Wichita State University, 1953; MME, 1959; EdD, University of Kansas, 1977.

Corbin, Harry F., University Professor (1946). AB, Wichita State University, 1940; BD, University of Chicago, 1943; LLB, University of Kansas, 1949; PhD, University of Chicago, 1972.

Cornelius, Richard D., Associate Professor of Chemistry (1977). BA, Carleton College, 1969; PhD, University of Iowa, 1974.

Corbin, Harry F., University Professor (1946). AB, University of Kansas, 1952; MA, 1959; EdD, University of Kansas, 1980.


Cress, Allan M., Professor of German (1953). AB, University of Illinois, 1942; MA, 1948; PhD, 1952.

Crowell, David D., Associate Professor of Mathematics (1962, 1968). BA, Wichita State University, 1960; MS, 1962; PhD, University of New Mexico, 1968.

Crown, Lary D., Associate Professor of Mathematics (1962, 1968). BA, Wichita State University, 1960; MS, 1962; PhD, University of New Mexico, 1968.

Crowns, Arthur J., Jr., Professor of Administration of Justice (1971). BS, University of Wisconsin at Stevens Point, 1947; JD, University of Wisconsin, 1950; MSSW, 1958; PhD, Florida State University, 1965.


Curry, Margaret A., Assistant Professor of Nursing (1980). BSN, California State University at Los Angeles, 1972; MN, University of California at Los Angeles, 1974.


Cutler, R. Bruce, Adele M. Davis Distinguished Professor of Humanities (1960). BA, University of Iowa, 1951; MS, Kansas State University, 1957; LHD, Southwestern College, 1975.


Daley, James M., Associate Professor of Marketing and Small Business and Director of Aviation Management Program (1982). BSBA, University of Alabama, 1968; MS, University of Arkansas, 1974; PhD, 1977.

Daly, John Patrick, Assistant Instructor of Speech Communication and Program Director of KMUW (1981). BM, University of Maryland, 1976; MM, Wichita State University, 1980.


Daniels, Virginia M., Instructor and Counselor and Assistant to the Dean of University College (1971). BA, Northwestern University, 1947; MEd, Wichita State University, 1967.


Davis, Gayle R., Assistant Professor of Women’s Studies (1982). BA, Muskingum College, 1968; MA, Michigan State University, 1975; PhD, 1981.

Davis, Richard A., Assistant Professor and Associate Director of Admissions (1977). BS, 1969; MS, 1971; PhD, Kansas State University, 1979.


DeAragon, Ra’Cena C., Visiting Assistant Professor of History (1981). BA, University of Santa Clara, 1974; MA, University of California, Santa Barbara, 1977.
Decker, Jay C., Professor of Music and Director of Orchestras (1971). BMed, Wichita State University, 1956; MS in Mus Ed, University of Illinois, 1962; DMA, University of Missouri at Kansas City, 1971.


desilva, Dharma, Associate Professor of Management (1976). BSBA, University of Evansville, 1957; MS, Southern Illinois University, 1959; PhD, Indiana University, 1966.

DeVun, Esmond E., Jr., Associate Professor of Mathematics (1969). BS, Louisiana State University at New Orleans, 1963; MS, Louisiana State University at Baton Rouge, 1966; PhD, University of Massachusetts, 1969.

Dey, Glen R., Professor of Student Personnel and Guidance and Chairperson of Department of Personnel Services (1967). BS in Ed, University of Nebraska, 1954; MEd, 1959; EdD, 1961.

Dicker, Marc Todd, Assistant Professor of Physician’s Assistant and Clinical Sciences Coordinator (1975). BA, University of Missouri, 1970; MA, Wichita State University, 1976.


Distler, Donald A., Associate Professor of Biological Sciences (1963). BA, University of Louisville, 1952; MS, 1958; PhD, University of Kansas, 1966.

Doeren, Stephen E., Assistant Professor of Administration of Justice (1977). BA, Ottawa University, 1972; MS, University of New Mexico, 1974; PhD, Louisiana State University, 1978.

Dougherty, Joe M., Assistant Professor of Military Science (1982). BS, Kansas State University, 1971.

Douglas, Donald M., Associate Professor of History (1965). BA, Kansas State University, 1961; MA, 1963; PhD, University of Kansas, 1968.


Dreifort, John E., Associate Professor of History (1970). BS, Bowling Green State University, 1965; MA, 1966; PhD, Kent State University, 1970.


Duell, Dennis C., Associate Professor of Economics, Associate Dean of College of Business Administration and Director of the Center of Business and Economic Research (1967). BS, Kansas State University, 1961; MS, 1963; PhD, University of Illinois, 1969.

Duell, Orpha K., Associate Professor of Educational Psychology (1967). BS, Kansas State University, 1963; MS, University of Illinois, 1965; PhD, 1967.

Dunning, Wayne W., Assistant Professor of Administration of Justice (1961). BS, Iowa State University, 1952; MS, 1959; PhD, 1964.

Duram, James C., Professor of History (1968). BA, Western Michigan University, 1961; MA, 1963; PhD, Wayne State University, 1968.


Dutton, Jeffrey E., Assistant Professor and Director of Institutional Research (1976). BA, Alfred University, 1969; MA, The American University, 1973; PhD, Florida State University, 1979.

Edgington, Mary P., Associate Professor and Interim Chairperson of Computer Science (1981). AB, Marymount College, 1957; MA, St. Louis University, 1959; PhD, 1961; MS, Ohio State University, 1974.


Egbert, Robert I., Assistant Professor of Electrical Engineering (1980). BSEE, University of Missouri at Rolla, 1972; MSEE, 1973; PhD, 1976; Licensed Professional Engineer—Missouri, Kansas.

Eichler, Victor B., Associate Professor of Biological Sciences (1971). BS, University of Illinois, 1963; MS, 1964; PhD, University of Iowa, 1969.

Elcrat, Alan R., Professor of Mathematics (1967). BS, University of New Mexico, 1963; MA, Indiana University, 1965; PhD, 1967.


Elliott, Barbara, Assistant Professor of Nursing (1982). BS, Wichita State University, 1974; MN, 1979.

Ellis, Howard E., Professor of Music Education and Associate Dean of College of Fine Arts (1955). AB, Albion College, 1942; MM, University of Michigan, 1947; PhD, 1957.


Emery, La Mont C., Assistant Instructor of Mathematics (1977).

Erickson, James, Associate Professor of English (1964). BA, University of Minnesota, 1955; MA, 1957; PhD, 1961.


Fagerlund, Edward, Assistant Professor of Economics (1978). BS, University of Michigan, 1965; PhD, University of Minnesota, 1979.

Fagin, James, Assistant Professor of Administration of Justice (1974). BA, University of Nevada, 1971; MS, Southern Illinois University, 1972; PhD, 1977.

Fahrbach, David D., Assistant Professor of Dental Hygiene and Supervising Dentist (1980). DDS, University of Missouri at Kansas City, 1978.

Faires, Sidonie E., Assistant Professor of Communicative Disorders and Sciences and Clinical Supervisor (1976). BA, Wichita State University, 1966; MA, 1971; PhD, 1978.

Faires, Wesley L., Associate Professor of Communicative Disorders and Sciences (1965). BA, Wichita State University, 1958; MA, 1962; PhD, 1965.

Fard, Nasser S., Assistant Professor of Industrial Engineering (1982). BBA, University of Teheran, 1973; MS, Western Michigan University, 1976; PhD, University of Arizona, 1982.

Farnsworth, David M., Professor of Political Science (1956). BA, Wichita State University, 1953; AM, University of Illinois, 1955; PhD, 1959.


Fife, Natasha Matson, Assistant Professor of Physical Education (1959). BS, Texas Woman's University, 1958; ME, Wichita State University, 1967.

Fisher, Glenn W., Regents' Professor of Urban Affairs and Professor of Economics (1970). BA, University of Iowa, 1948; MA, University of North Carolina, 1950; PhD, University of Wisconsin, 1954.


Flentje, H. Edward, Associate Director of Urban Studies and Associate Professor of Urban Affairs (1979). BS, Emporia State University, 1964; MA, George Washington University, 1965; PhD, University of Kansas, 1970.
Foley, David, Assistant Professor of Computer Science (1980). BA, St. Mary's College, 1964; MS, Northern Illinois University, 1966; PhD, Illinois Institute of Technology, 1975.


Ford, Margaret, Assistant Professor of Minority Studies (1973). BA, Wichita State University, 1971; MEd, 1974; EdD, University of Houston, 1979.


Foster, Carl E., Instructor of Physical Education (1979). BS, Lincoln University, 1967; MS, Kansas State University, 1974.

Foster, Donald L., Assistant Professor and Chairperson of Department of Physics (1966). BA, Reed College, 1957; PhD, University of Kansas, 1968.


Foster, Mary Sue, Associate Professor and Chairperson of Department of Art Education (1966). BSE, University of Kansas, 1961; MSE, 1963; MFA, 1971.


Fox, L. Raymond, Professor and Chairperson of the Department of Biological Sciences (1979). BA, University of California, Santa Barbara, 1963; PhD, 1967.


Fremont, Theodore S., Associate Professor of Educational Psychology (1970). BA, Nebraska Wesleyan University, 1965; MS, Fort Hays State University, 1966; EdD, Oklahoma State University, 1970.

French, Thomas C., Assistant Professor of Mathematics (1965). BS, Wichita State University, 1962; MS, Colorado State University, 1964.


Full, William E., Assistant Professor of Geology (1982). BS, University of Notre Dame, 1969; MS, University of Illinois-Chicago Circle, 1980; PhD, University of South Carolina, 1982.


Garufo, Maryann, Clinical Instructor of Dental Hygiene (1982). BHS, Wichita State University, 1975; MS, Kansas State University, 1982.

Garver, Stockton H., Assistant Professor and Chairperson of Department of Art History (1973). BA, Harvard University, 1964; MA, Indiana University, 1972; PhD, 1980.

Gass, Marcelle B., Assistant Professor of Business Education (1969). BS, University of Kansas, 1949; MS, Wichita State University, 1967; PhD, Kansas State University, 1975.

Gaston, John Coy, Assistant Professor and Chairperson of Department of Minority Studies (1973). BA, Wichita State University, 1971; MEd, 1973; PhD, University of Colorado, 1979.

Gaston, Susan K., Associate Professor and Acting Chairperson of Department of Nursing (1979). BSN, Oklahoma Baptist University, 1970; MS, University of California, 1973; PhD, Kansas State University, 1981.


Cauhtier, Don, Assistant Professor of Ceramics (1978). AA, Riverside City College, 1970; BFA, Utah State University, 1973; MFA, Wichita State University, 1976.

Gessler, Julie Ellen, Assistant to the Dean and Assistant Instructor of Engineering (1980). BS, Wichita State University, 1980.

Gibson, George, Associate Professor of Opera Theatre and Voice (1967, 1980). BM, University of Miami, 1956; MM, University of Texas, 1959; DMA, University of Southern California, 1971.


Gladhart, Stephen C., Assistant Professor and Director of the Physician’s Assistant Program (1974). BA, Wichita State University, 1969; MA, 1972; EdD, University of Kansas, 1977.

Glaser, Mark A., Visiting Assistant Professor of Center for Urban Studies (1981). BA, Wichita State University, 1970; MUA, 1974; PhD, University of Texas at Arlington, 1981.

Gleason, Kenneth G., Professor of Educational Administration and Director of Bureau of Educational Placement (1965). BA, Wichita State University, 1950; MA, Columbia University, 1952; EdD, 1964.


Goodwin, Michael H., Assistant Professor of Nursing (1975). BSN, Wichita State University, 1973; MEd, 1976; MN, 1980.

Goodyear, Mary Lou, Assistant Professor and Head of Reference Department, Library (1981). BA, Graceland College, 1974; MA, University of Missouri—Columbia, 1975; MPA, 1981.


Gosman, Albert L., Professor of Mechanical Engineering (1967). BS:ME, University of Michigan, 1950; MSME, University of Colorado, 1955; PhD, University of Iowa, 1965.

Goudie, Andrea K., Associate Professor of English (1968). BA, University of Minnesota, 1962; MA, Indiana University, 1963; PhD, 1969.

Graff, Thomas, Assistant Professor of Personnel Services (1979). AA, Mesa Community College, 1970; BA, Arizona State University, 1972; MA, 1975; PhD, Brigham Young University, 1978; PhD, 1979.

Graham, Archie Richard, Professor and Chairperson of Department of Mechanical Engineering (1965). BSME, Kansas State University, 1957; MS, 1960; PhD, University of Iowa, 1966.

Graham, Gerald H., R. P. Clinton Distinguished Professor of Management (1967). BS, Northwestern State College, 1959; MSBA, 1960; PhD, Louisiana State University, 1968.

Graham, J. Keith, Professor and Chairperson of Department of Communicative Disorders and Sciences (1966). BS, Wayne State University, 1948; MA, 1951; PhD, Northwestern University, 1965.

Gray, James, Associate Professor of History (1963). AB, University of California at Los Angeles, 1954; PhD, 1966.

Gray, Margaret Ann, Instructor of Management (1981). BA, Pittsburg State University, 1972; MBA, Wichita State University, 1981.

Greenberg, Gary, Associate Professor of Psychology (1966, 1970). BS, Brooklyn College, 1962; MA, Wichita State University, 1964; PhD, Kansas State University, 1970.

Gregg, Alvin L., Assistant Professor of English (1968). BA, Texas Tech University, 1956; MA, 1957; PhD, University of Texas, 1969.

Greywall, Mahesh S., Professor of Mechanical Engineering (1969). BSC, University of Allahabad, India, 1953; BS, University of California at Berkeley, 1957; MS, 1959; PhD, 1962.

Gries, John C., Associate Professor of Geology (1971). BS, University of Wyoming, 1962; MS, 1965; PhD, University of Texas, 1970.

Griffin, Gerald R., Assistant Professor of Administration of Justice (1981). BS, University of Tulsa, 1969; MBA, Southern Methodist University, 1971; EdD, University of Tulsa, 1978.

Griffith, Kathryn, Professor of Department of Political Science (1954). BA, Wichita State University, 1947; MPA, Syracuse University, 1954; PhD, University of Chicago, 1967.


Guillette, Louis J., Jr., Assistant Professor of Biological Sciences (1981). BA, New Mexico Highlands University, 1976; MA, University of Colorado, 1979; PhD, 1981.

Gundersen, James N., Professor of Geology (1970). BS, University of Wisconsin, 1949; MA, University of California at Los Angeles, 1955; PhD, University of Minnesota, 1958.


Gythiel, Anthony P., Assistant Professor of English (1971). Diplôme d'Humanités, St. Stanislas, Poperinge, Belgium, 1950; BPh, Maison de Philosophie, Brussels, Belgium, 1953; MA in Theology, Theologicum Université de Louvain, 1956; MA, University of Detroit, 1966; PhD, 1971.

Haag, Barbara A., Professor and Director of Graduate Program, Nursing (1982). BSN, College of Saint Teresa, 1954; MSN, Wayne State University, 1969; PhD, University of Maryland.


Hahn, Jerry Donald, Assistant Instructor of Guitar (1973).

Halstead, Helen L., Assistant Professor of Nurse Clinician (1970). BSN, University of Kansas, 1955; MEd, University of Minnesota, 1959; PhD, Kansas State University, 1982.

Hammers, William D., Assistant Professor of Mathematics (1980). BS, Emporia State University, 1963; MS, University of Arkansas, 1967; PhD, 1976.


Hardy, James Lynn, Professor and Chairperson of Department of Music Education (1965). BS in Ed, Southwest Missouri State University, 1948; MME, University of Kansas, 1956; EdD, 1969.

Harmon, Dorothy A., Instructor and Associate Director, Marcus Center for Continuing Education (1974). BA, Wichita State University, 1946.

Harmon, William W., Assistant Dean of the College of Health Related Professions (1980) and Assistant Professor of Health Administration and Education (1982). BS, Johnson C. Smith University, 1968; MA, Seton Hall University, 1974.

Harnsberger, John L., Professor and Interim Chairperson of Department of History (1962). BA, Hamline University, 1948; MA, University of Minnesota, 1950; PhD, 1956.


Hartman, John J., Professor of Sociology (1968). BS, Southwest Missouri State University, 1961; MS, University of Missouri, 1963; PhD, 1966.

Hartshorne, Timothy S., Assistant Professor of Student Personnel and Guidance (1978). BA, Grinnell College, 1970; MA, Colgate University, 1973; PhD, University of Texas, 1978.


Hawley, Donna J., Assistant Professor of Nursing (1981). BSN, University of Iowa, 1968; MA, University of Missouri at Kansas City, 1971; MN, University of Kansas, 1980; EdD, 1980.

Hay, Bryan S., Associate Professor of English (1965). BS, University of Rochester, 1958; PhD, 1969.


Hayes, Michael T., Assistant Professor of Speech Communication (1978). BS, University of Kansas, 1959; MS, Emporia State University, 1962; PhD, University of Missouri, 1978.

Hayes, Patricia V., Assistant Instructor of Speech Communication and Development Director of KMUW (1978). BA, Wichita State University, 1960; MA, University of Kansas, 1969.


Hays, William C., Associate Professor of Gerontology/Sociology and Director, University Gerontology Center (1973). BS, Ball State University, 1967; MA, 1968; PhD, University of Missouri, 1973.

Headley, Esther L., Instructor of Marketing and Associate Director of MBA Program (1980). BBA, Wichita State University, 1979; MBA, 1980.

Hebenstreit, Julia J., Assistant Professor of Nursing (1979). BSN, University of Iowa, 1970; MA, 1975.

Hecht, Sabrina M., Assistant Professor of Mathematics (1950). AB, Pittsburg State University, 1939; MS, University of Michigan, 1945.

Heilmann, Charles E., Assistant Professor of Sociology (1965). BA, Washburn University, 1936; JD, 1939; MA, Wichita State University, 1964.


Henderson, Jane S., Assistant Professor of Nursing (1980). BSN, University of Missouri at Columbia, 1967; MN, Wichita State University, 1980.


Herman, David T., Professor of Psychology (1949). AB, Indiana University, 1940; MA, 1942; PhD, 1947.

Hershey, Myrliss A., Associate Professor of Educational Psychology (1979). BA, Tabor College, 1951; MS, Emporia State University, 1965; PhD, Kansas State University, 1976.


Ho, James C., Professor of Physics (1971). BS, National Taiwan University, 1959; MS, University of California at Berkeley, 1963; PhD, 1966.

Hoag, Gerald B., Associate Professor of English (1967). AB, Loyola University, New Orleans, 1951; MA, Tulane University, 1955; PhD, 1965.


Hogan, Linda, Assistant Professor of Medical Technology (1972). BA, Emporia State University, 1965; MT (ASCP), 1965; BB (ASCP), 1972; MEd, Wichita State University, 1977.

Holmer, Robert M., Professor of Physical Education, Health, and Recreation (1955). BS, University of Kansas, 1941; MS, 1948; PhD, University of Iowa, 1954.


Holmes, Lowell D., Professor of Anthropology (1959). BS, Northwestern University, 1950; PhD, 1957.


Hommertzheim, Donald L., Associate Professor and Graduate Coordinator of Industrial Engineering (1976). BA, Friends University, 1965; MS, Wichita State University, 1970; PhD, University of Arkansas, 1975.
Hosseini-Ardehali, Jinoos, Assistant Professor of Decision Sciences (1982). BBA, University of Teheran, 1974; MBA, Western Michigan University, 1971; MS, University of Arizona, 1980; PhD, 1981.


Huckstadt, Alicia A., Assistant Professor of Nursing (1975). BSN, Wichita State University, 1975; MN, 1978; PhD, Kansas State University, 1981.


Humphrey, Bobbye J., Assistant Professor of Social Work (1968). AB, Friends University, 1948; MSW, University of Kansas, 1964.


Hutcherson, Bernice, Assistant Professor of Social Work (1973). BA, Langston University, 1950; MSW, University of Kansas, 1969.

Hutchinson, John J., Associate Professor and Chairperson of Department of Mathematics (1976). BA, St. Benedict’s College, 1962; MA, University of Kansas, 1966; PhD, 1968.

Iacovetta, Ronald G., Associate Professor and Chairperson of Department of Administration of Justice (1973). BS, Colorado State University, 1965; MS, 1967; PhD, University of Connecticut, 1972.


Ingrisano, Dennis R., Assistant Professor of Communicative Disorders and Sciences and Director of Research Laboratories (1977). BS, De Paul University, 1969; MEd, Pennsylvania State University, 1971; PhD, Indiana University, 1978.


Iwasaki, Carol N., Assistant Professor of Ballet and Acting 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, 1948; MBA, Northwestern University, 1949; CPA Certificate—Kansas.


Jakowitz, Charles V., Professor of Electrical Engineering (1965). BSEE, Kansas State University, 1944; MSEE, 1947; PhD, University of Illinois, 1953; Licensed Professional Engineer—Kansas.


Jonekscela, 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, 1975.

Jantze, Margaret L., Associate Professor and Chairperson of Department of Business Education (1965). BS, Union College, 1947; MEd, University of Nebraska, 1959; EdD, 1965.

Jeffords, Charles R., Assistant Professor of Administration of Justice (1981). BA, State University of New York at Stony Brook, 1972; MA, Sam Houston State University, 1976; PhD, 1981.
Jensby, Steven E., Instructor and Career/Life Planning Counselor in University College (1981). BS, Nebraska Wesleyan University, 1974; MS, Kearney State College, 1977.

Johnnychetty, Thomas, Assistant Professor of Respiratory Therapy (1978). BS, Kerala University, 1958; MS, Gujarat University, 1963; PhD, Northeastern University, 1970.

Johns, Buddy Ava, Jr., Associate Professor of Mathematics (1964). BA, Friends University, 1957; MA, University of Kansas, 1960; PhD, 1964.

Johnson, Everett L., Associate Professor of Electrical Engineering (1971). BSEE, University of Kansas, 1962; MSEE, University of New Mexico, 1964; PhD, University of Kansas, 1969; Licensed Professional Engineer—Kansas.

Johnson, John W., Jr., Associate Professor of Chemistry (1955). BA, Wichita State University, 1952; MS, 1953; PhD, University of Illinois, 1956.

Johnson, M. Claradine, Assistant Professor of Educational Administration (1978). BSE, Bowling Green State University, 1943; ME, Wichita State University, 1962; Ed Sp, 1973; PhD, University of Kansas, 1974.

Johnson, Sharon Lee, Assistant Professor and Associate Dean of Student Life (1980). BS, University of Wisconsin, LaCrosse, 1971; MS, 1972.

Johnston, Frances R., Assistant Professor, Library (1954). BA, Wichita State University, 1950; AMLS, University of Michigan, 1953.

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.

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.


Kaiser, Crystal E., Assistant Professor of Instructional Services (1982). BS, Florida State University, 1970; MA, George Peabody College of Vanderbilt University, 1972; PhD, University of Missouri, 1977.

Kalten, Michael Charles, Assistant Professor of Religion (1978). AB, St. Louis University, 1965; AM, 1965; PhD, Harvard University, 1977.


Kasten, Roger N., Professor of Communicative Disorders and Sciences (1971). BS in Ed, Bowling Green State University, 1955; MA, 1956; PhD, Northwestern University, 1964.


Kear, Dennis J., Assistant Professor of Elementary Education (1978). BSE, Emporia State University, 1970; MSE, 1975; PhD, Arizona State University, 1978.


Kelley, James W., Associate Professor and Associate Dean of University College (1982). BS, Oregon State University, 1964; MA, University of Denver, 1966; PhD, 1970.

Kelly, Francis L., Assistant Professor of Speech Communication (1965). BA, De Paul University, 1954; MT, University of Illinois, 1959; PhD, Ohio State University, 1972.


Kenyon, Grant Y., Professor of Psychology (1955). BS, Wichita State University, 1949; MA, 1951; PhD, University of Rochester, 1957.
Killian, Donald G., Associate Professor of Mathematics (1958). BS, Southeast Missouri State University, 1952; ME, University of Missouri, 1956; AM, 1958.

Killian, Janice, Assistant Professor of Educational Psychology (1980). BS, Ohio Northern University, 1950; MS, State University of New York, 1969; MS, Kansas State University, 1977; PhD, 1981.


Kiralyfalvi, Bela, Associate Professor and Chairperson of Department of Speech Communication (1973). BA, Phillips University, 1963; MA, University of Kansas, 1965; PhD, 1972.


Kiskadden, Robert M., Professor of Studio Arts and Assistant Dean of College of Fine Arts (1949). BFA, University of Kansas, 1947; MA, Ohio Wesleyan University, 1949.


Klein, Anna C., Assistant Professor and Director of Testing (1977). BA, College of St. Benedict, 1963; MA, University of Iowa, 1969; MS, 1974; PhD, 1978.

Klingsporn, Melvern J., Assistant Professor of Psychology (1965). AB, University of Nebraska, 1957; MA, 1962; PhD, 1965.

Knapp, Robert K., Associate Professor of Psychology (1961). BA, Kent State University, 1954; MA, 1956; PhD, Michigan State University, 1960.

Kneil, Thomas R., Assistant Professor of Communicative Disorders and Sciences (1967). AB, Bowdoin College, 1955; MS, Syracuse University, 1960; PhD, University of Iowa, 1972.

Knight, Paul G., Assistant Professor and Catalog Librarian (1980). BA, Guilford College 1965; MA, Lehigh University, 1966; MLS, University of North Carolina, 1980.


Koechn, Bruce W., Assistant Professor of Computer Science (1979). BS, Jacksonville 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). BS, University of Kansas, 1961; MA, Wichita State University, 1968; PhD, University of Oklahoma, 1977.

Koppenhaver, John H., Assistant Professor of Spanish and Chairperson of Department of Romance Languages (1966, 1972). BA, Wichita State University, 1964; MA, University of Iowa, 1966; PhD, 1974.


Lahey, Thomas F., Assistant Professor and Supervising Dentist of Dental Hygiene (1981). DDS, Creighton University, 1981.

Lancaster, Kirk E., Assistant Professor of Mathematics (1980). AB, Humboldt State University, 1975; PhD, Oregon State University, 1981.


Lause, Timothy W., Assistant Professor of Social Work (1978). BS, Central Missouri State University, 1973; MA, 1974; PhD, St. Louis University, 1981.


Lee, Carla Ann, Assistant Professor and Chairperson of Department of Nurse Clinician (1974). BSN, University of Kansas, 1967; MA, Wichita State University, 1972; EdS, 1975.


Lee, Shiang-Yu, Associate Professor of Aeronautical Engineering (1982). BSME, National Taiwan University, 1962; MSME, University of Delaware, 1965; PhD, 1968.

Levi, Donald, Professor of Real Estate and Kansas Chair in Real Estate and Land Use Economics (1980). BS, University of Missouri, 1964; JD, 1966; PhD, Washington State University, 1974.

Lewallen, Sterling B., Associate Professor of Industrial Education (1974). BA, Wichita State University, 1964; MS, Pittsburg State University, 1969; PhD, Colorado State University, 1978.

Lewis, Martha, Assistant Professor of Nursing (1980). BA, Wichita State University, 1958; Diploma, Wesley School of Nursing, 1975; MN, Wichita State University, 1980.

Lindsay, Sara Rodewald, Instructor of German (1968). BS, Kansas State University, 1963; MA, University of Kansas, 1968.

Livingston, Alan, Assistant Professor and Instructional Developer (1978). BA, University of Utah, 1974; PhD, Brigham Young University, 1978.

Lloyd, Sandra R., Assistant Professor of Instructional Services (1982). BA, Bethany College, 1962; MDiv, Union Theological Seminary, 1966; MEd, Kent State University, 1977; PhD in progress.

Loper, Gerald D., Jr., Associate Professor of Physics (1964). BA, Wichita State University, 1959; MS, Oklahoma State University, 1962; PhD, 1964.

Lounsberry, Elinor, Associate Professor of Nursing (1980). Diploma, Broadlawns Hospital School of Nursing, 1946; BSN, University of Iowa, 1961; MS, University of Colorado, 1965; PhD, Walden University, 1980.

Lowery, Roger D., Assistant Professor of Accounting and Vice President for Business Affairs (1964). BSBA, Pittsburg State University, 1960; CPA Certificate—Kansas.


Lucas, Walter A., Associate Professor of Elementary Education (1951). BE, State University of New York College at Fredonia, 1941; MS, State University of New York at Albany, 1947; EdD, University of Colorado, 1949.


MacLean, H. Alan, Associate Professor of Mathematics (1974). BS, Pacific University, 1968; MS, Portland State University, 1970; PhD, Kansas State University, 1974.

Magelli, Paul J., University Professor and Dean of Fairmont College of Liberal Arts and Sciences (1969). AB, University of Illinois, 1959; MS, 1960; PhD, 1965.


Maher, Thomas H., Associate Professor and Director of Professional Development Center (1979). BS, Virginia Polytechnic Institute and State University, 1963; MS, University of Michigan, 1966; PhD, 1971.


Malzahn, Don Edwin, Associate Professor of Industrial Engineering (1973). BS, Oklahoma State University, 1968; MS, 1969; PhD, 1975.
Mandt, Almer Joseph, Assistant Professor of Philosophy (1976). BA, Trinity College, 1972; MA, Vanderbilt University, 1974; PhD, 1978.


Martin, Janice Sue, Instructor and Student Development Specialist, Learning Resource Center (1981). BS, Oklahoma State University, 1979; MS, 1981.

Martin, Michael J., Assistant Professor of Military Science (1980). BA, Wichita State University, 1971.


Maseman, Denise Cecile, Assistant Professor of Dental Hygiene (1981). BS, University of Nebraska, 1974; MS, University of Missouri at Kansas City, 1978.

Mason, Nancy, Assistant Professor of Management (1980). BA, Wichita State University, 1969; MBA, 1974.

Masud, Abu S. M., Assistant Professor of Industrial Engineering, (1980). BS, Bangladesh University of Engineering and Technology, 1969; Diploma, Institute of Business Administration, 1973; MSIE, Kansas State University, 1975; PhDIE, 1978.

Mathis, William E., Professor of Music Education and Chairperson of Department of Performance (1969). BS, Brigham Young University, 1957; MS, 1961; PhD, University of Michigan, 1969.


Mawhinney, Barbara, Assistant Dean of Faculties for Personnel (1977). BS, Southwest Missouri State University, 1974; MA, Wichita State University, 1977.

May, Phillip T., Professor of Accounting (1974). BA, Lawrence University, 1957; MBA, Indiana University, 1959; PhD, University of Wisconsin, 1967; CPA Certificate —Wisconsin.


McCarten, John B., Assistant Professor of Chemistry (1964). BS, Creighton University, 1958; MS, 1960; PhD, University of Iowa, 1964.

McCollum, Shirley, Assistant Professor of Graphic Design (1975). BFA, University of Texas, 1968; MFA, North Texas State University, 1974.

McCormick, B. Jack, Professor and Chairperson of Department of Chemistry (1979). BS, West Texas State University, 1959; PhD, Oklahoma State University, 1962.

McCroskey, Robert Lee, Professor of Communicative Disorders and Sciences (1967). BS in Ed, Ohio State University, 1948; MA, 1952; PhD, 1956.

McDougall, Gerald S., Associate Professor and Chairperson of Department of Economics (1974). BS, California State University, Chico, 1967; BA, 1968; MA, Claremont Graduate School, 1973; PhD, 1974.

McKenna, Michael C., Associate Professor of Elementary Education (1977). BA, University of Arkansas, 1970; MA, 1972; MEd, University of Missouri, 1975; PhD, 1977.

McKenney, James W., Associate Professor and Chairperson of Department of Political Science (1966). BA, Willamette University, 1958; MA, University of Oregon, 1964; PhD, 1969.

McLuen, Peggy F., Assistant Professor of Dance (1966). BA, Wichita State University, 1947; ME, 1960.

Meabon, David L., Associate Professor of Student Personnel and Guidance and Dean of Student Life and Services (1976). BS, West Virginia State College, 1964; MEd, University of South Carolina, 1971; PhD, Florida State University, 1973.
Meissen, Gregory J., Assistant Professor of Psychology (1980). BA, Wichita State University, 1977; PhD, University of Tennessee, 1980.


Melton, Austin C., Jr., Assistant Professor of Computer Science (1982). BA, Friends University, 1971; MS, Kansas State University, 1974; PhD, 1980.

Merriam, Daniel F., Endowment Association Distinguished Professor of Natural Sciences and Chairperson of Department of Geology (1981). BS, University of Kansas, 1949; MS, 1953; PhD, 1961; MSc, Leicester University, England, 1969; DSc, 1975.

Merrifield, David E., Assistant Professor of Economics (1977). BS, Williamette University, 1974; MA, Claremont Graduate School, 1977; PhD, 1981.


Mickel, Howard A., Assistant Professor of Religion (1965). BA, University of Nebraska, 1949; MA, Northwestern University, 1951; MTh, Lutheran Theological Seminary, Gettysburg, 1953; PhD, Claremont Graduate School, 1969.

Milbrandt, Lanny, Assistant Professor of Art Education (1978). BS, Mankato State University, 1961; MS, 1967; PhD, Arizona State University, 1977.

Miller, Glendon R., Associate Professor of Biological Sciences (1968). BA, Southern Illinois University, 1960; MA, 1962; PhD, University of Missouri, 1967.

Miller, John W., Associate Professor of Elementary Education, Director of the Robert T. Pate Reading Center, and Associate Dean of the College of Education (1974). BS, Ohio University, 1969; MS, Northern Illinois University, 1972; PhD, Purdue University, 1974.


Miller, Lambert J., Assistant Professor of Administration of Justice (1974). BS, Wichita State University, 1973; MAJ, 1975; PhD, Kansas State University, 1980.


Miller, William E., Associate Professor of Communicative Disorders and Sciences (1949). BS, Wichita State University, 1940; MA, 1947; PhD, Northwestern University, 1950.

Millet, John H., Professor of Political Science (1957). AB, Beloit College, 1940; MA, University of Cincinnati, 1942; PhD, University of Illinois, 1950.

Millet, Nancy C., Professor of Secondary Education (1968). BA, University of Rochester, 1949; MA, 1951; EdD, University of Colorado, 1972.

Mills, Everal E., Associate Professor of Computer Science (1971). BS, University of Nebraska, 1962; MS, Washington State University, 1968; PhD, 1972.


Minor, Mary Alice, Assistant Professor of Physical Therapy (1979). BS, Northwestern University Medical School, 1969; MS, Boston University, 1972.

Minor, Scott, Assistant Professor and Acting Chairperson of Physical Therapy (1979). BA, Swarthmore College, 1971; MS, Boston University, 1975.

Mitchuson, Linda C., Associate Professor of Accounting (1977). BS, East Central University, 1968; MBA, University of Arkansas, 1969; PhD, 1975; CMA Certificate—Kansas.

Mohr, Phillip J., Professor of Speech Communication and Director of MA Program in Communication (1946, 1950, 1968). BA, Wichita State University, 1946; MA, 1947; PhD, Ohio State University, 1960.


Murphey, Dwight D., Associate Professor of Business Law (1967). BSL, University of Denver, 1957; JD, 1959.

Murphy, James M., Professor of Finance (1968). BS, Indiana University, 1943; MBA, 1948; DBA, 1959.

Myers, Marilyn S., Assistant Professor, Library, and Coordinator of Collection Development (1968). BA, Kansas State University, 1966; MS, University of Illinois, 1968; MA, Kansas State University, 1980.


Nance, Donald W., Associate Professor and Director of Counseling Service (1968). BA, University of Redlands, 1964; MA, University of Iowa, 1967; PhD, 1968.


Nelson, F. William, Professor and Chairperson of Department of English (1947). AB, University of Texas, 1943; AM, Columbia University, 1949; PhD, University of Oklahoma, 1957.


Neubert, B. David, Assistant Professor of Double Bass and Music Theory (1978). BA, San Jose State University, 1974; MM, Eastman School of Music, 1975; DMA, University of Texas, 1982.

Nickel, Kenneth N., Professor of Secondary Education (1956). BA, Wichita State University, 1936; MA, University of Kansas, 1947; EdD, University of Colorado, 1958.

Nielsen, Carl C., Associate Professor of Finance (1968). BS, Dana College, 1956; MA, University of Nebraska, 1963; PhD, 1966.

Norris, Roy H., Professor and Chairperson of Department of Electrical Engineering (1959). BS, Wichita State University, 1959; MS, 1962; PhD, Oklahoma State University, 1972.


Olivero, Raymond D., Assistant Professor of Studio Arts (1976). BA, University of South Florida, 1972; MFA, University of Illinois, 1976.


Palmer, Duncan, Instructor of Accounting (1975). BS, United States Military Academy, West Point, 1944; MS, Wichita State University, 1975; CPA Certificate—Kansas.


Parris, Wayne L., Associate Professor of Anthropology (1968). AB, McPherson College, 1944; BD, Bethany Theological Seminary, 1947; MA, Wichita State University, 1953; MA, University of Colorado, 1966; PhD, 1971.

Paske, Gerald H., Associate Professor of Philosophy (1967). BS, University of Wisconsin, 1958; MS, 1962; PhD, 1964.

Paulson, Merle J., Assistant Professor, Library and Head of Acquisitions Department (1962). BA, Emporia State University, 1953; BS in Ed, 1954; MA, University of Denver, 1962.

Payne, Joe Dean, Associate Professor of Elementary Education and Chairperson of Instructional Services (1967). BA, Texas Tech University, 1950; MEd, 1953; EdD, 1963.

Pearson, Charles G., Associate Professor and Chairperson of Department of Journalism (1977). AB, University of Kansas, 1942; MA, 1953.


Peters, Ralph, Assistant Professor of Biology (1980). BS, University of Tulsa, 1969; PhD, Washington State University, 1975.

Pettersen, Kenneth C., Assistant Professor of Spanish (1965). BA, Wichita State University, 1964; MA, University of Wisconsin, 1965; PhD, University of Colorado, 1980.


Pfannestiel, Maurice, Associate Professor of Economics (1966). BA, Fort Hays State University, 1960; MS, Oklahoma State University, 1966; PhD, 1967.


Platt, George M., Associate Professor of Urban Studies and Associate Vice President for Planning and Institutional Research (1969). BS, South Dakota State University, 1953; MA, Syracuse University, 1955; PhD, 1962.


Poland, Leo A., Associate Professor of Accounting (1958). BS, University of Kansas, 1947; MBA, Harvard University, 1948; DBA, Indiana University, 1962.

Puoci, Janette, Assistant Professor of Nursing (1982). BS, University of Arizona, 1969; MS, Texas Women's University, 1973.


Quantity, Diane D., Assistant Professor of English (1973). BA, Kansas State University, 1962; MA, 1966; PhD, 1971.

Raaafat, Feriaadon (Fred) Assistant Professor of Decision Sciences (1981). BS, Phillips University, 1974; BS, 1975; MIE, Oklahoma State University, 1977; PhD, 1982.

Rahimi, Mansour, Assistant Professor of Industrial Engineering (1982). BS, West Virginia University, 1977; MS, 1978; PhD, Virginia Polytechnic Institute and State University, 1982.

Rath, Gerald A., Associate Professor and Director of Engineering Technology (1976). BSEE, Iowa State University, 1955; MSE, Purdue University, 1963; Licensed Professional Engineer—Kansas, Indiana.


Rector, Larry, Assistant Professor and Director of Financial Aids (1967). BA, Southwestern College, 1962; MEd, Wichita State University, 1967.

Reed, Paul E., Associate Professor of Piano (1966). BM, Drake University, 1956; MM, 1957.

Rees, David, Assistant Professor of Accounting (1982). BS, Brigham Young University, 1972; MAC, Utah State University, 1977; DBA, Texas Technological University, 1982.

Reif, Martin A., Professor of History and Associate Dean of Fairmount College of Liberal Arts and Sciences (1959). AB, University of California at Los Angeles, 1954; PhD, 1960.
Rhatigan, James J., Associate Professor of Education, Vice President for Student Affairs, and Dean of Students (1965). BA, Coe College, 1957; MA, Syracuse University, 1959; PhD, University of Iowa, 1965.

Rhoads, Ellen C., Assistant Professor and Academic Coordinator, Gerontology Training Program (1975). BA, Wichita State University, 1968; MA, 1971; PhD, University of Kansas, 1981.


Richardson, William H., Associate Professor of Mathematics (1962). AB, California State University, Chico, 1959; MS, Iowa State University, 1961.

Richardson, William Harrison, Assistant Professor of History (1978). BA, University of California, Santa Barbara, 1969; MA, University of California, Berkeley, 1970; PhD, 1976.


Ritchie, Gisela F., Associate Professor of German (1965). MA, Free University of Berlin, 1952; PhD, University of Michigan, 1965.


Rodenberg, Sidney D., Professor of Microbiology and Health Sciences and Dean of College of Health Related Professions (1976). AB, Washington University, 1948; AM, 1950; PhD, 1953.


Rogers, Ben F., Associate Professor and Chairperson of Philosophy (1966). BA, University of Tennessee, 1958; MAT, Vanderbilt University, 1961; MA, Indiana University, 1966; PhD, 1970.

Rogers, Ethel Elizabeth, Assistant Professor of Mathematics (1958). BS, Kansas State University, 1946; MA, Northwestern University, 1950; ML, Emporia State University, 1973.

Rogers, George, Associate Professor of Department of Minority Studies (1971). BS in Ed, Langston University, 1961; MEd, Central State University, 1969; EdD, University of Kansas, 1971.


Rohner, Stephen J., Assistant Professor and University Counselor (1982). BA, Rockhurst College, 1976; MA, Western Kentucky University, 1978; PhD, University of Notre Dame, 1982.


Ross, Robert H., Associate Professor of Marketing and Director of MBA Program (1977). AB, Cornell University, 1964; MBA, 1966; PhD, University of Oklahoma, 1979.
Rounds, Harry D., Professor of Biological Sciences (1963). BA, University of Virginia, 1952; MS, University of Pittsburgh, 1960; PhD, 1962.


Rozzell, Robert W., Assistant Professor of University College and Coordinator of Advising Services (1978). BA, University of New York, Cortland, 1966; ME, Ohio State University, 1967.


Saalmann, Dieter, Associate Professor of German (1971). BA, Northwestern University of Louisiana, 1963; MA, The Johns Hopkins University, 1965; PhD, Washington University, 1970.

Saeed, Mohammad Arshad, Assistant Professor of Physician's Assistant (1976). MBBS, Islamic Medical College, Pakistan, 1966.

Sallzadeh Hossein, Assistant Professor of Decision Sciences (1979). BA, Iran Institute of Banking, 1974; MBA, Oklahoma State University, 1976; PhD, 1979.


St. John, Richard W., Associate Professor of Ceramics and Chairperson of Department of Studio Arts (1969). BFA, Kansas City Art Institute, 1967; MFA, Alfred University, 1969.

Santhanam, Viswanathan, Associate Professor of Computer Science (1975). B Tech, Indian Institute of Technology, Kanpur, India, 1971; PhD, Ohio State University, 1975.

Sarachek, Alvin, Distinguished Professor of Natural Sciences and Professor of Biological Sciences (1958). BA, University of Missouri at Kansas City, 1948; MA, 1950; PhD, Kansas State University, 1958.

Savaiano, Eugene, Professor of Spanish (1946). BS in Ed, Emporia State University, 1936; MS, 1937; PhD, University of Chicago, 1948.


Schaible, Max A., Assistant Professor of Journalism and Director of Information and Public Events (1970). BA, University of Colorado, 1957.

Scheible, Max A., Assistant Professor of Journalism and Director of Information and Public Events (1970). BA, University of Colorado, 1957.

Scudde, Rosalind R., Assistant Professor of Communicative Disorders and Sciences, and Clinical Supervisor (1972). BA, Wichita State University, 1964; MA, 1972; PhD, 1978.
Shannon, Jack T., Assistant Professor and Assistant to the Dean of Continuing Education (1974). BA, Southwestern Oklahoma State University, 1961; MEd, University of North Dakota, 1963; PhD, University of Oklahoma, 1973.


Sharp, Douglas, Associate Professor of Accounting and Dean of College of Business Administration (1969). BBA, University of Oklahoma, 1961; MBA, 1963; PhD, University of Missouri, 1969; CPA Certificate—Oklahoma.


Shawver, Martha M., Assistant Professor of Nursing (1975). BSN, Eastern Mennonite College, 1965; MA in Nursing, University of Iowa, 1974.

Shawver, Martha M., Assistant Professor of Nursing (1981). BGS, Wichita State University, 1977; AS, 1978.

Sharp, Douglas, Associate Professor of Accounting and Dean of College of Business Administration (1969). BBA, University of Oklahoma, 1961; MBA, 1963; PhD, University of Missouri, 1969; CPA Certificate—Oklahoma.

Shawver, Martha M., Assistant Professor of Nursing (1981). BGS, Wichita State University, 1977; AS, 1978.

Shee, Doris, Assistant Professor of Nursing (1981). BS, Case Western Reserve University, 1963; MS, 1966

Sheffield, James F., Associate Professor of Political Science (1974). BA, Mississippi State University, 1969; MS, Florida State University, 1970; PhD, 1973.


Shirley, William M., Assistant Professor of Chemistry (1982). BA, Vanderbilt University, 1971; PhD, North Carolina State University, 1978.

Shore, Elsie Rochelle, Assistant Professor of Psychology (1981). BA, Brooklyn College, 1967; MA, University of Nebraska—Lincoln, 1970; PhD, 1981.

Sickles, Gary, Assistant Professor and Supervising Dentist of Dental Hygiene (1981). DDS, Creighton University, 1980.

Singhal, Ram P., Associate Professor of Chemistry (1974). BSc, University of Lucknow, India, 1958; MSc, 1960; DEA, Université de Lille, France, 1964; PhD, 1967.

Simms, Elise, Associate Professor and Director of Undergraduate Program, Nursing (1982). BS, University of Colorado, 1963; BBA, Idaho State University, 1965; MS, Indiana University, 1967; PhD, University of Arizona, 1976.


Slingerland, F. Yvonne, Assistant Professor of Physical Education (1967). BS, Fort Hays State University, 1954; MS, 1964.


Smith, Abbie F., Assistant Director of Summer Session and Assistant Director of Admissions (1973). BA, Wichita State University, 1952; MA, 1971.

Smith, Bert L., Professor and Chairperson of Department of Aeronautical Engineering (1966). BSME, University of Missouri at Rolla, 1953; MSME, 1960; PhD, Kansas State University, 1966.


Smith, Nicholas E., Assistant Professor of French Horn (1975). BM, Pittsburgh State University, 1970; MM, Eastman School of Music, 1972; DMA, 1980.

Smith, R. V., Professor of Mechanical Engineering (1971). BSME, University of Colorado, 1948; MSME, 1951; MS, University of Utah, 1957; PhD, Oxford University, 1968; Licensed Professional Engineer—Colorado.

Smith, Robert M., Assistant Professor of Speech Communication and Associate Dean of Fairmount College of Liberal Arts and Sciences and Associate Dean of University College and Continuing Education (1968). BA, Wichita State University, 1967; MA, Ohio University, 1968; PhD, Temple University, 1976.

Snyder, Jacqueline J., Assistant Professor of American Studies and Associate Vice President for Academic Affairs (1975). BA, College of St. Catherine, 1963; MA, Indiana University, 1966; DA, University of Oregon, 1971.

Snyder, James J., Assistant Professor of Psychology (1977). BA, Loras College, 1968; MA, Southern Illinois University, 1974; PhD, 1977.

Snyder, Melvin H., Jr., Professor of Aeronautical Engineering (1947). BSME, Carnegie-Mellon University, 1947; MS, Wichita State University, 1950; PhD, Oklahoma State University, 1967; Licensed Professional Engineer—Kansas.


Sobin, Anthony G., Associate Professor of English (1970). BA, Tulane University, 1966; MFA, University of Iowa, 1969; PhD, University of Utah, 1975.

Sodhi, Raj S., Assistant Professor of Mechanical Engineering (1982). BS, Thapar Institute of Engineering and Technology—India, 1971; MS, Union College, 1976; PhD, University of Houston, 1980.

Sojka, Gregory, Assistant Professor and Chairperson of Department of American Studies (1978). BA, State University College of New York at Fredonia, 1971; MA, Indiana University, 1974; PhD, 1976.


Stangl, Eugene C., Associate Professor of Political Science and Coordinator of Theatre Services (1939). BM, University of Iowa, 1950.

Sweeney, Arthur B., Professor of Management (1968). BS, University of Illinois, 1947; MSW, 1949; PhD, University of Houston, 1958.

Taggart, Thoburn, Jr., Assistant Professor, Library (1962). BA, University of the South, 1953; MA, George Peabody College for Teachers, 1958.

Taher, Syed M. A., Assistant Professor of Physics (1976). BS, Dacca University, 1964; MS, 1966; MA, California State University, Long Beach, 1970; PhD, Washington State University, 1974.

Talaty, Erach R., Professor of Chemistry (1969). BSC (Honours), Nagpur University, Nagpur, India, 1948; PhD, 1954; PhD, Ohio State University, 1957.

Tannehill, Ronald L., Assistant Professor of Administration of Justice (1973, 1976). BS, Wichita State University, 1973; MA, 1975; PhD, Kansas State University, 1979.

Tanner, James L., Assistant Professor of Sociology (1981). BA, Wichita State University, 1977; MA, 1979; PhD, University of Illinois, Urbana, 1982.

Taylor, Kathleen H., Assistant Professor of Nursing (1981). BA, Central State University, 1972; MS, University of Oklahoma, 1975.

Tejeda, Antoinette M., Assistant Professor of Spanish (1967). AB, Bradley University, 1946; MA, Texas Tech University, 1965.


Terflinger, Curtis D., Professor of Business Law and Chairperson of Department of Finance, Real Estate, and Decision Sciences and Director, Legal Assistant Program (1957). BA, University of Kansas, 1953; JD, 1955.


Terrell, William T., Associate Professor of Economics (1967). BS, Oklahoma State University, 1958; MS, 1961; PhD, Vanderbilt University, 1970.

Terwilliger, Gordon B., Professor of Music and Dean of College of Fine Arts (1946). BME, Northwestern University, 1942; MA, Columbia University, 1946; EdD, 1952.


Thomann, Gary C., Associate Professor of Electrical Engineering (1975). BSEE, University of Kansas, 1965; MSEE, 1967; PhD, 1970; Licensed Professional Engineer—Kansas.

Thomas, James H., Associate Professor of American Studies (1976). BA, Wichita State University, 1971; MEd, 1975; PhD, Oklahoma State University, 1976.

Thomas, Phillip D., Professor and Chairperson of Department of History (1965). BA, Baylor University, 1960; MA, University of New Mexico, 1964; Ph.D, 1965.

Thompson, Linda L., Assistant Professor of Library and Head of Catalog Department (1980). BA, University of Texas, 1971; MLS, 1975.

Thompson, Norman D., Assistant Instructor, Assistant Director and Manager of Operations, Digital Computing Center (1967).

Thomson, John William, Associate Professor of Music Theory-Composition and Director of Jazz Ensembles (1976). BM, Wichita State University, 1963; MM, 1965; DMA, University of Missouri at Kansas City, 1968.


Tilford, Michael, Associate Professor of Secondary Education and Associate Dean for Graduate Studies (1967). BS, Langston University, 1957; MA, The Johns Hopkins University, 1958; EdD, Oklahoma State University, 1970.


Town, Robert L., Associate Professor of Organ (1965). BM, Eastman School of Music, 1960; MM, Syracuse University, 1962.

Tramill, James L., Assistant Professor of Instructional Services (1980). BS, Austin Peay State University, 1967; MA, 1977; PhD, University of Southern Mississippi, 1981.


Unruh, William E., Professor of History (1965). BA, Bethany College, 1951; MA, Kansas State University, 1956; PhD, University of Colorado, 1963.

Unruh, Henry, Jr., Professor of Physics (1961). BA, Wichita State University, 1950; MS, Kansas State University, 1952; PhD, Case Western Reserve University, 1960.


Vahdat, Fari, Associate Professor of Psychology (1967). AB, Indiana University, 1953; AM, 1957; PhD, 1964.


Vartabedian, Robert A., Assistant Professor of Speech Communication and Director of Forensics (1981). BA, California State University, Fresno, 1974; MA, Wichita State University, 1980; PhD, University of Oklahoma, 1981.


Waddell, Mina Jean, Assistant Professor and Education Librarian, Library (1965). BA, Wichita State University, 1938; MS, Emporia State University, 1965.

Wahlbeck, Phillip G., Professor of Chemistry (1972). BS, University of Illinois, 1954; PhD, 1958.

Webb, Arden, Assistant Professor of Speech Communication and Theater (1977). BS, Emporia State University, 1971; MA, 1972; PhD, Texas Tech University, 1982.

Webb, Edgar L., Assistant Professor and Chairperson of Department of Industrial Education (1959). BA, Wichita State University, 1959; MS, Pittsburgh State University, 1961.

Webb, Samuel C., Professor of Economics (1966). BS, University of Missouri, 1957; MS, 1959; PhD, University of Kansas, 1968.

Weber, Carolyn, Coordinator of Nursing Technology Laboratory (1980). Diploma, St. Francis Hospital School of Nursing, 1954; BSN, University of Colorado, 1960; MSN, Catholic University of America, 1969.

Weiss, Edward, Assistant Professor of Health, Administration, and Education (1980). BA, Gettysburg College, 1973; MAT, Duke University, 1974; PhD, Pennsylvania State University, 1981.

Wellbrock, Mildred, Instructor and Coordinator of Health Administration and Education (1978). BS, Marion College, 1941; MS, Creighton University, 1968.


Welsbacher, Richard C., Professor of Speech Communication and Theater and Director of Theater (1958). AB, Denison University, 1948; MA, University of Denver, 1950, PhD, Ohio State University, 1964.


Wentworth, C. Russell, Associate Professor of Educational Administration, Dean of University College and Continuing Education, and Director of Summer Session (1971). BA, Michigan State University, 1949; MA, 1952; PhD, 1970.

Wentz, Walter J., Associate Professor and Chairperson of Health Administration and Education (1978). BA, University of Iowa, 1949; MA, 1950; PhD, 1963.

Wentz, William H., Jr., Professor of Aeronautical Engineering (1957, 1963). BS, Wichita State University, 1955; MS, 1961; PhD, University of Kansas, 1969; Licensed Professional Engineer—Kansas.


Wherritt, Robert C., Associate Professor of Mathematics (1962). BS, Tulane University, 1955; MS, 1961; PhD, New Mexico State University, 1971.

Whitmer, Lionel R., Assistant Professor of Management (1982). BA, University of Missouri-St. Louis, 1971; MBA, 1975; PhD, University of Iowa, 1982.

Wilhelm, William, Professor of Engineering Education and Dean of the College of Engineering (1979). BME, Auburn University, 1958; MS, 1963; PhD, North Carolina State University, 1968; Licensed Professional Engineer—Kansas, West Virginia.

Williamson, L. Keith, Assistant Professor of Speech Communication and Director of Basic Oral Communication Program (1977). BA, Wichita State University, 1965; MTh, Southern Methodist University, 1968; PhD, Temple University, 1975.

Wilson, John H., Professor of Elementary Education (1968). BA, Wichita State University, 1958; MED, 1964; EdD, University of Oklahoma, 1967.

Wilson, W. Herman, Assistant Professor of Physical Education and Track Coach (1967). BS, Kansas State University, 1952; MS, 1963.

Wineke, Donald R., Associate Professor of English (1971). BA, University of Washington, 1960; MA, Pennsylvania State University, 1962; PhD, Indiana University, 1971.

Winget, Lynn W., Professor of Spanish (1961). BA, Wichita State University, 1948; MA, University of Wisconsin, 1949; PhD, 1960.


Wu, Frederick H., Associate Professor of Accounting (1974). BA, National Taiwan University, 1961; MBA, University of California at Berkeley, 1966; DBA, Texas Tech University, 1975; CMA Certificate.


Yanney, Douglas M., Assistant Instructor and Director of the Foreign Language Instructional Laboratories (1975). BS, Wichita State University, 1972.


Yeotis, Catherine G., Assistant Professor of Instructional Services (1979). BS, Michigan State University, 1963; MS, Purdue University, 1973; PhD, 1978.


Youngman, Arthur L., Assistant Professor of Biological Sciences (1965). BA, Montana State University, 1959; MA, Western Reserve University, 1961; PhD, University of Texas, 1965.

Zadoo, Harsh V., Assistant Professor of Industrial Engineering (1982). BSEE, University of Delhi, 1978; MS, Wichita State University, 1981.

Zandler, Melvin E., Associate Professor of Chemistry (1966). BA, Friends University, 1960; MS, Wichita State University, 1963; PhD, Arizona State University, 1965.

Zoller, Peter T., Associate Professor of English (1973). BA, University of San Francisco, 1965; MA, Claremont Graduate School, 1966; PhD, 1970.

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.

Retired Faculty

Aldrich, Benjamin M.
Bontrager, Ralph L.
Burgess, L. Phyllis
Carson, Doris M.
Chrisman, Paul G.
Comstock, George A.
Cowles, Josephine M.
Cross, Laura M.
Doig, J. Robert, Jr.
Dralle, Lewis A.
Duerksen, George N.
Froning, Dorothy Gardner
Fugate, Josephine B.
Gerling, Amy G.
Gossett, Lucille
Haines, Forrest D.
Hammond, Geraldine
Hinton, Evelyn A.
Holman, Carol Schowalter
Homburger, Richard H.
Jackson, Bill
Jamison, Ines
Knight, Dorothy M.
Knight, Kenneth C.
Linscheid, Harold W.
Lindquist, Emory
Malone, Henry H.
Malone, Marjorie M.
Mood, Robert Gibbs
Mullikin, Margaret D.
Nelson, Ennice D.
Newman, Arthur N.
O'Harra, Downing P.
Paddock, Beatrice
Parker, Albert R.
Pease, Beatrice Sanford
Powell, Jackson O.
Pronko, N. H.
Risser, Arthur C.
Robertson, James P.
Ryjdord, John
Santos, Bienvenido N.
Schoener, Wilhelmina
Sherman, Dorothy M.
Simoni, John P.
Small, Blanche L.
Snodgrass, Fritz M.
Strange, John M.
Taggart, Gladys Martha
Tasch, Paul
Teal, Mary Jane Woodard
Tuttle, Edward H.
Van Keuren, Katharine
Walker, Margaret L.
Wall, Lillian A.
Wallingford, Frances A.
Watson, Tully F.
Wilkes, Mary Nell
Wood, Curtise L.
Wrestler, Ferna E.
Wuertz, Clara L.
Zuercher, Victor H.

Noel, O. Carroll
O'Harra, Downing P.
Paddock, Beatrice
Parker, Albert R.
Pease, Beatrice Sanford
Powell, Jackson O.
Pronko, N. H.
Risser, Arthur C.
Robertson, James P.
Ryjdord, John
Santos, Bienvenido N.
Schoener, Wilhelmina
Sherman, Dorothy M.
Simoni, John P.
Small, Blanche L.
Snodgrass, Fritz M.
Strange, John M.
Taggart, Gladys Martha
Tasch, Paul
Teal, Mary Jane Woodard
Tuttle, Edward H.
Van Keuren, Katharine
Walker, Margaret L.
Wall, Lillian A.
Wallingford, Frances A.
Watson, Tully F.
Wilkes, Mary Nell
Wood, Curtise L.
Wrestler, Ferna E.
Wuertz, Clara L.
Zuercher, Victor H.
Adjunct Faculty—Fall, 1982

Abbas, Dilawar H.—Physician’s Assistant
Abshire, Patsy—Dental Hygiene
Adair, M. Kathleen—Student Affairs
Adams, Chris—Respiratory Therapy
Alexander, Holly—Medical Technology and Cytotechnology
Allen, Mark L.—Communicative Disorders and Sciences
Allison, Carol A.—Physical Therapy
Ambrose, Gayle—Physical Therapy
Anderson, Edward—Graphic Design
Armstrong, Janet—Medical Technology and Cytotechnology
Arnold, Jacqueline J.—Respiratory Therapy
Arterburn, Joan S.—Physical Therapy
Bachman, Greg—Physical Therapy
Bachman, Ruth—Physical Therapy
Baldwin, Marcia—Medical Technology and Cytotechnology
Ball, Ed—Nurse Clinician
Barb, Dale—Physical Therapy
Barden, Bobbi K.—Respiratory Therapy
Barlow, Diedra—Physical Therapy
Barr, Jane L.—Respiratory Therapy
Barto, Bette—Nursing
Barton, Nancy—Nursing
Bays, Sylvia—Medical Technology and Cytotechnology
Beadle, Kathy—Medical Technology and Cytotechnology
Beard, Alice—Medical Technology and Cytotechnology
Bechtel, Charles—Physical Therapy
Begnoche, Brad—Physical Therapy
Benson, Beverly—Nursing
Blackwell, Mark J.—Physical Therapy
Blanner, Patricia Ann—Physical Therapy
Bloom, Carolyn—Physical Therapy
Bolinger, Marjorie B.—Medical Technology and Cytotechnology
Bouillet, Karen F.—Physical Therapy
Bourey, Ann—Physical Therapy
Brenneman, Frank S.—Mathematics
Brenner, Carolyn—Medical Technology and Cytotechnology
Britton, Regina—Graphic Design
Broberg, L. Eileen—Medical Technology and Cytotechnology
Brown, Ron—Medical Technology and Cytotechnology
Brown, Shirley A.—Medical Technology and Cytotechnology
Brungardt, Rosie—Medical Technology and Cytotechnology
Bue, Gary D.—Respiratory Therapy
Bugg, Gary—Health Administration and Education
Burger, Pamela A.—Respiratory Therapy
Burns, Karen—Physical Therapy
Butin, J. Walker—Physician’s Assistant
Byrne, Robert—Respiratory Therapy
Caliendo, Daniel J.—Health Administration and Education
Calvert, Kathryn—Medical Technology and Cytotechnology
Carlton, Frederick—Dental Hygiene
Carmody, John—Religion
Chambers, Barbara—Medical Technology and Cytotechnology
Chard, Frederick—Physician’s Assistant
Cho, Sechin—Physician’s Assistant
Christian, Connie—Medical Technology and Cytotechnology
Clark, Edward Eugene—Finance
Clements, Donna—Nursing
Coats, Linda J.—Physical Therapy
Coffeen, Linda—Physical Therapy
Colby, Charles Chris—Physical Therapy
Colby, Jennifer A.—Physical Therapy
Collier, H. William—Health Administration and Education
Collins, Ronald—Medical Technology and Cytotechnology
Concho, Vera Ann—Medical Technology and Cytotechnology
Cook, Everett L.—Aeronautical Engineering
Cook, Lloyd—Respiratory Therapy
Cook, Virginia P.—Medical Technology and Cytotechnology
Cornfield, Charles S.—Respiratory Therapy
Cornfield, Jaquie M.—Respiratory Therapy
Cossman, F. Price—Physician’s Assistant
Covert, Michael H.—Health Administration and Education
Crooks, Connie—Respiratory Therapy
Davis, A. B.—Health Administration and Education
Davis, Gordon A.—Anthropology
Davis, William—Physical Therapy
Debacher, Colleen A.—Medical Technology and Cytotechnology
Deiter, Sherry K.—Medical Technology and Cytotechnology
Denton, Eugene H.—Urban Studies
Diamond, O. Patricia—Nursing
Dickey, Fred M.—Electrical Engineering
Diener, Clayton H.—Respiratory Therapy
Dinsmore, Ann E.—Physical Therapy
Doege, Ken—Medical Technology and Cytotechnology
Domen, Iris J.—Nurse Clinician
Donald, Mary Kay—Nursing
Donatelle, E. P.—Nurse Clinician
Donnelly, Paula—Physical Therapy
Dorsey, Crista C.—Physical Therapy
Doveton, J. H.—Geology
Draper, David J.—Communicative Disorders
Drees, Brenda—Physical Therapy
Drevets, Curtis—Respiratory Therapy
Dubois, Rojean—Nurse Clinician
Eagleton, Beth—Nursing
Ehrlich, Robert—Geology
Ellis, Joyce F.—Physical Therapy
Farmer, Mike—Physical Therapy
Fetterhoff, Jon—Physical Therapy
Finlayson, Susan B.—Physical Therapy
Fleming, Forney Withers—Health Administration and Education
Fox, Debra J.—Respiratory Therapy
Fraser, Gaylene—Nurse Clinician
Fry, Velma J.—Medical Technology and Cytotechnology
Funke, Judy—Respiratory Therapy
Gabbert, Jane—Physical Therapy
Galichia, Joseph P.—Health Administration and Education
Gaudreau, Pamela—Dental Hygiene
Gavin, William J.—Communicative Disorders
George, Ann—Physical Therapy
Geren, Stephany L.—Physical Therapy
Geyer, Joyce R.—Physical Therapy
Giblin, Richard—Respiratory Therapy
Gilmartin, Richard C.—Health Science
Goehring, Meri—Physical Therapy
Gottron, Kimberly A.—Respiratory Therapy
Hahn, Douglas R.—Biological Sciences
Hancock, Alan C.—Administration of Justice
Hanrahan, Susan A.—Physical Therapy
Harder, Susan—Medical Technology and Cytotechnology
Harris, Ann—Medical Technology and Cytotechnology
Hart, Dillis—Respiratory Therapy
Hartig, Sandra J.—University College Dean’s Office
Hartley, Marilyn—Nursing
Harvey, Julie—Physical Therapy
Hashbarger, Jim—Medical Technology and Cytotechnology
Hawley, Raymond G.—Physician’s Assistant
Heeb, Joseph A.—Health Administration and Education
Heinicke, James—Health Administration and Education
Henke, Alan R.—Respiratory Therapy
Hiskett, Evelyn—Respiratory Therapy
Hoefling, Anita—Respiratory Therapy
Hogan, Judy—Physical Therapy
Holden, David M.—Nurse Clinician
Holmes, Marty—Physical Therapy
Holmgren, John H.—Health Administration and Education
Horning, Nonya—Respiratory Therapy
Hudson, Terri E.—Physical Therapy
Huebert, Lois—Physical Therapy
Huffman, William H.—Physical Therapy
Hull, Heather—Nurse Clinician
Hunt, Kenneth L.—Respiratory Therapy
Jackson, Bill—Graphic Design
Jackson, Carolyn—Medical Technology and Cytotechnology
Jantz, Marcella—Nurse Clinician
Jeffers, Jeanette M.—Nursing
Jennings, Ken W.—Medical Technology and Cytotechnology
Johnson, Roseann—Physical Therapy
Johnson, Sandra V.—Physical Therapy
Jonas, Jack—Industrial Engineering
Jones, Channie—Physical Therapy
Jones, Kevin S.—Physical Therapy
Kellogg, Gwen L.—Physical Therapy
Kendall, Denise D.—Physical Therapy
Kenyon, J. Andrew, Jr.—Studio Arts
Kincaid, Julie—Medical Technology and Cytotechnology
Kiter, Jan—Respiratory Therapy
Kleffner, Frank R.—Communicative Disorders
Kodandapani, Kolar L.—Computer Science
Koelhn, Dixie L.—Physical Therapy
Krebs, Julie—Nurse Clinician
Krouse, Susan K.—Physical Therapy
Lay, Lawrence—Health Administration and Education
Lazar, Harry—Health Science
Leiter, John—Medical Technology and Cytotechnology
Letourneau, Annette M.—Physical Therapy
Lewis, Cindy Hamilton—Physical Therapy
Lewis, Jerri—Physical Therapy
Lies, Michael—Dental Hygiene
Littell, James—Health Administration and Education
Little, Carolyn—Medical Technology and Cytotechnology
Locke, Deb—Physical Therapy
Loehr, Kathleen A.—Physical Therapy
Love, Gary W.—Medical Technology and Cytotechnology
Lowman, Douglas—Dental Hygiene
Luehring, Shari K.—Physical Therapy
Lunsford, Jackie—Medical Technology and Cytotechnology
Lunt, Robert D.—Respiratory Therapy
MacDonald, Patricia L.—Health Administration and Education
Mainzer, Linda—Respiratory Therapy
Manley, Bill—Graphic Design
Manson, Becky—Physical Therapy
Marsh, Henry O.—Physician’s Assistant
Martin, Mary Jo—Physical Therapy
Marymount, Jesse H.—Medical Technology and Cytotechnology
Mathews, Dianna L.—Physical Therapy
Matson, Dixie—Medical Technology and Cytotechnology
McCleary Jerome M.—Respiratory Therapy
McElfresh, Roberta—Physical Therapy
McEnroe, Paul—Physical Therapy
McNeill, Kelli—Physical Therapy
McNutt, Paula—Medical Technology and Cytotechnology
McReynolds, Patsy—Medical Technology and Cytotechnology
Medley, Carol—Physical Therapy
Menninger, William Walter—Administration of Justice
Mills, George—Medical Technology and Cytotechnology
Mostowitz, Pat Harris—Physical Therapy
Myers, Ken—Respiratory Therapy
Naccarato, David—Computer Science
Nance, M. Louise—Medical Technology and Cytotechnology
Neal, Donna D.—Physical Therapy
Nelson, Keith—Medical Technology and Cytotechnology
Neu, Robert—Mathematics
Newton, Diane—Studio Arts
Noller, Mary Kathleen—Physical Therapy
Nossaman, Janis—Medical Technology and Cytotechnology
O’Brien, Robert J.—Health Science
Oatsdean, Joetta S.—Physical Therapy
Oduio, Perlita—Physician’s Assistant
Oliver, Carolyn Ann—Physical Therapy
Oswald, Ves—Physical Therapy
Pamperin, Catherine—Physical Therapy
Panek, Marilyn—Respiratory Therapy
Park, Wesley—Dental Hygiene
Patton, Marilee C.—Physical Therapy
Pennington, Katherine—Physician’s Assistant
Peterson, Joleen C.—Physical Therapy
Peterson, Susan S.—Physical Therapy
Pitzner, Violet—Graphic Design
Player, Jeanette M.—Nursing
Poling, Terry L.—Nurse Clinician
Pollard, Stephen—Respiratory Therapy
Postlethwaite, Dorothy—Medical Technology and Cytotechnology
Randall, George R.—Communicative Disorders
Rapp, Reva J.—Medical Technology and Cytotechnology
Rawlings, Jacqueline S.—Physical Therapy
Rawlins, Timothy D.—Respiratory Therapy
Reals, William J.—Medical Technology and Cytotechnology
Rebolz, Marie—Physical Therapy
Reed, D. Cramer—Health Administration and Education
Rees, Douglas—Physical Therapy
Regehr, Jerry—Respiratory Therapy
Reinert, Bernard E.—Physical Therapy
Rempel, Richard S.—Mathematics
Reno, Judy—Nurse Clinician
Reynolds, Jor Jean—Medical Technology and Cytotechnology
Richard, Deborah—Medical Technology and Cytotechnology
Richmond, Brenna C.—Physical Therapy
Riley, Ronald Ray—Dental Hygiene
Robinson, Charlene—Nurse Clinician
Roettger, Richard—Physical Therapy
Rose, Shelby—Medical Technology and Cytotechnology
Ross, Cheryl Lynn—Medical Technology and Cytotechnology
Ross, James—Medical Technology and Cytotechnology
Ross, Ruth Joanne—Medical Technology and Cytotechnology
Ruedebusch, Virginia L.—Urban Studies
Rupp, Judy—Medical Technology and Cytotechnology
Sanborn, Wanda K.—El Dorado Archaeological Project
Sanders, Jo—Respiratory Therapy
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Schickling, Anne—Nursing
Schild, Royce D.—Physical Therapy
Schmidt, Kathleen M.—Physical Therapy
Schukman, Mark—Physical Therapy
Seigh, William—Dance
Shandera, Stephen Paul—Physical Therapy
Shea, Mary Therese—Nursing
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Small, Rita Maxine—Respiratory Therapy
Smith, Charles L.—Physical Therapy
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Smith, Timothy—Respiratory Therapy
Spahn, Richard—Respiratory Therapy
Sphatt, Thomas R.—Respiratory Therapy
Sporn, E. Ray—Physical Therapy
Squire, Charles—Dental Hygiene
Staehele, Joseph F.—Physical Therapy
Statler, Christine Ann—Physical Therapy
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Sutter, Susan J.—Physical Therapy
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Swafford, Bonnie B.—Physical Therapy
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Twist, Kevin—Respiratory Therapy
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White, Marguerite—Respiratory Therapy
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Wilson, Ann M.—Physical Therapy
Wilson, Kathleen—Physical Therapy
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Wingert, Karen—Physical Therapy
Witsman, Forest Tim—Urban Studies
Wooden, Lisa—Dental Hygiene
Woods, Julia B.—Medical Technology and Cytotechnology
Wright, Becky—Medical Technology and Cytotechnology
Wright, Steven—Medical Technology and Cytotechnology
Yeck, Elsie—Health Administration and Education

**Applied Music Instructors—Fall, 1982**

Janet Birchenough-Koehn
Judy Fear
Tom Harder
Janet Heise
Nancy Hercher
Glenn Holmes
Janice Johnson
Brad Jackson

Gay Jones
Nancy Luttrell
Kathleen Maxwell
William F. Pischnotte
Linda Starkey
Keith Stucky
Mildred Unrau
Lecturers—Fall, 1982

Aggarwal, Sarvan K.—Computer Science
Alberts, Ruby W.—Instructional Services
Almes, David—Industrial Education
Anderson, Edward R.—Graphic Design
Antrim, Edward L.—Industrial Education
Argetsinger, Jack E.—Industrial Education
Avery, Nancy S.—English Composition
Barger, Everett F.—Administration of Justice
Barlow, William M.—Chemistry
Barnes, Ethne J.—Nurse Clinician
Barney, Louie L.—Administration of Justice
Baugartner, Donald O.—Administration of Justice
D. Wayne Becker—Industrial Education
Blankenship, Elmer T.—Journalism
Bouska, Charles A.—Computer Science
Breeden, Tamara O.—Learning Resources Center
Bronson, Jack—Instructional Services
Brueck, Sylvia T.—Women’s Studies, Liberal Arts
Buchanan, Verna E.—Sociology
Burgert, Doris P.—English
Cardenas, Michael P.—Mathematics
Chorba, Frank J.—Speech Communication
Clevenger, Richard S.—Computer Science
Coakley, Marie L.—Instructional Services
Coffman, Madeline—Instructional Services
Cowen, Hugh A.—Personnel Services
Cris, C. Barthur P.—Sociology
Crooms, Charles G.—Minority Studies
Darnell, Richard A.—Administration of Justice
Dickey, Fred M.—Physics
Diehl, Richard E.—Administration of Justice
Dodez, Orin—Personnel Services
Duerksen, George N.—Industrial Education
Eastburn, John H.—Computer Science
Elango, Ranjay.—Aeronautical Engineering
Elliott, Jean B.—Minority Studies
Ellis, William C.—Engineering Technology
Ewick, C. David—English
Farley, Sara A.—English
Fear, Judith A.—Music Performance
Flann, Lynnette M.—Geology
Focht, Joyce C.—College of Liberal Arts Dean’s Office
Fox, Brian—Engineering Technology
Fox, Glenn J.—Mathematics

Friederich, Jeffrey A.—Health Administration and Education
Friedman, Peggy L.—Instructional Services
Gates, James A.—Personnel Services
Georgoulakis, James M.—Administration of Justice
Gilliland, William J.—Geology
Goodwin, E. Allen—Learning Resources Center
Goodwin, William M.—Instructional Services
Gragert, April L.—Instructional Services
Guliani, Jasbir—Mathematics
Hamilton, Stella M.—Mathematics
Hancock, Alan C.—Administration of Justice
Henderson, Roy B.—Physician’s Assistant
Hesser, Susan J.—Computer Science
Hicks, Virlene H.—Instructional Services
Hiebert, Timothy J.—Mathematics
Hilt, August W.—Computer Science
Hilt, Mark A.—University Dance
Holmes, Glenn—Music Performance
Hoover, Dennis D.—Electrical Engineering
Hoover, Justin A.—Physical Therapy
Hunter, Bruce M.—Administration of Justice
Isaac, Mary E.—Instructional Services
Issa, Tareq N.—Mathematics
Jackson, Brad Lee—University Dance
Johnson, H. Dean—Mathematics
Johnston, Dean W.—Personnel Services
Jones, Larry E.—Electrical Engineering
Jones, Sally A.—Intensive English Language Center
Kash, Rej—Administration of Justice
Kelley, Marjorie J.—University Dance
Klein, Mary L.—English
Kust, Randall J.—Studio Arts
Lawless, Michael R.—Administration of Justice
Leonard, Mary M.—Administration of Justice
Lincoln, Diane M.—Studio Arts
Long, Lesley—Romance Languages
Love, Karen G.—English
Lubatkin, Michael—Management
Luttrel, Nancy K.—Music Performance
Mann, Susan M.—Respiratory Therapy
Martin, Thomas W.—Mathematics
Matsuura, Noriko—German
Maya, Mary J.—Physical Education
McCarthy, C. D.—Administration of Justice
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McDavitt, Billie L.—Communicative Disorders
McEachern, John L.—Industrial Education
Means, Nancy K.—Studio Arts
Meyer, Bertha R.—English
Mills, Irmgard F.—Instructional Services
Minard, Barbara J.—Medical Technology and Cytotechnology
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Moore, Stephen P.—Dental Hygiene
Moran, C. Rodger—Computer Science
Morton, John R.—Personnel Services
Myers, Charlene—Instructional Services
Myers, James E.—Geology
Nathan, C. Henry—Journalism
Neumann, Richard L.—English Composition
Nordyke, Rebecca S.—Speech Communication
Novacek, Greg R.—Physics
O’Leary, Owen N.—Industrial Education
Oehm, John S.—Studio Arts
Parks, Karen—Administration of Justice
Parsons, Greta S.—Instructional Services
Petersen, Dixie L.—Instructional Services
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Randol, Philbert W.—Mathematics
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Riley, Ronald Ray—Dental Hygiene
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Rogers, David—Computer Science
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Schmidt, Barbara J.—Health Administration and Education
Schwan, Suzanne S.—Speech Communication
Scott, Margaret K.—English
Smallwood, Kathleen—Studio Arts
Smith, Douglas P.—Administration of Justice
Sowers, Mattie Chari—Instructional Services
Stephens, Kenneth F.—Journalism
Stewart, Mildred H.—Instructional Services
Strawder, Vickie S.—University Dance
Stucky, Keith L.—Music Performance
Swanson, Kjersti—Mathematics
Taggart, Ernest A.—Mathematics
Taylor, Stephan L.—Computer Science
Teall, Mary Jane—Speech Communication
Thain, Linda J.—Intensive English Language Center
Troutman, L. Jean—Computer Science
Tucker, William W.—Administration of Justice
Vollmer, George E.—Musicology-Composition
Walker, Darold D.—Computer Science
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Zima, Joseph—Administration of Justice
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