
Central Missouri State University 1998-2000 General Catalog

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Greetings

Welcome to Central Missouri State University. Please take the time to become familiar with this University catalog as it will help you become better acquainted with our institution and allow you to learn about the advantages of studying here.

As a major comprehensive university with a statewide mission in academic technology, Central offers over 150 areas of study. But more importantly, we provide an atmosphere of personalized attention and individualized instruction. Our faculty and staff are dedicated to working with you to help you accomplish your career goals while providing a learning environment which is enriching, fun and enjoyable.

Your years at Central will be exciting and productive. Students from all over the nation and world help to make the learning environment positive and friendly.

Our University focuses upon strong baccalaureate programs designed to help all students obtain skills which are related to lifelong success. Additionally, Central offers an extensive array of graduate programs. Our graduate offerings aid people who seek greater expertise in a discipline or who are pursuing a career change.

Central has an excellent reputation as a teacher education institution, but we are also widely known for our international education, technology, and professional programs. We have a program to fit your needs.

We hope that you enjoy your time at Central, and we are delighted to be of service to you.

ED ELLIOTT
President

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4 Calendar

CALENDAR 1998-2000

SUMMER SESSIONS 1998, MAY 13--AUGUST 4*

(Payment of fees must be made or a payment plan must be finalized 10 calendar days before the beginning of classes)

May 12	Tuesday, 8 a.m., housing facilities open.
May 13	Wednesday, 1ST SIX-WEEK Session begins.
May 18	Monday, last day for changing 1ST SIX-WEEK class schedules.
May 25	Monday, Memorial Day Holiday, CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
May 28, 29	Thursday, Friday, Professional Development Days.
June 1	Monday, Fall Semester class schedules are CANCELED for students who are enrolled but have not confirmed their attendance.
June 9	Tuesday, last day to drop classes for 1ST SIX-WEEK Session with a W recorded.
June 12	Friday, 8 a.m., EIGHT-WEEK students move into university housing.
June 15	Monday, EIGHT-WEEK Session begins.
June 17	Wednesday, last day for changing EIGHT-WEEK class schedules.
June 23	Tuesday, 1ST SIX-WEEK Session Final Examinations.
June 23	Tuesday, 8 a.m., 2ND SIX-WEEK students move into university housing.
June 24	Wednesday, 2ND SIX-WEEK Session begins.
June 29	Monday, last day for changing 2ND SIX-WEEK class schedules.
July 3, 4	Friday, Saturday, Independence Day Holiday, CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
July 16	Thursday, last day to drop classes for EIGHT-WEEK and 2ND SIX-WEEK Sessions with a W recorded.
Aug. 3, 4	Monday, Tuesday, 2ND SIX-WEEK and EIGHT-WEEK Sessions Final Examinations.

FALL SEMESTER 1998, AUGUST 26--DECEMBER 19*

(Payment of fees must be made or a payment plan must be finalized 10 calendar days before the beginning of classes)

June 1	Monday, Fall Semester class schedules are CANCELED for students who are enrolled but have not confirmed their attendance.
Aug. 23	Sunday, 8 a.m., residence halls open.
Aug. 24, 25	Monday, Tuesday, Faculty Planning.
Aug. 26	Wednesday, 8 a.m., classes begin.
Sept. 1	Tuesday, 5 p.m., Last day for Fall Semester enrollment and changing classes.
Sept. 7	Monday, Labor Day Holiday, CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
Sept. 30	Wednesday, 5 p.m., last day to drop first half semester classes with a W recorded.
Oct. 16	Friday, District Teachers Meeting, CLASSES DISMISSED.
Oct. 16	Friday, Professional Development Day.
Nov. 5	Thursday, 5 p.m., last day to drop semester classes with a W recorded.
Nov. 23	Monday, 5 p.m., last day to drop second half semester classes with a W recorded.
Nov. 25	Wednesday, 6 p.m., residence halls close and classes scheduled after 5 p.m. are dismissed.
Nov. 26, 27	Thursday, Friday, Thanksgiving Holidays, CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
Nov. 29	Sunday, noon, residence halls open.
Dec. 14, 15, 16, 17, 18	Monday, Tuesday, Wednesday, Thursday, Friday, Fall Semester Final Examinations (includes second half semester classes).
Dec. 18	Friday, 6 p.m., residence halls close.
Dec. 19	Saturday, Commencement
Dec. 24-Jan. 3	Winter Holidays, UNIVERSITY OFFICES CLOSED.

SPRING SEMESTER 1999, JANUARY 11--MAY 8*

(Payment of fees must be made or a payment plan must be finalized 10 calendar days before the beginning of classes)

Jan. 7, 8	Thursday, Friday, Professional Development Days.
Jan. 8	Friday, 8 a.m., residence halls open.
Jan. 11	Monday, 8 a.m., classes begin.
Jan. 15	Friday, 5 p.m., last day for Spring Semester enrollment and changing classes.
Jan. 18	Monday, Martin Luther King Holiday, CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
Feb. 15	Monday, 5 p.m., last day to drop first half semester classes with a W recorded.
Mar. 1	Monday, application priority date for students to mail 1999-2000 Federal financial aid application to the National Processor (pre-addressed envelope with application).
Mar. 12	Friday, 6 p.m., residence halls close.
Mar. 15-19	Monday through Friday, Spring Break, CLASSES DISMISSED.
Mar. 21	Sunday, noon, residence halls open.
Mar. 29	Monday, 5 p.m., last day to drop Semester classes with a W recorded.
Apr. 14	Wednesday, 5 p.m., last day to drop second half semester classes with a W recorded.
May 3, 4, 5, 6, 7	Monday, Tuesday, Wednesday, Thursday, Friday, Spring Semester Final Examinations (includes second half semester classes).
May 7	Friday, 6 p.m., residence halls close.
May 8	Saturday, Commencement.

SUMMER SESSIONS 1999, MAY 12--AUGUST 4*(Payment of fees must be made or a payment plan must be finalized 10 calendar days before the beginning of classes)

May 11	Tuesday, 8 a.m., housing facilities open.
May 12	Wednesday, 1ST SIX-WEEK Session begins.
May 17	Monday, last day for changing 1ST SIX-WEEK class schedules.
May 20, 21	Thursday, Friday, Professional Development Days.
May 31	Monday, Memorial Day Holiday, CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
June 1	Tuesday, Fall Semester class schedules are CANCELED for students who are enrolled but have not confirmed their attendance.
June 8	Tuesday, last day to drop classes for 1ST SIX-WEEK Session with a W recorded.
June 11	Friday, 8 a.m., EIGHT-WEEK students move into university housing.
June 14	Monday, EIGHT-WEEK Session begins.
June 16	Wednesday, last day for changing EIGHT-WEEK class schedules.
June 22	Tuesday, 1ST SIX-WEEK Session Final Examinations.
June 22	Tuesday, 8 a.m., 2ND SIX-WEEK students move into university housing.
June 23	Wednesday, 2ND SIX-WEEK Session begins.
June 28	Monday, last day for changing 2ND SIX-WEEK class schedules.
July 4, 5	Sunday, Monday, Independence Day Holiday, CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
July 19	Monday, last day to drop classes for EIGHT-WEEK and 2ND SIX-WEEK Sessions with a W recorded.
Aug. 3, 4	Tuesday, Wednesday, 2ND SIX-WEEK and EIGHT-WEEK Sessions Final Examinations.

FALL SEMESTER 1999, AUGUST 25--DECEMBER 18*(Payment of fees must be made or a payment plan must be finalized 10 calendar days before the beginning of classes)

June 1	Tuesday, Fall Semester class schedules are CANCELED for students who are enrolled but have not confirmed their attendance.
Aug. 22	Sunday, 8 a.m., residence halls open.
Aug. 23, 24	Monday, Tuesday, Faculty Planning.
Aug. 25	Wednesday, 8 a.m., classes begin.
Aug. 31	Tuesday, 5 p.m., last day for Fall Semester enrollment and changing classes.
Sept. 6	Monday, Labor Day Holiday, CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
Sept. 29	Wednesday, 5 p.m., last day to drop first half semester classes with a W recorded.
Oct. 15	Friday, District Teachers Meeting, CLASSES DISMISSED.
Oct. 15	Friday, Professional Development Day.
Nov. 4	Thursday, 5 p.m., last day to drop semester classes with a W recorded.
Nov. 22	Monday, 5 p.m., last day to drop second half semester classes with a W recorded.
Nov. 24	Wednesday, 6 p.m., residence halls close and classes scheduled after 5 p.m. are dismissed.
Nov. 25, 26	Thursday, Friday, Thanksgiving Holidays, CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
Nov. 28	Sunday, noon, residence halls open.
Dec. 13, 14, 15, 16, 17	Monday, Tuesday, Wednesday, Thursday, Friday, Fall Semester Final Examinations (includes second half semester classes).
Dec. 17	Friday, 6 p.m., residence halls close.
Dec. 18	Saturday, Commencement
Dec. 24-Jan. 2	Winter Holidays, UNIVERSITY OFFICES CLOSED.

SPRING SEMESTER 2000, JANUARY 10--MAY 6*(Payment of fees must be made or a payment plan must be finalized 10 calendar days before the beginning of classes)

Jan. 6, 7	Thursday, Friday, Professional Development Days.
Jan. 7	Friday, 8 a.m., residence halls open.
Jan. 10	Monday, 8 a.m., classes begin.
Jan. 14	Friday, 5 p.m., last day for Spring Semester enrollment and changing classes.
Jan. 17	Monday, Martin Luther King Holiday, CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
Feb. 14	Monday, 5 p.m., last day to drop first half semester classes with a W recorded.
Mar. 1	Wednesday, application priority date for students to mail 2000-2001 Federal financial aid application to the National Processor (pre-addressed envelope with application).
Mar. 17	Friday, 6 p.m., residence halls close.
Mar. 20-24	Monday through Friday, Spring Break, CLASSES DISMISSED.
Mar. 24	Friday, Spring Holiday, UNIVERSITY OFFICES CLOSED.
Mar. 26	Sunday, noon, residence halls open.
Mar. 27	Monday, 5 p.m., last day to drop Semester classes with a W recorded.
Apr. 12	Wednesday, 5 p.m., last day to drop second half semester classes with a W recorded.
May 1, 2, 3, 4, 5	Monday, Tuesday, Wednesday, Thursday, Friday, Spring Semester Final Examinations (includes second half semester classes).
May 5	Friday, 6 p.m., residence halls close.
May 6	Saturday, Commencement.

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SUMMER SESSIONS 2000, MAY 10--AUGUST 3*

(Payment of fees must be made or a payment plan must be finalized 10 calendar days before the beginning of classes)

May 9	Tuesday, 8 a.m., housing facilities open.
May 10	Wednesday, 1ST SIX-WEEK Session begins.
May 15	Monday, last day for changing 1ST SIX-WEEK class schedules.
May 18, 19	Thursday, Friday, Professional Development Days.
May 29	Monday, Memorial Day Holiday, CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
June 1	Thursday, Fall Semester class schedules are CANCELED for students who are enrolled but have not confirmed their attendance.
June 6	Tuesday, last day to drop classes for 1ST SIX-WEEK Session with a W recorded.
June 9	Friday, 8 a.m., EIGHT-WEEK students move into university housing.
June 12	Monday, EIGHT-WEEK Session begins.
June 14	Wednesday, last day for changing EIGHT-WEEK class schedules.
June 20	Tuesday, 1ST SIX-WEEK Session Final Examinations.
June 20	Tuesday, 8 a.m., 2ND SIX-WEEK students move into university housing.
June 21	Wednesday, 2ND SIX-WEEK Session begins.
June 26	Monday, last day for changing 2ND SIX-WEEK class schedules.
July 3	Monday, CLASSES DISMISSED.
July 4	Tuesday, Independence Day Holiday, CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
July 18	Thursday, last day to drop classes for EIGHT-WEEK and 2ND SIX-WEEK Sessions with a W recorded.
Aug. 2, 3	Wednesday, Thursday, 2ND SIX-WEEK and EIGHT-WEEK Sessions Final Examinations.

To Call the University Operator Dial

660-543-4111

The Central Community Creed

Choosing to become a citizen of Central Missouri State University implies an acceptance of and willingness to contribute to the common goals and purposes of the community. The Central Community Creed outlines the principles which guide the creation and maintenance of desired community at Central. The Creed also provides a framework for individual behaviors which help build our vision.

As a member of the Central community, I will join in building . . .

a **learning** community by striving for academic and personal excellence and by promoting the value of education and lifelong learning

an **open** community by creating and maintaining effective channels of communication and by accepting and respecting individuals whose values, ideas, beliefs, and life experiences may be different from my own

a **caring** community by seeking opportunities to serve and by supporting and affirming the well-being of others

a **just** community by behaving in ways which are ethical, honest, equitable, trustworthy, civil and respectful

a **disciplined** community by seeking to understand and fulfill personal responsibilities, by upholding University guidelines, and by working toward self and community betterment

a **celebrative** community by observing and honoring existing traditions and by seeking and creating opportunities to enrich and define Central

a **purposeful** community by helping to shape and achieve the common goals of Central Missouri State University.

SECTION I

GENERAL INFORMATION, SERVICES, FACILITIES

Introduction

Your Catalog

Your Central Missouri State University catalog contains a wealth of information for students and faculty members. Examine it carefully. Organized for your convenience, it has four main sections: I, General Information, Services and Facilities; II, Academic Programs and Courses; III, Policies and Regulations; and IV, University Personnel.

This catalog is a reliable guide for entering the University, reviewing available programs of study, planning a program, selecting courses, and meeting graduation requirements. If you are a student entering the University, keep this catalog. To the extent possible, the University will accept the degree requirements in it for a five-year period. (See Section III, Date of Catalog for Checking Degree Requirements.)

Since the policies and programs of the University are constantly changing, no catalog can be completely up to date, even when it is published. Students, therefore, should review their programs periodically with an Academic Advisor and with departmental advisors to allow for necessary changes.

The University

Central Missouri State University is located in Warrensburg, a west central Missouri community of 15,300, fifty miles southeast of Kansas City at the junction of Highways 50 and 13. It is easily reached by automobile, Trailways Bus, or AMTRAK.

Central has provided more than a century of service, having been founded in 1871 as the State Normal School for the Second Normal District of Missouri. Formal accreditation and continued growth led the campus to be recognized as Central Missouri State Teachers College in 1919, Central Missouri State College in 1946, and Central Missouri State University in 1972. The University's statement of Mission and Goals may be found in Section III. Central

is an Affirmative Action EEO/ADA institution. (See Section III.)

Including its airport and other special facilities, the University occupies more than a thousand acres. It offers over 150 undergraduate and graduate programs for its approximately 12,000 students. Its facilities are exceptional—not only its modern classrooms, laboratories, technical developments, and residence halls, but also its airport, Pertle Springs Park, and recreational and sports areas. (See Services for Students and Other Services and Facilities.)

With a University motto of "Education for Service," it is not surprising that the University's faculty members have earned a reputation for teaching excellence, on and off campus. They have also distinguished themselves as scholars, achieving recognition in academic and professional organizations, in addressing learned societies, in performing in music and the arts, and in writing many books and journal articles.

Accreditations

Central is accredited by the North Central Association of Colleges and Schools*. In addition, it has the following specialized accreditations: Art baccalaureate and graduate programs, National Association of Schools of Art and Design; Aviation Technology baccalaureate, Council on Aviation Accreditation; Business baccalaureates and graduate program, The International Association for Management Education (AACSB); Chemistry baccalaureate, American Chemical Society; Drafting baccalaureate programs, American Design Drafting Association; Human Environmental Sciences baccalaureate program, American Dietetic Association; Manufacturing and Construction baccalaureate programs, National Association for Industrial Technology and American Council for Construction Education; Music baccalaureate and graduate programs, National Association of Schools of Music; Nursing baccalaureate program, National League for Nursing and the Missouri State Board of Nursing; Social Work baccalaureate program, Council on Social Work Education; Speech Pathology and Audiology masters program, American Speech-Language-Hearing Association; Teacher Education baccalaureate

*For information about NCA Accreditation, contact the North Central Association Commission on Institutions of Higher Education, 30 North La Salle Street, Suite 2400, Chicago, IL 60602. [800-621-7440; 312-263-7462 (fax)]

8 General Information

and graduate programs, National Council for Accreditation of Teacher Education and the Missouri Department of Elementary and Secondary Education.

The University has institutional membership in
American Association for Higher Education
American Association of State Colleges and Universities
American Association of University Women
American Council on Education
Association for Gerontology in Higher Education
Association of American Colleges and Universities
Association of Governing Boards of Universities
Center for Academic Integrity
Coalition for Positive Family Relationships
Council for Public Higher Education for Missouri
Council on Undergraduate Research
Council of Social Work Education
Kansas City Professional Development Council
Mid-America Intercollegiate Athletics Association
Missouri Academy of Science
Missouri School College Relations Committee
National Collegiate Athletic Association
National Council for Accreditation of Teacher Education
National Council of Educational Opportunity Associations
North Central Association of Colleges and Schools

Graduate Studies

Central offers graduate study toward Master of Arts, Master of Business Administration, Master of Science, Master of Science in Education, Education Specialist, Doctorate of Education and Doctor of Philosophy in Technology degrees. Students may also pursue non-degree graduate study.

An applicant must hold a bachelor's degree from an accredited college or university recognized by Central. However, qualified Central seniors may take graduate work by special arrangement. (See Undergraduate Enrollment in Graduate Courses.)

Students may obtain applications in the Office of Graduate Studies. For more information, contact the Dean of Graduate Studies, Humphreys 410, 660-543-4621.

Unless indicated otherwise, 4000-level courses are offered for either graduate or undergraduate credit.

Following is a list of graduate degree programs offered at Central:

Master of Arts
Art
Communication
Economics
English
History
Music
Sociology
Teaching English as a Second Language
Theatre
Master of Business Administration
Accounting Concentration
Finance Concentration
Information Systems Concentration
Management Concentration
Marketing Concentration
Master of Science
Agricultural Technology
Aviation Safety
Biology
Criminal Justice
Industrial Hygiene
Industrial Management
Industrial Technology
Industrial Vocational Technical Education
Library Science and Information Services
Mathematics
Occupational Safety Management
Physical Education: Exercise and Sport Science
Psychology
School Counseling
Social Gerontology
Speech Pathology and Audiology
Student Personnel Administration
Master of Science in Education
Adult Education
Elementary Education
K-12 Education
Secondary Education
Education Specialist
Administration
Curriculum and Instruction
Human Services
Doctorate of Education*
Educational Leadership
Doctorate of Philosophy*
Technology

*See the Graduate Catalog for information about the Doctorate programs.

Enrolling at Central Admission

From High School. Students graduating from accredited high schools who rank in the upper two-thirds of their graduating class, have completed the college core curriculum, and have an ACT composite score of 20-36 will be admitted to the University. Other applicants will be considered on an individual basis. All admitted students will be assessed for the purpose of placement in courses which will provide an appropriate challenge for their level of preparedness and enhance their opportunity for success.

Under special circumstances, high school juniors and seniors may enroll in Central classes. (See Enrollment of High School Students.)

From Other Colleges and Universities. Students who are in good standing at other accredited colleges and universities may apply for admission and transfer appropriate credit. (See Transfer of Credit.)

GED Applicants. General Education Development (GED) test scores may be used as a basis for admission to the University. (See GED Applications.)

Application Fee. A non-refundable application fee of \$25 must accompany the application. International students should remit \$50.

Academic Preparation

Years of experience reveal that students who select college preparatory coursework in high school enhance their potential for academic success in college. Students who meet the following criteria are academically prepared and better able to take advantage of the opportunities available at Central.

1. High school class rank in the upper half.
2. An ACT score of 20 or above.
3. At least 16 units of college preparatory work, including these courses:
 - a. Four units of English with an emphasis on writing skills.
 - b. Three units of mathematics (algebra and beyond).
 - c. Two units of science (one a laboratory course in biology, physics, or chemistry).

- d. Three units of social science.
- e. One unit of visual/performing arts.
- f. Three additional academic units selected from foreign language, mathematics, science, social science, English (language arts), speech, or debate.

How to Apply

During High School. Graduating high school students who wish to enter Central Missouri State University should apply for admission early in their senior year so that the admissions process may be completed well in advance of enrollment. Each student should submit the following credentials to the Office of Admissions:

1. A completed application for admission, including verification of class rank by counselor or principal.
2. An official transcript mailed directly from the high school to the University Office of Admissions.
3. American College Test (ACT) scores, including subscores and composite.
4. \$25 application fee.

After High School. Other students who have graduated from high school but have not attended a college/university should apply as early as possible. They should submit an application, \$25 application fee, and a final high school transcript.

From Other Colleges and Universities. Students who wish to transfer to Central from other accredited colleges and universities should (1) submit a completed application form with \$25 application fee and (2) arrange to have an official transcript sent to the Office of Admissions from each college or university previously attended.

GED Applications. Applicants should submit a completed application form with a \$25 application fee and a copy of the GED test scores. As soon as both documents are on file in the Office of Admissions, the University considers the applications on an individual basis.

How to Enroll

Beginning Freshmen. Students entering the University from high school attend one of the orientation sessions offered during the summer. At these sessions, students receive information about life on the Central campus and complete their enrollment for fall.

10 Admissions

Other Entering Students. All students go first to the Office of Admissions. When students have been notified that admission to the University has been granted, an appointment should be made at the Office of Academic Advisement to enroll for classes.

Readmission. Returning students who have been out of school less than a year complete an application for readmission and follow the procedure noted above for other entering students. Students who have been out of school a year or more fill out a new application form at the Office of Admissions. After review of their academic records to verify eligibility, they may proceed with enrollment.

Courses Taken for Transfer. Students who plan to transfer credit to another university should be careful to check that university's program requirements. Each institution sets its own requirements, and students are wise to choose transferable courses.

Undergraduate Enrollment in Graduate Courses

Graduating Central seniors may arrange, in their final semester of undergraduate study, to take courses for graduate credit, as long as their total load does not exceed 16 hours. To do so, each student submits an application for admission to Graduate School in advance of enrollment. Upon notification of admission to Graduate School, students enroll in the usual way for either undergraduate or graduate courses.

Senior-level Federal financial aid recipients should be aware that only those classes taken for **undergraduate** credit can be considered when determining the student's enrollment status (full-time, half-time, etc.) for disbursing undergraduate Federal financial aid.

Transfer of Credit to Central

Transfer From Other Colleges. In general, the University accepts transfer students from other accredited colleges/universities and evaluates their credit on the same bases used for Central students. Thus, admission requires students to be in good standing and to have a grade-point average of C (2.00) or better, computed by Central methods. With a GPA of less than 2.00, students may be considered on an individual basis.

Appeal of Transfer Credit. If, on admission to the University, a student wants to appeal the decision of Central Missouri State University in accepting the transfer of credit from another accredited Missouri institution of higher education, an established appeal process exists. This appeal process is articulated in the publication, Transfer of Credit From Accredited Missouri Institutions of Higher Education and can be obtained through the Office of Admissions.

Graduates of Two-Year Colleges.

Graduates of two-year colleges may transfer up to 64 semester hours of credit. Applicants who hold an Associate in Arts degree from an accredited two-year college may transfer full credit up to that limit and are considered to have met Central requirements in University Studies with the exception of one 3-hour course in Integrative Studies (Division III of the University Studies). Note also that the State of Missouri requires certain education courses that may need to be added for teacher certification. For those with degrees other than the AA, the University reviews transcripts and accepts applicable credit toward Central graduation requirements. Courses taken at a two-year college will not be applicable toward senior-hour requirements.

Federal Financial Aid. A student transferring to Central who wishes to receive Federal financial aid should request that a Financial Aid Transcript be sent to the Office of Financial Aid and Veteran Services from the college, university, or technical/trade school from which the student is transferring. This is a Federal requirement, even though no financial aid may have been received at the previous school. There will be no charge to comply. The Financial Aid Transcript must be received before any Federal financial aid can be processed for a transfer student.

Special Credit. Students may receive a maximum of 30 hours of special credit earned through examination or experience for a bachelor's degree or 15 hours for an associate degree. Included in special credit possibilities are Advanced Placement Examination (AP), International Baccalaureate (IB), College Level Examination Program (CLEP), Defense Activity for Non-Traditional Education Support (DANTES), official certifications and military service or training programs. (See Section III, Special Credit Assessments.)

International Student Admission

The Application Process. To apply for admission, international students file the following credentials with the Office of Admissions. Applicants sending applications from another country submit credentials at least three months before enrollment; those transferring from another institution in the United States, submit credentials at least one month before enrollment.

1. A completed application form.
2. Official (or notarized) transcripts in English from each high school or college previously attended.
3. Evidence of financial resources to attend a university in the U.S.
4. A brief statement describing educational objectives and career plans.
5. Evidence of proficiency in the English language.
6. \$50 application fee.

Demonstrating English Proficiency. For admission purposes, international students who use English as a second language may present any one of the following three alternatives as evidence of proficiency:

1. A Test of English as a Foreign Language (TOEFL) score of 500 or better for undergraduates, 550 for graduates and 565 for TESL.
2. Completion of 60 semester hours of satisfactory academic work in an accredited U.S. college or university.
3. Acceptable level of completion of program at Intensive English Language School.

During the orientation session, any student who has not received a baccalaureate from an accredited United States college is evaluated for oral and written proficiency and may be required to take special classes designed to improve communication skills.

Orientation. All international students admitted to Central for the first time are required to arrive on campus on a set date (five days prior to the first day of classes) for orientation and evaluation sessions.

Health Insurance. All international students are required to participate in the Student Health Insurance Program.

Federal Financial Aid. An international student may receive Federal financial aid, but **only** if the student is classified by the U.S. Immigration and Naturalization Service as an "eligible non-citizen" or "permanent resident." Documentation must be provided to the Office of Financial Aid and Veteran Services, Administration 316, to verify the student's status.

Enrollment of High School Students

Students Who Have Completed Graduation Requirements. High school students who have completed graduation requirements may apply for full-time admission to Central Missouri State University prior to high school graduation. In addition to all regular application requirements (See How to Apply), these students submit a letter of recommendation from a counselor or principal.

Seniors. High school seniors who can meet graduation requirements with less than a full load of classes may apply for admission to take one or more courses at Central if they can meet the following requirements:

1. Class rank in the upper half.
2. Recommendation from counselor or principal.
3. A plan for total class work not to exceed a full-time load.
4. Released time to take University classes.

The application process is the same as that for a full-time University student (See How to Apply).

Juniors. High school juniors may apply to take Central classes during the summer before their senior year if (1) they rank in the upper half of their classes and (2) are recommended by a counselor or principal.

Federal Financial Aid. High school students are not eligible to receive Federal financial aid for the classes taken at Central. All high school graduation requirements must be met and the student must be fully accepted for admission at Central, before any Federal financial aid can be authorized.

Servicemembers Opportunity Enrollment

Central Missouri State University is a Servicemembers Opportunity College (SOC) member. Once admitted to Central, active duty members of the military may earn an Associate degree or a Bachelor's degree on a contract basis, as follows:

1. Thirty semester hours are completed at Central.
2. All Central degree requirements are met.
3. Acceptable credits from other accredited colleges and universities are posted on the Central transcript as they are earned during the student's active tour of duty.
4. Up to 30 hours may be earned through CLEP, DANTES and/or military experience for bachelor's degrees, 15 hours for associate degrees.

12 Housing

Places to Live

Central Missouri State University requires first-year students to reside in University housing. For housing purposes, upperclass status is determined by the completion of 24 or more credit hours of course work, on-campus residence at Central for one academic year, or the student's being 21 years of age or older.

On-Campus Housing

Central Missouri State University provides a variety of on-campus housing opportunities. Except for freshmen, who must request permission to live in locations other than residence halls, on-campus housing is optional, but the accommodations attract a substantial number of upperclass students. Early application for housing is wise.

Arranging for Housing. Contact the Office of University Housing, L23 Ellis Complex, or call 660-543-4515 for applications and information. Assignments are made according to application date. A deposit of \$100 must accompany the application. Apartments will require an additional deposit of \$100 or \$200 (depending on location) prior to occupancy. This deposit may be forfeited for late cancellation, damage to University property, outstanding account or other agreement violations.

Residence Halls. Residence halls are located on the east and west sides of the campus. Students may choose from a variety of living options. Some halls are air conditioned.

Freshmen (under 21 years) are assigned to First-Year halls. These environments are carefully designed to help acclimate the new student to the Central campus. Special staffing, educational and social activities, faculty involvement, student governments, and access to a variety of campus resources create an environment where student success is emphasized. Limited single rooms are available for first-year students.

Students with 24 or more credit hours or those over 21 years old may live in upperclass housing. Residence hall accommodations offer the student convenience, opportunities for involvement and a variety of choices. Single rooms are available for the room cost plus one-third of the room rate per semester. Meal plans for upperclass students are available, but optional.

In the residence halls, students in each pair (suite) of rooms share a private bath. Each student room has a phone jack and cable television capability. All rooms are furnished with individual beds, mattresses, chairs, desks, draperies, a chest of drawers and mirror. However, residents may bring additional items to make their rooms more homelike. Residents have ready access to coin-operated washers and dryers, but they furnish their own irons and fireproof ironing boards. Mail is delivered regularly to the main desk at each residence hall. Lounge areas and recreation facilities are open to all residents. Residence hall libraries and study areas provide a quiet place for reading and study.

Residence hall life gives students valuable experience in the "give-and-take" necessary for comfortable group living. Democratic participation offers opportunities for personal involvement. Cultural and recreational activities are open to all.

Meals. Students in First-Year halls must be on a meal plan. Students may choose from a variety of meal plan options. Full-meal service is available daily. The University Union provides additional on-campus dining alternatives. The food service accommodates students with special dietary needs. This service requires a doctor's request.

Fraternities and Sororities. Members of seven sororities live in Panhellenic Hall. Similarly, the Fraternity Complex accommodates eight fraternities. Other sororities and fraternities are housed or provided Chapter Room space in South Todd Hall.

Graduate/Upperclass Residence. Special accommodations have been designated in residence halls and/or University apartments for students 21 years of age or older, for those who have completed at least four semesters, or for those enrolled in graduate school.

Twelve-Month Accommodations. The Twelve-Month floor in the University Conference Center as well as the University apartments is available for students seeking accommodations during scheduled breaks.

Family Housing. Apartments are available for married couples with or without children and single parents with child(ren) living with them full time. These apartments are available for twelve-month accommodations.

The University tries to honor student preferences in housing assignments. Room changes will be permitted beginning on designated dates during the first part of each semester. Room reservations which have not been used are canceled after 5 p.m. on the first day of classes, unless students have made arrangements to arrive late.

At the end of each semester, students are to vacate (except for personal property) rooms by 6 p.m. on the last day of final examinations. All personal possessions are to be moved out at the close of spring semester or whenever a student's housing agreement is canceled.

The Department of Public Safety and the Office of University Housing work together to provide a safe campus environment. However, the University is not responsible for loss of, or damage to, personal property. Parents and/or students are urged to arrange privately for insurance coverage of personal property.

University Apartments

Comfortable and convenient living accommodations contribute to good study conditions and study habits. Recognizing this need as well as the need for opportunities in personal growth and development for all family members, non-traditional students, and upperclass students, the University has made every effort to provide a wide variety of facilities for students and their families. Comfortable accommodations with proximity to the campus are offered in the University apartments.

Residents may participate in a variety of educational, cultural and recreational programming while living in the apartments. A Community Action Board meets monthly for residents to discuss concerns and to suggest various programs which they would like to plan and have presented. Some activities have included pot-luck dinners, picnics, hayrides, wiener roasts, parents' night out, various intramural teams, holiday parties, and educational programs in resume writing, stress management, and others. In all aspects of apartment living, the goal is to provide the residents a place to live which contributes to their total development and to the success of their academic lives.

Apartments are available for student families and for single students who are graduate level, upperclass and those who are at least 21 years of age. Eligibility requirements vary among the different apartment complexes. Some complexes are primarily for families (married couples with or

without children and single parents) and some are primarily for the eligible single students. Most of the apartments are available for twelve-month accommodations.

Rent includes local telephone service, basic cable, internet access, parking, water, sewer and trash service in all apartment complexes. Gas and electric utilities are also included in some of the apartment complexes. Community rooms are available for residents' use as well as coin- or access card-operated washers and dryers. Children's playgrounds are located at the complexes which are predominantly for families.

An economy suite is a regular site, but unfurnished. It is for upperclass students only and all 30 are located in Todd Hall. A maximum of 3 people can share the suite. You must be in good standing with the University (not on academic or disciplinary probation).

University Conference Center

Located on Anderson Street, east of the main campus, the University Conference Center accommodates over 300 guests in 152 air-conditioned rooms. Meeting rooms include the Ozark Room (seating 250); the Kansas City Room (12); and the St. Louis, Independence, and Jefferson City Rooms (30 each). A variety of suites and rooms are available for guests of the University. For reservations, call the Facilities Coordinator at 660-543-4342.

Costs, Scholarships, and Financial Aid

Fees and Expenses

All housing, food service, and instructional fees are assessed for payment prior to the beginning of the semester. Payments on any other basis must be approved in advance by the Revenue Office.

The following rates were effective beginning Fall Semester 1997. Current fees are available from the Revenue Office.

Housing and Food Service Fees, 1997-98

Residence Halls

Basic Rate	\$1346/semester
Air Conditioned Room	\$1346/semester
Single Room Surcharge	1/3 more than basic rate
Additional Fee for Fraternity/Sorority Housing	\$15/semester

Apartments

(all utilities included)

Foster/Knox	
Air-Conditioned	\$238.50/month*
Non-Air-Conditioned	\$231.00/month*
Hawkins Hall	
One Bedroom	\$231.00/month** \$462.00/month***
Two Bedrooms	\$241.50/month*
Nickerson	\$238.50/month*
*Per Person - must have roommate	
**Per Person - may have roommate	
***Private - no roommate (resident pays gas and electricity)	
Central Village	
One Bedroom	\$390/month
Two Bedrooms	\$432/month
Three Bedrooms	\$489/month
Greenwood Park	\$484/month

Meal Plans \$665-724/semester

Instructional Fees, 1997-98

On Campus

Undergraduate	
Missouri Resident	\$ 88 per hour
Out-of-State Resident	\$176 per hour
Graduate	
Missouri Resident	\$132 per hour
Out-of-State Resident	\$264 per hour
Doctorate of Education (UM-C current fee)	
Missouri Resident	\$158 per hour
Out-of-State Resident	\$475 per hour
Doctorate of Philosophy in Technology	\$158 per hour

Off Campus

General	
Undergraduate	\$108 per hour
Graduate	\$136 per hour
St. Louis-based programs	\$166 per hour
Albuquerque-based programs	\$208 per hour
Joplin/St. Joseph based programs	\$147 per hour

Textbook Rental Fees, 1997-98

The fees indicated above do not include the cost of the textbook rental system which supplies students with required texts in many undergraduate courses. Students enrolled in courses numbered 5000-7000 or in off-campus courses do not receive rental books from the textbook department and are not assessed a fee. Graduate students normally will purchase textbooks; however, if available, some texts may be rented on a charge per book.

1. Student rental charge per semester per textbook . \$15.50
 2. Textbook late fee per book
(assessed following last day of finals) \$ 5.00
 3. Textbook damage fees assessed by University Store
- Note: Failure to return a book after dropping a class will result in the late fee being assessed.

Special Fees, 1997-98

The following fees are paid only for special purposes or because of certain conditions.

Graduation Fee	\$ 30
(\$25 for those who have previously received a degree or certificate from Central)	
Preliminary examination fee (graduates)	fixed by publishers
Early or late examination fee per final (by permission)	\$ 10
Service fee for credit earned through advanced placement, and certain professional schools and experiences (per semester hour) \$ 5	
ROTC Summer Camp (per semester hour)	\$ 15
Microfilming Thesis (if applicable)	\$ 40

Supplemental Course Costs

Certain specific courses and programs require supplementary fees, materials, supplies, and activities at additional expense to the student.

**FEES MAY BE ALTERED AT ANY TIME
BY ACTION OF THE
BOARD OF GOVERNORS**

Payment of Fees

Following admission and an appointment in the Office of Academic Advisement, undergraduate class enrollments may be completed by calling 660-543-8888 or by using a computer terminal in the Academic Advisement Center or Union 207 for self-enrollment. Students with questions or who need assistance in enrolling should make an appointment with the Office of Academic Advisement.

Graduate students, following an appointment with their departmental advisors, may complete their self-enrollments by calling 660-543-8888 or using computer terminals in Humphreys 410 or Union 207. Graduate students should come to the Office of Graduate Studies, Humphreys 410, if they need assistance.

The student is responsible for enrollment in classes and payment of fees. Students who are not enrolled and who have not paid or have not arranged payment for fees will not be added to class rolls after enrollment deadlines, and credit will not be recorded for classes in which they have not been enrolled.

Credit Policy

Withdrawal. Students who find it necessary to **officially withdraw from the University** should initiate the proper procedure in the Office of Student Affairs. Upon completion of withdrawal, the following credit schedule for **instructional fees** will apply to students who are **not** federal financial aid recipients:

Withdrawal prior to the beginning of the semester: full credit.

Withdrawal during first week of classes: 75%

Withdrawal during second week of classes: 50%

Withdrawal during third week of classes: 25%

No instructional fees are refundable when the student withdraws after the third week.

Federal Financial Aid. The credit policy for Federal financial aid recipients is determined by Federal regulations (34 CFR 668.22). A copy of the policy is available from the Office of Financial Aid and Veteran Services, Administration 316.

Reduced Load. Refunds of **instructional fees** for a student-initiated reduction in class load will not be processed until after the fourth week of classes. The following schedule for such refunds will apply for semester hours dropped:

Prior to beginning of semester: full credit.

First week of classes: 75%

Second week of classes: 50%

Third week of classes: 25%.

No refund of instructional fees will be made for student-initiated reduction in class load after the third week. If a fee amount would be reduced due to load changes caused by failure of classes to materialize or class cancellation by the University, a full credit for that class will be made.

Credit Appeal. A student who believes that a credit greater than the established schedule should be issued may submit a written request to the Office of Student Affairs. The reasons and unusual circumstances believed to justify a larger credit must be outlined in the written request. All requests for credits must be submitted within two weeks of the end of the semester for which the fees were paid/charged. Decisions made by the Office of Student Affairs shall be final.

Federal Financial Aid. Federal Financial aid recipients who drop classes should be aware that any credit of charges will be returned to the Federal programs from which the aid was disbursed.

16 Scholarships

Scholarships and Awards

For undergraduate scholarship applications and information, contact the Scholarships and Awards Officer, Administration 104. For graduate scholarship applications, contact the Office of Graduate Studies, Humphreys 410.

Undergraduate Scholarships and Awards

The **Distinguished Scholar Award** is one of the University's most prestigious scholarships for incoming freshmen. It provides the total cost of in-state/out-of-state fees, an air-conditioned double room, board (175 meals/20 points), and a book allowance. To be eligible to compete for this award, students must (1) achieve a minimum ACT composite score of 28 and (2) either rank in the upper 5 percent of the high school graduating class or achieve a 3.75 cumulative grade-point average while in high school. Distinguished Scholar Awards are presented to 25 freshmen each year by the Scholarship Committee. The scholarship may become a nine-semester award for those students who meet continuation requirements.

Katzentine, Carswell, Cheatham Scholarship for National Merit Finalists is a scholarship provided by the Central Missouri State University Foundation for students designated as National Merit Finalists by the National Merit Scholarship Corporation. This award provides in-state/out-of-state fees, an air-conditioned double room, board (175 meals/20 points), and a book allowance for up to nine semesters of undergraduate study for those students who meet continuation requirements.

University Scholar Awards provide full in-state/out-of-state fees. To be eligible for this award, students must (1) achieve a minimum ACT composite score of 28 and (2) either rank in the upper 5 percent of the high school graduating class or achieve a 3.75 cumulative grade-point average while in high school. Students named University Scholars by February 15 will be invited to compete for the Distinguished Scholar Award. This award may become a nine-semester award for those students who meet continuation requirements.

Regents Scholarships are awarded to (1) valedictorians and salutatorians, (2) to high school seniors who graduate in the top 25

percent of their class and achieve a minimum ACT composite score of 25, and (3) to persons with a minimum GED score of 310. The scholarship may become a nine-semester award for those students who meet continuation requirements.

Academic Award for Out-of-State Scholars is a competitive award for incoming freshmen who are recipients of the Regents Scholarship and who reside outside the state of Missouri. The award provides out-of-state fees and may be received for a maximum of nine semesters of undergraduate study by students who meet continuation requirements. To be eligible to apply, a student must be an incoming freshman who is a current recipient of a Regents Scholarship and not receiving a non-resident fee credit or a Second Generation Grant.

Leadership Award for Missouri Boys State and Girls State Citizens is a competitive award for incoming freshmen which may be received for a maximum of two semesters. It may be combined with other University scholarships not to exceed the cost of education. To be eligible to apply, a student must have been a Missouri Boys State or Girls State participant.

President's Scholarships are presented to 1) incoming freshmen who rank in the top 25 percent of their high school class and achieve a minimum ACT composite score of 22 and 2) persons with a minimum GED score of 285. The President's Scholarship may be received for a maximum of two semesters; thereafter, a student may earn a Regents Scholarship each succeeding semester of undergraduate study by meeting Regents Scholarship criteria.

High School Recognition Awards are presented to entering freshmen who rank in the upper 25 percent of their high school graduating class. The award may be received for a maximum of two semesters; thereafter, a student may earn a Regents Scholarship each succeeding semester of undergraduate study by meeting Regents Scholarship criteria.

Achievement Awards are granted by academic departments in recognition of a student's potential or outstanding performance. Each department determines the criteria and

selects the recipients. Award values may vary. An Achievement Award may be combined with a University Scholar Award, a Regents Scholarship, President's Scholarship, or High School Recognition Award; the total amount not to exceed the cost of education at Central.

Transfer Student Scholarships are available. **University Scholar Awards** for transfer students are designed to recognize outstanding academic achievement. These awards provide full in-state/out-of-state fees for one year. To compete, a transfer student must have achieved a minimum cumulative grade-point average of 3.60 and completed 60 hours or an AA/AS degree at the time of matriculation. **Regents Scholarships** are available to transfer students with a minimum of 24 semester hours and a cumulative grade-point average of 3.50. Recipients must earn 12 hours per semester. The Regents Scholarship for transfer students may be received for a maximum of seven semesters of undergraduate study. All transfer students are eligible to apply for an **Achievement Award** from an academic department. (See explanation above for additional information.)

Special Alumni Awards are available to sons and daughters of graduates of Central. The **Second Generation Grant**, which covers out-of-state fees, is provided to children of alumni residing outside the State of Missouri. The **Alumni Reunion Award** is a competitive award for entering freshmen. The recipients are selected by the Alumni Scholarship Committee. For additional information and an application, contact the Scholarships and Awards Officer.

The Missouri Teacher Education Scholarship and **Missouri Minority Teacher Education Scholarship** are awarded to qualifying students interested in a career in teaching. The recipients are selected by a state committee. Applications are available through the Missouri Department of Elementary and Secondary Education, P.O. Box 480, Jefferson City, Missouri 65102.

General Undergraduate Scholarship Guidelines. Recipients of all University-funded undergraduate scholarships must (1) maintain full-time status, and (2) earn a minimum of 12

hours per semester at Central, and (3) not be on academic probation.

Graduate Scholarships

Graduate Regents Scholarships and several other scholarships are available to qualified graduate students. The amounts of the awards vary. Information and applications may be obtained from the Office of Graduate Studies, Humphreys 410.

Other Scholarships

The Central Missouri State University Foundation, Inc., through the generosity of alumni, organizations, corporations, and friends of the University, provides a variety of other special scholarships. Recipients are selected by the Scholarship Selection Committee in the appropriate academic department or by the Foundation Scholarship Selection Committee.

Other Scholarships from over 800 private organizations are available to students attending Central. Information regarding these awards is available through a high school counselor, parents' employers, religious affiliations, and service organizations.

Federal Financial Aid. Federal financial aid recipients should be aware that the total dollar amount of all academic scholarships and benefits received must, in accordance with Federal law, be taken into consideration when determining a student's eligibility for Federal grant, loan, and employment assistance.

Financial Aid and Veteran Services

There is no better investment in a person's future than a good education. At Central, reasonable charges for fees, books/supplies, and housing/meals are a major benefit to our students, even though the cost of obtaining a university education has risen somewhat in recent years. To help an individual reach his or her educational goals, Central Missouri State University offers a variety of Federal grant, loan, and employment assistance, most of which is awarded on the basis of a student's calculated financial need.

The Office of Financial Aid and Veteran Services annually processes nearly \$30 million in assistance to over one-half the students who attend Central. Each student's family and economic situation is recognized as unique, and every financial aid application is examined on an individual and personal basis. The total number of requests for financial aid, however, almost always exceeds the total amount of assistance available. Therefore, it is important for each applicant to:

apply on-time (by March 1st each year)

comply with all financial aid instructions, policies, and requests for follow-up information and documents

contact the Office of Financial Aid and Veteran Services if there are any questions or concerns:

In person - Administration 316
Telephone - 660-543-4040
FAX - 660-543-8080
E-mail - FEDAID@CMSUVMB.CMSU.EDU

Federal financial assistance can be used to help pay direct educational expenses, such as fees, books/supplies, and housing/meal plan charges, as well as variable living costs, such as off-campus housing, food, transportation, child care, and other personal costs associated with attending Central. Although the responsibility for meeting these costs lies primarily with the student and his or her family, financial aid from one or more of the following Federal programs can often be awarded to supplement the contribution of the family.

Types of Financial Aid

Grants (Pell Grant and Supplemental Educational Opportunity Grant) are gift assistance that do not have to be repaid.

Loans (Stafford Loan and Perkins Loan) are types of aid that must be repaid, but normally after the student graduates, withdraws, or drops to less than half-time enrollment status.

Employment (Federal Work-Study) assistance enables a student to earn a portion of his or her educational resources through part-time work on-campus and off-campus. Available Work-Study positions, as well as University-funded student employee positions, are posted at the Office of Career Services, Union 302.

How to Apply

To apply for the above types of Federal financial aid, a student must obtain, complete, and mail a **Free Application for Federal Student Aid (FAFSA)**, preferably **by March 1st** each year. The FAFSA may be obtained from any high school guidance counselor, from the Office of Financial Aid and Veteran Services at Central, or from any college or university.

A student may also file the FAFSA electronically using **FAFSA-on-the-Web**, an internet site supported by the U.S. Department of Education. The address for this site is WWW.FAFSA.ED.GOV.

After filing the FAFSA, certain financial aid applicants may be required by Federal law to provide supporting documents or clarifying information to the Office of Financial Aid and Veteran Services. If required to do so, the applicant will be contacted by mail, and should then respond as promptly as possible.

Financial Need

A student's calculated need for Federal financial assistance is determined by careful examination of the results of the applicant's FAFSA. Once the calculation has been completed, one or more types of financial aid are awarded to help meet that need. The student is notified of the award "package" by way of a Financial Aid Notification, which outlines the type(s) and amount(s) of aid offered. The notification process begins each Spring for Central's earliest applicants and continues throughout the year.

Other Assistance

Financial assistance, other than the Federal aid programs, are also available from Central Missouri State University. Many academic scholarships are awarded each year to undergraduate and graduate students. Information and applications may be obtained from the Office of Admissions, Administration 104. The State of Missouri also offers grants to full-time enrolled undergraduate Missouri students with high levels of calculated financial need. Students apply for these grants simply by filing the FAFSA. Financial aid recipients should be aware, however, that receiving other types of financial aid or benefits can often mean an adjustment in the Federal aid that may have already been awarded to them.

Transfer Students

A student transferring to Central who wishes to receive Federal financial aid must request that a Financial Aid Transcript be sent to the Office of Financial Aid and Veteran Services from the college, university, or technical/trade school previously attended, even if no financial aid was received. This is a Federal requirement, and there will be no charge to comply. The required Financial Aid Transcript must be on file before any Federal financial aid can be processed for a transfer student.

Satisfactory Academic Progress

Federal law requires that each student wishing to **continue** receiving Federal financial aid maintain "satisfactory academic progress" toward the completion of his or her degree or teacher certification program. Satisfactory academic progress is defined as successfully completing at least two-thirds of the credit hours attempted during an academic year (in order to be considered eligible for Federal aid for the subsequent year). In addition, undergraduate students with 60 or more credit hours must maintain at least a 2.00 cumulative grade-point average (GPA) to remain eligible for Federal assistance. Graduate students must maintain a 3.00 cumulative GPA.

Short-Term Loans

The University realizes that many students are totally dependent upon Federal financial assistance to pay the costs of attending Central. However, it is still very important to have some money on hand when starting classes each semester to help pay incidental costs during the first few weeks. If an emergency arises, however, a student can apply for short-term loan funds at the Office of Financial Aid and Veteran Services. This assistance must normally be repaid within 60 days. A service charge of \$10 is levied to borrow from the short-term loan fund.

Veteran Services

The Central Missouri State University Veteran Services Office assists over 450 students annually. This office is located in Administration 316 and acts as a liaison between students requiring Veteran services and the Veterans Administration offices in St. Louis and Kansas City.

Support is provided to students enrolled at Central who are in the Military Reserve/National Guard (Chapter 1606), on active duty or no longer in the military but eligible for VA educational benefits (Chapter 30), Veterans Vocational Rehabilitation students (Chapter 31), dependents of military personnel (Chapter 35), and personnel who contributed to the Veterans Educational Assistance Program (Chapter 32).

For information and assistance in completing and maintaining the proper documents to receive VA benefits, please contact the Veteran Services Office by telephone 660-543-4983, FAX 660-543-8080 or e-mail FEDAID@CMSUVMB.CMSU.EDU.

Graduate Assistantships

Students pursuing graduate degree programs may apply for assistantships for teaching, laboratory supervision, research, administrative, or student affairs assignments. The Graduate Catalog also provides information about graduate scholarships. Graduate assistantship and scholarship applications are available from the Office of Graduate Studies, Humphreys 410.

ACADEMIC AND SOCIAL RESPONSIBILITIES**Summary of "Standards and Regulations Concerning Undergraduate Students"**

By enrolling in the University, students become entitled to the benefits of instruction and the many academic and social opportunities the University offers. They also assume certain responsibilities for themselves--responsibilities to approach their class work and their social activities in a mature way. These few paragraphs summarize policies and regulations affecting student life. Full details appear in Section III of this catalog. Since this is only a summary, the full text governs if any question of rights arises.

Student Responsibility. University staff members will help, but you are responsible for meeting your own degree requirements.

Academic Load. A normal semester load for undergraduates is 15 or 16 semester hours. Freshmen and sophomores need special approval for more than 18; upperclass students in good standing may take 19.

Academic Standards. The University uses a five-letter marking system, ranging from an A (high) through F (low). NC indicates no credit; U means course not completed; W shows withdrawal during the first ten weeks; during the last five weeks, WP shows withdrawal with passing work, WF with failing work.

Unfinished Work. A U may be removed by finishing the work during the next term of enrollment; otherwise, the U becomes an F. Do not retake the course while you have a U; rather, see the instructor and arrange to finish the work.

Qualitative Standards. You are responsible to know and meet specific GPA levels and other requirements for your degree.

Acceptance Into Programs. You need to know specific entry requirements for degree programs; these are explained in the major program listings in Section II of this catalog.

Pass-Fail. You may take up to nine hours of work pass-fail. However, none of this work may be a part of your major, minor, professional certification, or University Studies requirements.

Audit Courses. If you wish, you may audit a class for no grade and no credit. You pay regular fees and enroll in the usual way. Audited classes, however, cannot be considered when determining a student's

enrollment status (full-time, half-time, etc.) for disbursing Federal financial aid or V.A. educational benefits.

Grade Average. To compute your cumulative grade-point average (GPA), divide honor points earned by credit hours attempted. Each semester hour of A earns 4 honor points; B, 3; C, 2; D, 1; F, 0; and WF, 0.

Repeating Courses. If you have a grade lower than C, you may take the class again at Central. The higher grade is then used to compute your GPA; the lower grade, however, remains on your transcript. (See Section III for transfer courses and other details.)

Dean's List. You earn this honor with a semester GPA of 3.50 or better.

Good Standing. You are in good standing if you are eligible to enroll in classes.

Academic Probation. If your Central or overall GPA drops below 2.00, you are placed on probation and are limited to a load of 15 hours or fewer.

Removal From Probation. You are removed from probation when your Central GPA, as well as your overall GPA, equals at least 2.00.

Academic Suspension. If you are a student on probation and do not achieve at least a 2.00 GPA each subsequent enrollment period, you will be suspended. (See Section III.)

Academic Dismissal. If you return from suspension and do not achieve at least a 2.00 GPA each subsequent enrollment period, you will be dismissed.

Readmission. Returning after suspension or dismissal is not automatic. You reapply for admission. If you have good reasons for your poor work, you may petition to continue in school by writing a letter to the University Committee on Undergraduate Exceptions, c/o the Admissions Office. (See Section III.)

Course Prerequisites. Look at course descriptions in Section II of this catalog. You must meet all prerequisites before you enroll for a class.

Class Attendance. You are responsible to attend all classes and lab sessions and to do all the assigned work. If you must be out, let your instructor know in advance if you can. See your instructor on the first day you return to class to arrange make-up work. (See Section III.)

Schedule Changes. During the Drop and Add period (first five days of the semester), you may go the Office of Academic Advisement

and change your schedule. During weeks two through ten, you may see an Academic Advisor and fill out a form to withdraw from any class. After ten weeks, you are expected to finish your courses.

Regulations Applying to Undergraduate Degrees and Certificates. These regulations are set forth in Section III. Take time to read through them carefully since they give you important information about your degree program.

Conduct

Students, faculty, and administrators work together to write and keep up-to-date social and scholastic standards for Central. Students are expected to have the qualities of character, scholarship, and conduct to live up to these standards. See the [Student Calendar/ Handbook](#) for rules and regulations.

Motor Vehicles on Campus

Because parking space is limited, the University asks that students who can arrange other transportation not bring vehicles to campus.

To park in student lots, students may buy parking permits at Parking Services (306 Broad Street). However, parking spaces are limited in number.

Students may get complete information on parking and operating motor vehicles on campus by picking up a copy of [Central Missouri State University Parking and Traffic Regulations](#) at Parking Services.

Unauthorized Persons in Classrooms

Persons who are not officially enrolled in a course may not attend a class session without the prior consent of the instructor. Persons bringing children on campus are responsible for any inappropriate supervision and behavior.

Social Opportunities

A college education is more than what happens in the classroom. At Central, students are encouraged to participate in a variety of activities outside of the classroom that create a well-rounded educational experience. Getting involved on campus gives students the opportunity to develop interpersonal and leadership skills that will serve them throughout their lives.

Student Activities

From participating in University Program Council events to membership in a fraternity or sorority, Central has it all! There are many things for students to do on campus including attending dances, plays, films, concerts, going bowling, and being involved in clubs, intramural sports and student government. Taking part in social, cultural and athletic events provides students with many opportunities to learn about themselves, other people and the world in which they live.

Student Organizations

Approximately 200 registered student organizations exist at Central. Students are able to affiliate with academic honoraries, departmental organizations, and special interest groups. Research indicates a positive correlation between involvement and student academic success; one such experience is involvement in student organizations. Participation in student organizations offers a means to apply classroom learning, explore career choices, gain leadership experience and make valuable contacts. For information, see the Office of Campus Activities, Union 217.

Intercollegiate Athletics and Organized Sports

Central offers three general classes of organized activities in athletics and sports: intercollegiate athletics, intramural sports, and sports clubs.

Intercollegiate Athletics. Central belongs to the eleven-member Mid-America Intercollegiate Athletic Association (MIAA) and the National Collegiate Athletic Association (NCAA), Division II.

22 Social Opportunities

Varsity sports for women are basketball, cross-country, indoor track, outdoor track, softball, soccer, and volleyball. For men, they are baseball, basketball, cross-country, football, golf, indoor track, outdoor track, and wrestling. (See the Office of Intercollegiate Athletics, Multipurpose 203, for information.)

The Athletic Committee, composed of faculty and students from all parts of the University, advises the intercollegiate athletics program.

Intramural Sports. An extensive intramural program gives University students, faculty, and staff many opportunities to take part in competitive and non-competitive activities at low cost. Team and individual activities are available for men, women, and co-recreational groups. Among these are archery, badminton, basketball, billiards, bowling, golf, handball, racketball, rifle and pistol shooting, soccer, softball, swimming, table tennis, tennis, touch football, track, volleyball, wrestling, and many others. (See the Office of Student Development Programs and Activities, Union 216, for information.)

Sports Clubs. Sports clubs give students an opportunity to participate in sports which are not included in the University's intercollegiate program. Club activities may be intramural (all participants being Central students) or extramural (competition with teams from outside the University). The University does not fund club sports and assumes no liability for them. Thus, clubs do not represent the University or use its name in competitive events. (See the Office of Student Development Programs and Activities, Union 216, for information.)

Recreation Facilities

Multipurpose Building. The "Multi," located just west of the stadium, seats up to 10,000 in its arena and provides recreational facilities for students, faculty, and community. Its basketball area accommodates four courts, five volleyball courts, and a six-lane, 220-yard indoor track. It also has nine handball/ racketball courts, two weight rooms, a six-lane, 25-meter pool with a one-meter diving board, conference rooms, and an activity area.

Pertle Springs. Located at the end of Holden Street one mile south of campus, Pertle

Springs is a 300-acre recreational, instructional, biological research area. Popular activities on the wooded grounds are boating, fishing, hiking, and picnicking. Especially popular are the eighteen-hole golf course with its air-conditioned golf shop and fleet of golf carts, an olympic-size swimming pool with separate diving well for the one-meter diving board, and a wading pool for the younger set.

The **Recreation Center** is located in the University Union and provides 10 bowling lanes with automatic scoring, pool tables, video games, and facilities for birthday parties. The Corner Pocket is located here providing drinks, pastries, popcorn, sandwiches, nachos, and pretzels.

Rifle and Pistol Range. Located in the basement of Humphreys at the southwest corner, the Rifle and Pistol Range is open from 6:30 to 9 P.M., Monday, Tuesday and Thursday. Range attendants supervise and instruct shooters at 12 stations on the 50-foot range. Firearms, ammunition, targets, ear protection, etc., are available for nominal fees. The range has .22, .38, .40, .45, and 9 MM pistols and .22 caliber rifles for your recreational shooting.

Other Facilities. Other campus facilities include eleven all-weather tennis courts, a play field east of the Morrow Building, eight acres of recreational and practice fields west of the stadium, a 400-meter track in the stadium, and a play field southeast of Diemer Hall. Five city parks are located within walking distance of campus. Knob Noster State Park, 10 miles east of the campus, offers group and family picnic grounds, hiking trails, and a swimming pool.

Religious Life

The churches of Warrensburg have a long tradition of welcoming participation in their services and activities by members of the University community. Many students are active in local churches of their choice and in campus denominational groups. Many religious groups have "campus ministers" located near campus who offer assistance to individuals and who advise campus religious associations.

Services for Students

Academic Advisement

The Office of Academic Advisement, Administration 102, provides assistance to Central students. Academic Advisors, specializing by college, help undergraduates plan career opportunities, determine degree programs, select courses, register for classes, and coordinate their academic progress.

Faculty and Staff Resource Advisors are available to counsel students who are considering their programs or who have selected majors/minors within their departments. The Director of Clinical Services and Certification prepares programs for post-baccalaureate teacher certification candidates and candidates for the Alternative Teacher Certification program.

Members of the Student Academic Advising Association are available to assist students as they plan their schedules, check availability of classes, etc.

Assessment and Testing Services

Assessment and Testing Services maintains test scores as well as administers the following standardized examinations:

- American College Testing Program (ACT)
- Area Concentration Achievement Test (ACAT)
- College Basic Academic Subject Examination (C-BASE)
- College-Level Examination Program (CLEP)
- General Education Development (GED)
- Graduate Management Admission Test (GMAT) [computer-based testing only]
- Graduate Record Examinations (GRE)
- Law School Admissions Test (LSAT)
- Leadership Academy Missouri Administrators Multiple Choice Test for Principals (LAMP)
- Major Field Achievement Test (MFAT)
- Medical College Admissions Test (MCAT)
- Miller Analogies Test (MAT)
- National Engineering Aptitude Search (NEAS)
- National League of Nursing Achievement Tests (NLN)
- National Registry of Emergency Medical Technician - First Response (NREMT-FR)
- PRAXIS Series (previously National Teacher Exams)
- Test of English as a Foreign Language (TOEFL)
- Test of Spoken English (TSE).

Staff can assist with identifying appropriate reconsideration (Planned Placement) and Math for Credit Exams. An official photo I.D. (drivers license, school I.D., military I.D., current passport) is required when taking tests or inquiring about test scores. Official test score reports are provided by the testing company

only. Scores reported by Assessment and Testing Services are considered "unofficial" and are not available by telephone. Assessment and Testing Services will administer correspondence course exams upon request. Staff also provide consultation on test selection, design, use, analysis and interpretation.

Assessment and Testing Services also provides support and coordination for Central's Assessment/CPI program. Further information, examination dates and registration assistance may be obtained from Humphreys 223 or by telephone at 660-543-4919.

Campus Advocate

The Campus Advocate serves as a support office for students with questions, concerns and/or problems. The Advocate's role is to facilitate communication between students and others (faculty, administration, other students) and to assist students in knowing how to address/resolve problems within the framework of the University's organizational structure.

Chapel

The Alumni Memorial Chapel was built in 1956 in memory of Central students who served in World War II and the Korean War. Funds were donated by private individuals and organizations. The Alumni Chapel seats 200 in the sanctuary, has a meeting room for twenty people, and contains a complete kitchen and dining area in the undercroft. The Danforth Foundation funded the attached Danforth Chapel which contains six kneeling benches and is open to the public during the day. In the Fall of 1994 a bronze sculpture entitled "Guardian," which is a memorial to all men and women who have served our country in armed services, was placed near the entrance of the Danforth Chapel. The Chapel is used by Central students as a meeting place for social and religious organizations, choir practice, initiation ceremonies, group testing, parties, and weddings. Students also use it for individual or group meditation and communion.

Computer Source

Computer Source sells educationally priced computer hardware and software and is located in Union 125. Current faculty, staff and

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students are eligible to purchase hardware and software.

Counseling and Psychological Services

Located in Humphreys 131, Counseling and Psychological Services offers CONFIDENTIAL counseling for Central students concerned about educational, career, and personal issues. Psychologists provide individual and group counseling, psychological assessment and referral, outreach programming on psychological issues, consultation, and crisis intervention. Call 660-543-4060 for an appointment.

Distance Learning

Distance Learning at Central Missouri State University encompasses all formats of electronically-based education delivery systems which include interactive television, instruction involving satellite uplinks and downlinks, and online courses. Within the Office of Extended Campus, Distance Learning manages, schedules, coordinates and assists in marketing all distance education courses and degree programs. Faculty training, instructional design support and an incentive program are offered to instructors participating in distance education, and appropriate student services are provided to meet the additional need of the learner at a distant site.

Central is a charter member of the Western Missouri Educational Technology Consortium, the largest educational consortium in the state of Missouri, as well as the Kansas City Educational Network. These networks provide Central the necessary connectivity to successfully conduct two-way, continuous presence, interactive television courses within, and outside of, Central's traditional regional and state boundaries.

Educational Development Center

The Educational Development Center (EDC), Humphreys 120, helps students improve any of the learning skills needed for success in college studies. EDC courses and services are appropriate for both beginning and advanced students. The EDC offers both credit classes and non-credit labs with all services free except for the regular fees for credit classes.

College Skills Classes. Students may choose the course or courses which would give them the best preparation for future classes. Courses include: (1) Introduction to College Writing [Pers 1000] (2) Textbook Reading Techniques [Pers 1010] (3) Speed Reading [Pers 1012] (4) College Study Skills [Pers 1020], and (5) Introductory Algebra [Pers 1030].

Learning Lab. Individualized programs for self-paced academic improvement are offered free of charge to Central students through the EDC Learning Lab. Topics include speed reading, reading comprehension, critical and logical reasoning, vocabulary, lecture note-taking, test-taking (classroom or standardized tests such as GRE, TOEFL, C-BASE, Nelson-Denny, etc.), time management, math, listening, spoken English, and other skills valuable to University-level studies. With staff assistance, students work with computers, learning activity packets, programmed texts, and video or cassette tapes to develop or enhance their academic learning skills. To begin a program, come to Humphreys 110 any weekday of the semester. The Learning Lab is open from 9 A.M. to 4 P.M., Monday through Friday.

Writing Lab. In one-to-one conferences, instructors assist writers--beginners and experts--at all stages in the writing process from brainstorming ideas to polishing drafts. All writers profit from a professional response to their texts, and Lab instructors are experienced in critiquing a wide variety of written work. In a non-threatening setting, students learn such diverse skills as creating an effective thesis statement or formatting an eye-catching resume. Additionally, many types of resources are available such as handbooks, style models, and instructional handouts related to specific language concerns. The English Department's Analytic Scoring Guide provides criteria which assist instructors in assessing performance outcomes. Instructors and word processing are available Monday through Friday; hours are announced per semester and summer session. The Writing Lab is located in Humphreys 116.

McNair Central Achievers Program (McCAP). Designed primarily for juniors and seniors, McCAP offers preparation for doctoral

study for U.S. citizens and permanent residents who meet the U.S. Department of Education eligibility requirements. Activities include information seminars, faculty mentoring, and a paid summer research internship. Interested students should stop by the Educational Development Center for further information.

Student Support Services (TRIO-SSS).

Funded by a grant from the U.S. Department of Education, the TRIO-SSS program offers tuition-free specialized developmental courses in writing, reading, mathematics, and college success strategies. These courses differ from the College Skills classes in restricted participation, smaller class sizes, individualized learning methods, required tutorials and advisement sessions, enhanced academic support, etc. The TRIO-SSS program also offers extra advisement opportunities as well as free tutoring in a variety of high-risk courses. Because of federal restrictions, this program is open only to U.S. citizens and permanent residents who meet the eligibility criteria. Before enrolling in TRIO-SSS courses, students must obtain permission through the Educational Development Center.

Summer Suspension Waiver Program.

Students on academic suspension, with GPAs of 1.50 or higher, may request to be readmitted for summer classes through the Summer Suspension Waiver Program. Members of the EDC faculty, who serve as mentors, meet weekly with these students to discuss strategies for improving their academic performance. Mentors, students and their teachers work as a team to achieve this objective. Students who successfully complete the summer program and achieve at least a 2.00 summer average are permitted to enroll for fall classes.

Faculty and Staff Resource Advisors

Each academic department which offers major or minor programs has identified faculty and staff members as Resource Advisors. Advisors confer with students interested in those fields of study and help those who plan to major or minor in them with their individual programs. Inquire at the Office of Academic Advisement, Administration 102, for names and offices of Resource Advisors.

Food Service

In addition to regular meal service in residence halls, food service is also available in the University Union. Food service in the Union is located on the first floor which includes: **Union Station** which features an ice cream and convenience shop; **Central Courte** features Pizza Hut® pan pizza, Stir Crazy, Sub City, Burger King®, Taco Bell® Express, TCBY, pastries, salads, daily specials, desserts, and other food items; **Central Courte Cafe** features daily entrees and soups. Located in the Recreation Center is **The Corner Pocket** which features drinks, pastries, popcorn, sandwiches, nachos, and pretzels.

Both on- and off-campus groups and organizations may arrange for catered refreshments and full meals through the Union Catering Office, Union 120.

International Center

The International Center, Union 224, provides service to all international students through orientation and advocacy for all international student concerns. Other areas of service include immigration and student status certification matters, coordinating and sponsoring campus and community multicultural activities, sponsorship of the International Student Organization, and promoting the role of international education.

Students interested in attending school or traveling in another country are encouraged to visit the International Center and inquire about Central's study abroad programs. Placement opportunities exist in approximately 100 schools in over 40 countries.

KMOS-TV and KCMW-FM

KMOS-TV is a non-commercial public broadcasting station operating on Channel 6 with 100,000 watts of power. Studios are located on campus in the Martin Building. The station can be received by 800,000 residents in mid-Missouri. A satellite receiving dish on campus permits direct reception of TV programs from the main PBS transmitting station in Alexandria, VA, and from other producers around the country. The station airs a full range of programs, including instructional courses at the elementary, secondary, and

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post-secondary level, PBS programs, and locally produced shows.

KCMW-FM 90.9, the radio voice of Central, is a 100,000 watt stereo operation. The station broadcasts to a potential listening audience of one million people. Studios and offices are located in the Martin Building. KCMW broadcasts a full range of National Public Radio programs. The station also produces and airs a number of local programs. KCMW-FM can also be heard at the Lake of the Ozarks on 104.9 FM.

Both KMOS and KCMW are managed by professional core staffs with most of the actual operations carried on by volunteer and paid students.

Library Services

Central's Library Services supports the instructional, research, and public service programs of the University. Library Services includes Ward Edwards Library, University Media Services, and the Department of Library Science and Information Services. Ward Edwards Library has a centralized reference area, periodicals area, curriculum area, and Special Collections. The Government Documents area houses the depository collections for federal and Missouri documents. Library holdings include approximately 483,975 books and bound volumes, 631,919 pieces of microform, 643,115 government documents and 2,691 periodical subscriptions.

The library faculty and staff provide reference and bibliographic services, teach library skills and research techniques, lecture to classes, and conduct library orientation tours. Library Users Information Service (LUIS), a computerized catalog, provides on-line access to library collections. The library also provides access to external library databases and collections via computerized information retrieval and interlibrary loan services. Library Services is committed to providing quality services using a variety of information resources and technologies.

Audiovisual Campus Services (AV) primary function is to support classroom instruction. Services are available to Central's faculty, staff, students, alumni, and public clients. Audiovisual equipment and the media collection - 16mm film, video, audio CS's, slide-tape sets, and books-on-tape are housed within

AV and available for check-out. All AV materials are listed in LUIS, the on-line catalog. Overhead transparencies are made for a minimum charge. Faculty and staff may reserve AV materials and request rental of films/videos.

Engineering Services (ES) maintains electronic equipment used on campus. Staff members design, modify, and install electronic systems. Audio technicians are responsible for the operation of all campus sound systems.

Instructional Development & Design (IDD) designs, develops, and produces instructional materials such as slides, transparencies, posters, and computer presentations. Production requests range from the creation of a single slide to complete multi-media learning packages. The department also assists faculty and staff in the media development process.

Instructional Television (ITV) provides non-broadcast video support services to the University. Services include studio and location videotaping of lectures and presentations, original video program design and production, and videotape duplication. ITV also consults in media facility design and video equipment purchases and provides training in the operation of video technologies as an educational tool.

The **Computer Commons** consists of a microcomputer network of IBM compatibles and Macintoshes, and audiovisual viewing rooms. Mainframe and internet access is available along with local software manuals and class assignments. Computer software classes are taught throughout the semester. The facility can be reserved for class instruction sessions.

Non-Traditional Student Services

Non-Traditional Student Services is a resource office for Central's adult learners, providing information, support, advocacy, and referrals to campus and community support services. The office has information on non-traditional scholarships, commuter ride-sharing network, housing, child care, and tutoring or other skill enhancers. Non-Traditional Student Services is located in Union 217, or call 660-543-4517.

Office of Accessibility Services

The Office of Accessibility Services provides academic assistance to students with disabilities who require reasonable accommodations. Accommodations are unique to each individual and should be discussed with the Coordinator of Accessibility Services upon enrollment at Central. The office is located in Union 220 and is open from 8 A.M. to 5 P.M., Monday through Friday. Stop by or call 660-543-4421 to schedule an appointment or to request more information regarding the services available. In addition, Central's ADA Coordinator may be contacted at 660-543-4730 or Administration 201. To ensure that accommodations can be achieved, a minimum notice of 48 hours is requested for programs, events, and general services. Notice of six to eight weeks is requested for special accommodations regarding University housing, location of classrooms, and other services. Relay Missouri number for TDD callers is 800-735-2966 or for voice callers is 800-735-2466.

Office of Career Services

The Office of Career Services helps students identify careers and stay in touch with the job market before and after they graduate. Its services include:

- Employment Referrals
- Career Fair
- Teacher Placement Day
- On-Campus Interviews
- Career Counseling
- Information on Employment Opportunities
- Career Library
- Career Workshops
- Resume Writing Assistance
- Interviewing (via videotaped mock interviews)
- Career Hotline (available 24 hours a day/7 days a week)
- Job Search Skills
- Credential Services
- Vacancy Bulletins
- Part-Time Employment Board
- Home Page on Internet

These services are optional, but students are encouraged to use them for selecting careers and for help in finding positions. Students should register when they begin looking for any type of employment opportunity

or hands-on experience. After they graduate, they should notify the office of their employment status and any changes in address or phone number.

Over 600 employers will visit Central's campus to interview students for full-time, internship and summer positions. Both employers and students may call or write the Director of Career Services regarding their employment needs.

Please note that no course, program, certificate, and/or degree available at Central carries with it a promise, real or implied, of immediate or eventual employment within the specific areas covered or in any other specific or general areas. Although Central offers its services to those seeking jobs, employment is the responsibility of the student.

Office of Community Awareness Services

The Office of Community Awareness Services aims to build the Central community. Located in Union 222, phone 660-543-4156, the office encourages understanding and appreciation of all members of Central's community. The office's goal is to foster an open and inclusive community on Central's campus. The office's activities and program focus on commonalities among members of Central's community and encourage all community members to understand, accept and value each other. The office accomplishes this by:

- Reaching out to all faculty, staff and students so that together we create an inclusive community at Central.

- Fostering an open and aware community at Central which respects all individuals for their uniqueness, yet places the focus on our commonalities as people.

- Serving as a resource for community awareness programs and initiatives across campus.

- Implementing Central's Vision for Community.

- The plan guides the programs and activities of the Office of Community Awareness.

- Overseeing the Community Awareness Advisory Council.

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Office of Financial Aid and Veteran Services

The Office of Financial Aid and Veteran Services administers a variety of Federal grant, loan, and employment programs all of which provide funds to help eligible students handle the educational and living expenses of attending Central. Knowledgeable staff members are available to assist students and their parents with all aspects of applying for Federal financial aid and V.A. educational benefits. The office is located at Administration 316 and may be contacted by telephone 660-543-4040, FAX 660-543-8080, or e-mail FEDAID@CMSUVMB.CMSU.EDU.

Union Station

Union Station is Central's version of the old ice cream shop and gift shop. It features frozen yogurt, hand-dipped ice creams, a variety of ice cream treats, soft drinks and juices, and assorted pastries and cookies. Gourmet coffees are served daily. Other gourmet foods are also offered. Union Station is located on the lower level of the University Union.

University Health Center

Clinical Services. The University Health Center, located just south of the Union, is a fully staffed medical clinic operating as a department of the University. Staffed by licensed health care providers; physicians, nurses, registered pharmacist, laboratory technician, and other trained personnel, it is open from 8 A.M. to 5 P.M. Monday through Friday during Fall and Spring semesters. Summer hours are posted. The clinic operates primarily on an appointment system; however, severe illnesses and emergencies are given priority. For an appointment, call 660-543-4770 or inquire at the University Health Center.

Emergencies. In the event of a severe accident of an emergency nature, call 911 for assistance in all areas of Johnson County.

Group Insurance. All students attending Central and carrying five or more hours of class work may purchase group health insurance covering themselves and their dependents. Applications may be obtained at the University

Health Center. All international students are required to enroll in the insurance program.

The plan provides benefits to insured students and their insured dependents on or away from campus 24 hours a day for one full year (August through August), provided the insured student has attended the University for a period of 30 days. It does cover emergencies.

The University Health Center provides insurance brochures, applications, claim forms, and any other needed assistance.

University Health Policies. Students should have documentation of receipt of two doses of measles vaccine after the first birthday or other evidence of measles immunity at the time of entry. Proof of these vaccinations from a physician, a school health nurse, or a community health department is required. A current medical history is requested. (Forms are available from the University Health Center.) Accident and Illness Provisions are included in Section III of this catalog.

University Store

The University Store sells graduate texts, supplementary texts and workbooks for undergraduates, university supplies, popular books and magazines, and Central apparel and gifts. Services include special order services for books and supplies, graduation announcements, FAX, U.S. Postal Service, and check cashing. Additionally, the University Store has a textbook rental system for most texts needed in undergraduate classes. "The Store with the Collegian in Mind" is located on the lower level of the University Union.

University Union

The University Union is centrally located on the main campus, serving as the "living room" for the campus community. The Union provides facilities for dining, meetings, social functions, conferences, student activities and programs, a computer lab, a travel agency, a copy center, ATM, student organization offices, study lounges, and quiet areas. The Union also houses student services offices which include: Department of Student Life, Office of Campus Activities, Office of Community Awareness, Food service/catering, Office of Career Services, Office of Campus Advocate,

International Student Center, Student Government Association, Union Operations office, Office of Accessibility Services and the Office of Facility Coordination. The Union also features an Information Desk that provides campus-wide information to students, staff, faculty, and guests.

Welch-Schmidt Center for Communication Disorders

Central has a modern speech-language and hearing clinic in the Welch-Schmidt Center for Communication Disorders (Martin 34) where undergraduate and graduate student clinicians, supervised by faculty of the Department of Communication Disorders, provide assessment and therapy to students, faculty members and other Missouri citizens with speech, language or hearing problems.

The Center also offers the Early Childhood Communication Program and Preschool for language-delayed children, ages 2½ to 5. This program utilizes a cognitively based preschool, comprehensive parent training, individual speech and language therapy, and transdisciplinary training to meet the special needs of these children and their families.

Students, faculty, staff and their dependents may use the services of the Center for one semester free of charge and at reduced fees after that. The Center accepts referrals from University faculty and staff, the University Health Center and community health and education agencies.

Other Services and Facilities

Academic Professional Development Office

The Academic Professional Development Office assists faculty by organizing on-campus professional development activities and maintaining a master faculty development calendar of all on- and off-campus faculty development opportunities. Other activities include in-service programs, Professional Enhancement Committee programs, faculty exchange programs, and the faculty Resource Directory.

Airport

Central owns and operates the Max B. Swisher Skyhaven Airport, located three miles west of Warrensburg on Highway 50. It includes 375 acres of land; a 4,200-foot runway, with a full-length parallel taxiway; a 2,800-foot runway; and buildings for administration, maintenance, and other uses. The airport is a teaching laboratory for the University and a community airport serving the Warrensburg area.

Alumni Relations

The mission of the Office of Alumni Relations is to build loyalty and support among graduates and former students. This is done by promoting a positive image of Central Missouri State University, strengthening feelings of identity with Central and offering opportunities for alumni to serve the University. The purpose of the Office of Alumni Relations is to develop a spirit of loyalty and friendship among alumni and to provide vehicles of communication and information among alumni and friends of the University.

Center for Family Studies

Faculty, students, and community agency representatives committed to strengthening the family are brought together by the Center for Family Studies located in the Department of Human Environmental Sciences. Their efforts include education, research, public service, and technical assistance related to individual, family, and community challenges and needs.

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Center for Fitness

The Center for Fitness is an educational facility developed to provide Fitness/Wellness and Physical Education majors with a laboratory for research, internships, testing, and rehabilitation activities. The facility is operated by the Department of Physical Education and is located in the Morrow building. The Center houses computerized fitness equipment and Cybex weight equipment. Students, staff, and faculty are encouraged to inquire at the Physical Education Office, Morrow 101, about usage.

Center for Technology and Small Business Development

The Center for Technology and Small Business Development offers consulting, counseling, training, and research services for business and industry. Students from all colleges work with faculty members to collect and evaluate data and offer counsel on problems in today's marketplace.

Central Regional Professional Development Center

The CRPDC is the primary operating agency of the Central Professional Development Consortium. The Center's mission is to provide information and resources in proven instructional and administrative practices which promote quality instruction in the classroom, overall school improvement and school-linked services for children and youth and their families. The Center offers professional development opportunities, including inservices and workshops, to practicing teachers and administrators designed to address needs in all areas, particularly in science, math, technology and reading/writing. The Center's toll free number is 800-762-4146, or the Executive Director may be e-mailed at GVINSON@KMOS.CMSU.EDU.

Child Care Centers

The campus Child Care Centers include the Foster-Knox Center and the Central Village Center. They offer child care to children of students, faculty and staff. Children ages six weeks to 10 years may enroll. Activities and daily care routines appropriate for the age and

development of the children are planned, and meal services are provided.

The centers are licensed with the Missouri Department of Health and follow their guidelines. Foster-Knox Center is the only center open during the Summer sessions and offers a School-Age Summer Camp Program.

Both centers offer full-day care, Monday through Friday. The Central Village Center offers the option of attending Monday, Wednesday and Friday or Tuesday and Thursday only. Enrollment is drawn from a waiting list. For more information call Foster-Knox at 660-543-4605 or Central Village at 660-543-4793.

Farm

The 188-acre University Farm, a teaching unit of the Agriculture Department, provides laboratory experience for students in agriculture classes and work opportunities for students who need additional acquaintance with a variety of phases of agriculture. Agricultural research, funded by the University, private industry, and the National Resources Conservation Service is carried on by faculty and graduate students.

Gerontology Institute

The Gerontology Institute provides research, service, and training resources to agencies and individuals working in the field of aging. It convenes scholars, practitioners, and policymakers for workshops and seminars. It promotes research in the field of aging and disseminates recent scholarly findings. In addition, it provides public service to those serving in the field of gerontology.

INFORM - Information Network for Missouri's Children With Special Needs

INFORM maintains an up-to-date listing of all agencies, services, and programs within the state of Missouri which serve young children and families with special needs. A computerized networking system allows INFORM's information specialists to access information on services available statewide. The Network's toll-free number (800-873-6623) with voice/TDD access ensures that this valuable information will be available to all residents of Missouri.

Information Services

With the Director and most offices located in the Humphreys building, this major campus organization provides computing, computer support, network and telecommunications services for the entire University. Its **Computer Support Services** unit operates, on a nearly around-the-clock basis, the large-scale central IBM mainframe academic and administrative computer systems which house many databases critical to the University's operations. Access to these systems is provided through over 1,500 microcomputers and terminals and via dial-in service. The **Management Information Systems** unit designs, develops, acquires and supports application software systems, including financial, student services, developmental and human resource management for the many administrative offices of the University. The **User Services** unit provides campus-wide computing access through over 2750 workstations (with over 1500 connected to a high speed ATM network), computer support through a central HELP Desk facility and support staff, general and customized training for faculty, staff and students along with World Wide Web user support and academic consulting. The **Telecommunications** unit administers and maintains the University fiber-optic and copper wire cabling system which provides voice, data, and video support to over 50 buildings, as well as managing the campus telephone and voice mail systems.

Missouri Safety Center

Promoting safety in Missouri and the nation, the Missouri Safety Center seeks to prevent injury and death through technology transfer, instruction, research and public service. The Center utilizes a staff of safety professionals dedicated to injury prevention. These safety professionals deliver programming to a diverse clientele which includes personnel from law enforcement, pupil transportation, industry, government and the general public. State-of-the-art information and use of advanced technology is at the core of the Center's various curriculums and programs.

The Missouri Safety Center's Instructional Park is located just south of the main campus. This unique facility houses the professional training programs, off-street driving range, skid

pad, and off-road and all-terrain vehicle range. The Center maintains a fleet of over 100 vehicles for road, special training and range use. These vehicles range from tractor trailer units and school buses to 100cc motorcycles. Also housed within this facility are a driving simulation laboratory, computer laboratory, and one of the nation's foremost breath alcohol instrument training laboratories.

National Police Institute

The National Police Institute serves municipal, county, state, federal, and foreign law enforcement agencies by developing programs of technical assistance on request and conducting these wherever they are needed. Its offerings include police traffic operations, criminal investigation, police administration, and specialized courses in other police service areas.

The Institute is also a certified police academy offering basic police training to new officers as prescribed by the state's Peace Officer Standards and Training Act.

Office of Extended Campus

With the cooperation of Central academic departments, the Office of Extended Campus administers courses and degree programs off campus, at night and through interactive television. The Office also coordinates workshops, non-credit courses, contract training, adult basic education courses, high school dual credit courses, continuing education units (CEUs), vocational education courses and entrepreneurial courses.

Planning Center

The Planning Center in Humphreys, offers facilities materials and equipment for every level of University planning activities. Its resources include (1) two IBM-compatible PCs, Dell Optiplex BXIM 200 MHZ and 486 with 3½", 5¼" and hard disk storage attached to an HP Laserjet II printer, an HP Scan Jet IIc, and a CD-ROM unit; (2) IBM-compatible laptop PC; (3) Macintosh 6500/275 with full-page monitor attached to a CD-ROM unit; (4) Macintosh notebook computer; (5) a mainframe terminal; (6) software including WordPerfect, dBase, Microsoft PowerPoint, PageMaker, McPaint,

32 Services and Facilities

Microsoft Works, MS Word, ClarisWorks, EXCEL, Hypercard, Multimedia Make Your Point, Aldus Persuasion; (7) Panasonic electronic keyboard; (8) overhead and sound/slide projectors with screen; (9) Proxima Desktop Projector 2800 with Cyclops 2060 Camera Eye and wand; (10) InFocus computer projection panel; (11) conference room for a ten-member group including a Soundstation for conference calls; (12) VCR with color monitor; (13) dry erase marker board; and (14) planning resource library. Some equipment can be checked out for use.

Public Safety

The Department of Public Safety includes the areas of University Police, Key Control, Environmental Health and Safety and Parking Services. It is located at 306 Broad Street and is open twenty-four hours daily, 365 days per year. Call 543-4123.

Publications

The following publications are produced and distributed by Central Missouri State:

Alumni Today. A quarterly newspaper for alumni and friends of the University published by the Central Missouri State University Alumni Association and the Central Missouri State University Foundation.

Central Missouri State University News. A weekly newsletter for faculty and staff published by the Office of Public Relations.

The Muleskinner. A weekly campus newspaper published by a Department of Communication student staff.

Rhetor. The University yearbook published each year by an Office of Public Relations student staff.

Research

The Office of Sponsored Research and Projects helps faculty, staff, and students develop, coordinate, negotiate, and administer all types of research and sponsored projects. These services are free.

The Office of Sponsored Research and Projects maintains information about funding opportunities from government and private sources. This information includes newsletters,

announcements, computer databases, and electronic access to federal and private agencies.

Students may apply through the Office of Sponsored Research and Projects for a Willard North Graduate Student Research Award (funded by the Central Missouri State University Foundation). To be considered for this funding, students work closely with a faculty mentor to design an appropriate study and to prepare a proposal for consideration.

Student Volunteer Programs

Student Volunteer Programs provide students with opportunities to become involved in the Warrensburg community. The office provides referrals to local agencies and schools for special projects and ongoing commitments. For information on how to be a part of this enriching experience, stop by the Office of Campus Activities, Union 217, or call 660-543-4380.

Workshop on Wheels

The Workshop on Wheels Resource and Referral is an in-service training project for child care providers, early childhood professionals, and parents affiliated with the Department of Human Environmental Sciences. Its primary purpose is to provide programs and services throughout central Missouri which will improve and enhance the quality of child care offered to young children while they are away from their homes. Child care referrals and consumer education materials focusing on choosing quality child care, ADA guidelines, immunization schedules, and other relevant early childhood information are also available to families who are searching for child care options for their children. The Workshop on Wheels Resource and Referral is funded by grants from the Missouri Department of Elementary and Secondary Education - Division of Adult and Vocational Education (Family and Consume Sciences), the Division of Community Education and the Division of Early Childhood Education; the Missouri Department of Health; and the Children's Trust Fund.

SECTION II

BACHELOR'S DEGREES

Central offers the following baccalaureates:

Bachelor of Arts
 Bachelor of Fine Arts
 Bachelor of Music
 Bachelor of Music Education
 Bachelor of Science
 Bachelor of Science in Business Administration
 Bachelor of Science in Education

The following policies apply to the undergraduate degrees offered by the University:

GENERAL REQUIREMENTS FOR A BACCALAUREATE

1. A baccalaureate shall total a minimum of 124 semester hours including 30 semester hours in residence at Central. The final 10 semester hours must be earned at Central.
2. A baccalaureate shall include 48 semester hours of University Studies as prescribed by the University. See "University Studies" in this section.
3. A baccalaureate shall include a major and a minor or a functional major.
4. A baccalaureate shall include a minimum of 35 semester hours of upper-level credit, 12 of which must be part of a major or of a functional major. Upper level course work must have been earned at Central in the minor.

SPECIFIC REQUIREMENTS FOR THE BACCALAUREATE- -BACHELOR OF ARTS

1. All General Requirements shall be met.
2. A major for this degree normally shall be 30-35 semester hours.
3. A minor for this degree normally shall be 20-25 semester hours.
4. A modern language requirement shall be 9 semester hours and may be met as follows:

The modern language requirement is fulfilled by successfully completing 9 semester hours of one modern language, or completing 6 hours of one modern language and 3 hours of modern literature in translation (Engl 2220), or completing 3 hours of an upper-level modern language course.

Students with previous study of a modern language in high school who enroll in a second semester modern language class or higher may be eligible for validated credit. See Department of Modern Languages Statement of Policy. For further information contact the Chair of the Department of Modern Languages.

SPECIFIC REQUIREMENTS FOR THE BACCALAUREATE- -BACHELOR OF FINE ARTS

This is a professional performance degree available through the Departments of Art and Theatre.

1. All General Requirements shall be met.
2. A functional major for this degree normally shall be 60-80 semester hours.

SPECIFIC REQUIREMENTS FOR THE BACCALAUREATE- -BACHELOR OF MUSIC

This is a professional performance degree available through the Department of Music.

1. All General Requirements shall be met.
2. A functional major for this degree normally shall be 80-82 semester hours.

SPECIFIC REQUIREMENTS FOR THE BACCALAUREATE- -BACHELOR OF MUSIC EDUCATION

This is a professional education degree available through the Department of Music. Students planning to obtain teacher certification should see "Teacher Education Policies and Procedures."

1. All General Requirements shall be met.
2. A functional major normally shall total 60-66 semester hours.
3. Professional education courses for this degree shall be 25-35 semester hours.
4. A candidate for this degree must have a minimum cumulative grade-point average of 2.50 based upon total hours attempted.
5. All students receiving this degree must obtain minimum scores on the area specialty test in music of the National Teacher Examination to be eligible for teacher certification (HB463). See "Teacher Education Policies and Procedures."

SPECIFIC REQUIREMENTS FOR THE BACCALAUREATE- -BACHELOR OF SCIENCE

1. All General Requirements shall be met.
2. A major for this degree normally shall be 40-45 semester hours.
3. A minor for this degree normally shall be 20-25 semester hours.
4. A functional major for this degree normally shall be 60-70 semester hours.
5. Candidates for this degree who are seeking teacher certification must satisfy teacher education certification standards. See BSE degree requirements below.

SPECIFIC REQUIREMENTS FOR THE BACCALAUREATE- -BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION

1. All General Requirements shall be met.
2. A functional major in this degree normally shall be 60-70 semester hours.

34 Degree Requirements

SPECIFIC REQUIREMENTS FOR THE BACCALAUREATE- -BACHELOR OF SCIENCE IN EDUCATION

Students planning to obtain teacher certification should see "Teacher Education Policies and Procedures."

1. All general requirements shall be met.
2. A major for this degree shall be in a certifiable area and normally shall be 30-36 semester hours except in those instances where certification requirements exceed this amount.
3. A minor for this degree normally shall be 18-24 semester hours.
4. The semester hours required for a functional major for this degree normally shall be 50-60 semester hours.
5. Professional education courses for this degree shall be 25-35 semester hours.
6. A candidate for this degree must have a minimum cumulative grade-point average of 2.50 based upon total hours attempted.
7. All students receiving this degree must obtain a minimum score on the appropriate exit test, generally the major area specialty test of the National Teacher Examination, to be eligible for teacher certification (HB463). Not obtaining the prescribed minimum score does not preclude receiving the degree. Students with double majors in education normally must plan to take tests in both areas, over a two-semester time period.

ASSOCIATE DEGREES

Central offers an Associate in Science degree.

GENERAL REQUIREMENTS FOR ASSOCIATE DEGREES

1. An associate degree consists of a minimum of 60 semester hours. For an associate degree, the student must earn at least 20 semester hours in residence at Central. The final 10 semester hours must be earned at Central.
2. An associate degree candidate must have a minimum cumulative GPA of 2.0 (C), based upon total hours attempted. In the case of a transfer student, a cumulative GPA of 2.0 must be earned at Central as well as an overall cumulative average of 2.0.
3. All associate degree candidates are required to satisfy Missouri State requirements in regard to the Federal and State Constitutions. This requirement is filled by taking Hist 1321 or Hist 1351.
4. In those cases involving two-year college transfer students, career-level courses may be counted toward the major requirement as determined by departmental evaluation.

MAJORS AND MINORS

Central requires that candidates for bachelor's degrees provide evidence of depth of study through the completion of majors and minors. This requirement can be met by one of three options: (1) completion of a major and a minor, (2) completion of a functional major, or (3) completion of a double major.* The double major and the major-minor combination allow for preparation in two fields. The functional major is a comprehensive program which integrates, with the primary field, fields which are closely related. (*NOTE: If a course used to meet a major or minor requirement also meets a requirement of another major or minor, then a departmentally approved course substitution must be made for the duplicate course in one of the major/minor programs.)

RESIDENCE

A candidate for any bachelor's degree must have earned a minimum of 30 semester hours with Central. Candidates for the degrees must have earned at least 20 semester hours with Central during the junior and senior years, including upper-level courses in both the major and minor areas.

The last ten semester hours required for the degree must have been earned from this institution.

For an associate degree, the student must earn at least 20 semester hours with Central.

UNIVERSITY STUDIES PROGRAM

The University Studies Program introduces students to areas of skill and knowledge that will equip them to function and contribute as educated citizens in a free society. The Program is a requirement for all baccalaureate degree candidates. Courses are grouped in categories in order to provide students with common bodies of knowledge and experiences generally accepted as desirable of all educated people.

To contribute to the academic success of students, Central has a procedure for planned placement of students in Reading Skills, Modern Languages and in the Intellectual Skills. Students demonstrating exceptional preparation in the Intellectual Skills areas of Written Communication, Oral Communication and Mathematical Reasoning may be eligible to receive credit for the required University Studies course(s) by meeting the established guidelines for exemption and credit. Requests for exemptions from required Intellectual Skills courses should be directed to the Office of Academic Advisement.

POLICIES CONCERNING THE UNIVERSITY STUDIES PROGRAM

The University Studies Committee is charged with the development and interpretation of policies concerning the University Studies Program. Policies must conform to the Statement of Philosophy and General Goals of the University Studies Program.

1. Students will take courses in three divisions: I. Intellectual Skills, II. Core and III. Integrative Studies. In general, University Studies Intellectual Skills and Core Division courses are introductory in nature and open to all students.
2. Courses in Division I. Intellectual Skills should be taken during the student's first year of study. Students with more than 30 semester hours of college credit who have not completed their intellectual skills requirements will be expected to make continuing progress toward completion of any remaining courses in this division.
3. Students must meet state law requirements, Section 170.011 RSMo Supp (1988), that mandate specific instruction in

State and Federal constitutions and American history and institutions by the successful completion of one of the following courses: Hist 1350, Hist 1351, or PoIS 1510.

4. In any division of the University Studies Program where a requirement may be met in a variety of ways, colleges and departments shall allow students maximum freedom of choice whenever possible. However, colleges and departments may specify the University Studies course(s) meeting that requirement for any or all of their degree programs.
5. Transfer credit will be accepted for comparable University Studies courses.
6. Courses taken to fulfill University Studies requirements may not be taken on the Pass-Fail basis, but students who have fulfilled all University Studies requirements in a specific area may elect to take additional University Studies courses in the same area on the Pass-Fail basis.

PLANNED PLACEMENT IN DIVISION I. UNIVERSITY STUDIES, READING SKILLS AND MODERN LANGUAGES

To contribute to the academic success of students, Central Missouri State University has a procedure for planned placement of students in Division I. Intellectual Skills (Written Communication, Oral Communication and Mathematical Reasoning), reading skills and Modern Languages. The academic credentials of first time, full-time degree seeking students and transfer students with fewer than 24 semester hours of credit, who have not completed the Intellectual Skills requirements, will be evaluated. Students will be placed in appropriate courses--developmental, college level and advanced--to maximize their opportunities for success and achievement.

The Modern Language Department uses Planned Placement for the Spanish, French and German classes. Validated credit can be earned for previous knowledge and/or abilities in the languages.

Students with questions concerning placement should contact the Office of Academic Advisement, Administration Building 102.

36 University Studies Requirements

UNIVERSITY STUDIES

Division I. Intellectual Skills 12

Area A. Written Communication 6

Students exceptionally prepared in written communication, as defined by Planned Placement guidelines, will take Engl 1080 in place of Engl 1020 and Engl 1030. Completion of Engl 1080 with a grade of C or above will result in 6 hours--Engl 1080 (3) and Engl 1020 (3).

Engl	1020	Composition I	3
Engl	1030	Composition II	3
Engl	1080	Advanced Composition	3

Area B. Oral Communication 3

Choose one course from the following:

SpCm	1000	Public Speaking	3
Thea	1100	Oral Interpretation	3

Area C. Mathematical Reasoning 3

Choose one course from the following:

Math	1111	College Algebra	3
Math	1150	Pre-Calculus Mathematics	4
Math	1620	Contemporary Mathematics	3

Division II. Core 33

Each student must take a course in fine arts (prefix of Art, Mus, or Thea) in Div. II Area C.

Each student must take a history course (prefix of Hist) in Div. II Area B or D.

Area A. Natural Sciences and Technology 9

Choose two courses with different prefixes from the following, one of which must have a laboratory component:

Biol	1003	Introduction to the Sciences: Ecology (Lab not included)	3
Biol	1004	Introduction to the Sciences: Ecology (Lab included)	4
Chem	1103	Introduction to the Sciences: Chemistry (Lab not included)	3
Chem	1104	Introduction to the Sciences: Chemistry (Lab included)	4
EaSc	1004	Introduction to the Sciences: Geology (Lab included)	4
Phys	1103	Introduction to the Sciences: Physics (Lab not included)	3
Phys	1104	Introduction to the Sciences: Physics (Lab included)	4

Choose one technology course from the following:

CIS	1610	Impact of Computer-Based Technology	2
IA&T	2000	Technology & Change	3
LIS	1600	Information Resources	2
MF&C	1012	Global Production Technology	3

Area B. Social Sciences 9

Choose from three of the following specified areas: Anthropology (Anth), Economics (Econ), Geography (Geog), History (Hist), Political Science (PoIS), Psychology (Psy), Sociology (Soc). Each student must take a course (Hist 1350, Hist 1351, or PoIS 1510) to fulfill state law requirements, Section 170.011 RSMO Supp (1988).

Anth	1810	Human Prehistory	3
Econ	1010	Principles of Economics	3
Geog	2212	World Geography	3
Hist	1350	History of the U.S. to 1877	3
Hist	1351	History of the U.S. from 1877	3
PoIS	1500	Intro to Political Science	3
PoIS	1510	American Government	3
Psy	1100	General Psychology	3
Soc	1800	General Sociology	3

Area C. Humanities 9

Choose one literature course from the following:

Engl	2200	Amer. Literature to 1865	3
Engl	2205	Amer. Lit. 1865 to Present	3
Engl	2210	British Literature to 1750	3
Engl	2215	British Lit. 1750 to Present	3
Engl	2220	World Masterpieces	3

Choose from two of the following specified areas one of which must be Art, Mus or Thea: Art (Art); Mass Communication (MCom); Modern (Foreign) Languages (Fren, Ger, Span, etc.); Music (Mus); Philosophy (Phil); Religious Studies (Rel); Theatre (Thea).

Art	1800	Ideas and the Visual Arts	3
MCom	3000	Film Appreciation	3
Mus	1210	Experiencing Music	3
Phil	1000	Introduction to Philosophy	3
Rel	1510	Exploring Religion	3
Thea	2400	Theatre in Western Civ.	3
Any Modern (Foreign) Language			3

Area D. Cultural Interaction 3

Choose one course from the following:

Agri	2130	Global Agriculture	3
Anth	1820	Cultural Anthropology	3
EdCI	2110	World Diversity & America	3
Geog	3201	The Cultural Landscape	3
Hist	2402	History of the Modern World	3
IndS	3340	Modern East Asia	3
Mus	1225	Music of World's Cultures	3
WS	2000	Race, Class, & Gender	3

Area E. Personal Interaction 3

Choose three hours from the following:

HEd	1100	Personal Health	3
HES	1010	Individual & Family Relationships	3
PE	1203	Aerobic Conditioning	1
PE	1206	Lifetime Fitness	3
PE	1204	Stress Management	1
PE	2200	Weight Training	1
Phil	2300	Ethics	3
Psy	1320	Psy. of Personal Adjustment	3
SpCm	3000	Interpersonal Comm.	3

Division III. Integrative Studies 3

Each student must take a course in Integrative Studies which may be specified in major program or chosen from Div. III A. To enroll in a course for Div. III A or B, a student will have successfully completed a minimum of 60 semester hours, all required Intellectual Skills courses, and at least 24 semester hours of University Studies Core courses, including a course from each core area. Any additional prerequisites are listed per course.

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Area A. General Integrative Studies Courses

IGen	3116	Creative Problem Solving	3
IGen	3224	Critical Thinking	3
IGen	3232	Media Literacy	3
IGen	4224	Communication, Science & Technology	3
IGen	4235	Cognitive Science	3
IGen	4236	Science & Religion: From Conflict to Dialogue	3
IGen	4231	Myth, Memory & American Realities	3
IGen	4234	Arts: An Integrated Approach	3
IGen	4244	Comparative Cross-Cultural Cinema	3
IGen	3468	Community, School & Family Connections	3
IGen	3472	Sport in American Life	3
IGen	3896	Assessing Global Change for the Information Age	3

Area B. Capstone Integrative Studies Courses

offered by student's major department

ICap	4101	Agricultural Capstone Experience	3
ICap	4109	Construction Operations	3
ICap	4110	Industrial Problem Solving	3
ICap	4111	Socio-Economic Factors Impacting Health	3
ICap	4112	Automotive Systems for Contemporary Society	3
ICap	4113	Air Operations Mgt.	3
ICap	4115	Safety & Health Mgt.	3
ICap	4221	Artists in Contemporary Society	3
ICap	4222	The Biological Perspective	3
ICap	4357	Business Policy	3
ICap	4468	Student Teaching Secondary II	4
ICap	4478	Integrative Social Work Practicum Seminar	3

Total Semester Hours 48

HONORS PROGRAM

The Honors Program is an academic program specifically designed to enhance the educational experience of highly able and/or exceptionally motivated undergraduate students. The Honors Program is flexibly structured to enable students to realize their full potential by providing them with opportunities for learning and development which may not be available otherwise. The Program provides a stimulating academic environment within which gifted students can nurture their talents.

The Honors Program Committee will consider applications for admission to the Honors Program from high school seniors, high school graduates, transfer students and Central students who have strong academic records.

All applicants must prepare an application form and arrange to have college and high school transcripts forwarded. For application material and information regarding admission requirements, financial aid and other benefits, interested students should contact the Director of the Honors Program, Library 214, 660-543-4633.

Some of the present features of the Honors Program include:

- Early enrollment
- Financial assistance
- Course overload privilege
- Undergraduate credit for certain graduate-level courses
- Transcript recognition.

Honors Program

The Honors Program is designed for those students who seek to graduate from Central with recognition for completing the Honors Program. The flexibility of the Honors Program allows Program members to explore a wide variety of subject areas—from the introductory level courses to those requiring advanced standing.

Division I. Intellectual Skills 12

Area A. Written Communication 6

Engl 1080 Advanced Composition 3

Honors Program students take Engl 1080 in place of Engl 1020 and Engl 1030. Completion of Engl 1080 with a grade of C or above will result in 6 hours, Engl 1080 (3) and Engl 1020 (3).

Area B. Oral Communication 3

SpCm 1000 Public Speaking 3

Thea 1100 Oral Interpretation 3

Area C. Mathematical Reasoning 3

Math 1111 College Algebra 3

Math 1150 Pre-Calculus Mathematics 4

Math 1620 Contemporary Mathematics . . . 3

38 Options

Division II. Core	32
Area A. Natural Sciences and Technology	9
Natural Sciences	7
Honors Program students may choose the courses listed in the regular University Studies Program or may substitute higher level courses in the appropriate prefix categories to fulfill this requirement with approval of the Director of the Honors Program.	
Technology	2
CIS 1610 Impact of Computer-Based Technology	2
IA&T 2000 Technology & Change	3
LIS 1600 Information Resources	2
Area B. Social Science	9
Hist 1351 History of U.S. from 1877	3
Honors Program students may choose two additional courses from the courses listed in the regular University Studies Program or may substitute higher level courses in the appropriate prefix categories to fulfill this requirement with approval of the Director of the Honors Program 6	
Area C. Humanities	9
Literature	3
Honors Program students may choose one of the courses listed in the regular University Studies Program or may substitute a higher level course to fulfill this requirement with approval of the Director of the Honors Program.	
Modern (Foreign) Language	6
All Honors Program students are required to take two modern language courses of a single foreign language.	
Area D. Cultural Interaction	3
Honors Program students may choose one of the courses listed in the regular University Studies Program or may substitute a higher level course in the appropriate prefix category to fulfill this requirement with approval of the Director of the Honors Program.	
Area E. Personal Interaction	2
Honor 3000 Honors Colloquium	2
Division III. Integrative Studies	4
Honor 4000 Honors Project	4
TOTAL SEMESTER HOURS	48

Honor 3000 Honors Colloquium (2) A multidimensional course, the content of which may vary with each offering; required of and open only to members of the University Honors Program. May be repeated for a maximum of 6 semester hours. Prerequisite: junior standing or approval.

Honor 4000 Honors Project* (4) A research study or creative project entailing independent work, which is required of and open only to members of the University Honors Program. Prerequisite: senior standing or approval.

*Not available for graduate credit.

Policies Governing the Honors Program

- Each participant in the Honors Program will be required to conform to the policy guidelines of the University Honors Program and the University Studies Program. Suitable course electives consist of those courses permitted on major/minor programs or in the University Studies Program

- requirements. Any exceptions or departures will require the approval of the Director of the Honors Program.
- Elementary education functional majors and elementary special education functional majors must include Engl 1080, Hist 1350 or Hist 1351, Modern Languages, Honor 3000 and Honor 4000 in the Honors Program. All other portions of the University Honors Program are fulfilled by the requirements of those majors in conformity with the policies of the University Studies Program.

PRE-PROFESSIONAL TRAINING

Students who wish to prepare for entrance to professional schools such as Dentistry, Law, Medicine, Optometry, Osteopathy, Pharmacy, Physical Therapy, Veterinary Medicine, or Wildlife Biology and Forestry may take pre-professional work at Central. The student should contact the Office of Academic Advisement for additional information.

INDIVIDUALIZED PROGRAMS

Before 72 semester hours are earned, a student pursuing a baccalaureate degree may request an undergraduate major or minor concentration not listed in the Catalog, but consisting of courses offered herein. Such a major or minor may be across various disciplines; however, all University Studies and other degree requirements must be met. The student must select a faculty member to serve as an advisor. Together they will develop a proposed plan of study which must receive the written approval of the student, faculty advisor, appropriate department chair(s), dean(s) and the Provost and Vice President for Academic Affairs. The student must include a signed statement indicating he/she accepts full responsibility for the proposal. Upon final approval of the individualized major or minor, the student is notified and a copy of the proposal is filed with the Registrar and the Office of Academic Advisement.

OFF-CAMPUS STUDY, EVENING, AND WEEKEND CLASSES

Central has an extensive offering of late afternoon, evening and weekend courses and degree programs. These courses and programs provide students with educational opportunities at both the graduate and undergraduate levels. Admission requirements are identical to those established for traditional students. Specific inquiries or requests for a class schedule should be directed to the Office of Extended Campus.

INTERNATIONAL STUDY

Central Missouri State University believes strongly in the development of an international perspective among its students and faculty. One of the most exciting educational experiences available is the opportunity for students to spend a semester or year abroad. The following programs are available through the Office of International Programs.

Budapest University, Budapest, Hungary.

Agreements have been signed which will allow Central students to attend one of Eastern Europe's finest universities. Courses taught in English are available in Economics and History, with additional options being developed.

Denmark International Study Program is taught in English by Danish professors at the University of Copenhagen. Students in this program are given the option of living with a Danish family or with Danish students. A large selection of upper-division undergraduate courses are offered in Liberal Arts (Arts, Humanities, Social Sciences, International Relations, Education), International Business and Architecture and Design.

International Student Exchange Program (ISEP). This organization, of which Central is a member, allows its members to participate in balanced, one-to-one exchanges of students between institutions in the United States and those in other countries. Students pay tuition, fees and room and board. The students attend the foreign university free of charge.

ITESM (Instituto Tecnológico y de Estudios Superiores de Monterrey) Campus Estado de Mexico, Mexico. This system of 26 campuses represents the leading university in Mexico. A direct exchange agreement with the Mexico City campus promotes language study plus courses in Mexican culture and business.

Maastricht Center for Transatlantic Studies, Netherlands. This program provides a central meeting place for faculty, staff and students from Europe, the United States and Mexico. Courses from the social sciences, humanities and business are available and are taught by international faculty.

Kansai Gaidai University, Osaka, Japan.

Programs offered include Asian studies, business, political science and art. The exchange is designed so that students pay room, board and tuition at Central without additional fees in Japan.

The Missouri Africa Program - Ghana. The Missouri Africa Program is a one-semester program at the University of Ghana, Legon. The program enables students to enroll in select courses at the University of Ghana, which allows for the greatest level of cultural immersion. All of the classes are taught in English.

Missouri London Program. Central participates with nine other Missouri universities in teaching an academic program in London, using their own faculty, curriculum, standards and style. Courses are structured so that academic credits earned are part of the regular authorized offerings which allow Central students to make normal progress toward their undergraduate degrees while utilizing London and other European resources and cross-cultural experiences.

Napier University, Edinburgh, Scotland. This direct exchange allows Central students to pay tuition at home while living in one of Scotland's most exciting cities. Several unique opportunities exist at Napier, including programs in photography, graphic arts, hotel and restaurant management and communications.

Örebro University, Örebro, Sweden. This program is designed as an exchange for business, economics, communications, law and social work students.

University of Glamorgan, outside Cardiff, South Wales. Exchanges are primarily for communications, social sciences and humanities but are available for other academic areas, as well.

University of Helsinki, Helsinki, Finland. Central's Department of Speech Pathology and Audiology and the Department of Phonetics in Helsinki signed agreements to facilitate this exchange of students and faculty.

Växjö University, Växjö, Sweden. Three basic programs are available in courses taught in English by Swedish professors. During the fall semester, social science options are available for upper-level students in economics, political science, or sociology. A spring semester course is available in intercultural studies which provides an opportunity to study cultural and international subjects through a mix of sociological, anthropological and communication theory. During the spring semester, Scandinavian business and international education are also offered.

Summer Language Programs. Summer study programs in French, Spanish and German are offered on a periodic basis by the Department of Modern Languages.

Other International Study. In addition to the programs available at Central, it is possible to make other study arrangements in most European countries, Latin America and Japan.

Federal Financial Aid. An otherwise eligible student is normally permitted to use Federal grant and loan aid to help pay the expenses of participating in an approved program of International Study. For more information, contact the Office of Financial Aid and Veteran Services, Administration 316, several months in advance of the scheduled departure date.

COURSE AND DEGREE PROGRAM REQUIREMENTS--COLLEGES AND DEPARTMENTS

Course and degree program requirements are arranged according to college and department or area as indicated in the following outline:

COLLEGE OF APPLIED SCIENCES AND TECHNOLOGY

- Agriculture (Agri)
- Electronics Technology (ET)
 - Electronics Engineering Technology (EET)
- Graphics (Grap)
 - Fashion and Apparel Merchandising (FAMe)
 - Industrial Arts and Technology (IA&T)
- Manufacturing and Construction (Mf&C)
 - Air Conditioning and Refrigeration (ACR)
 - Industrial Management (IndM)
- Military Science (MS)
- Nursing (Nur)
- Power and Transportation (Pr&T)
- Safety Science and Technology (SS&T)
 - Driver's Education (DrEd)

COLLEGE OF ARTS AND SCIENCES

- Art (Art)
- Biology and Earth Science (Biol, EaSc)
- Chemistry and Physics (Chem, Phys)
- Communication (Comm)
 - Mass Communication (MCom)
 - Speech Communication (SpCm)
- English and Philosophy (Engl, Phil)
- History and Anthropology (Hist, Anth)
 - Social Science (SoSc)
- Mathematics and Computer Science (Math, CS)
- Modern Languages (ML)
 - French (Fren)
 - German (Ger)
 - Spanish (Span)
 - Chinese (Chin)
- Music (Mus)
- Political Science and Geography (PolS, Geog)
- Religious Studies (Rel)
- Theatre (Thea)
- Women's Studies (WS)

ADRIAN AND MARGARET HARMON COLLEGE OF BUSINESS ADMINISTRATION

- Accounting (Acct)
- Computer and Office Information Systems (CIS, BE&O)
- Economics and Finance (Econ, Fin)
- Management (Mgt)
 - Human Resource Management (HRM)
- Marketing and Legal Studies (Mkt, BLaw)

COLLEGE OF EDUCATION AND HUMAN SERVICES

- Communication Disorders (CD)
- Criminal Justice (CJ)
- Curriculum and Instruction (EdCI)
 - Science Education (ScEd)
- Human Environmental Sciences (HES)
- Physical Education (PE)
- Psychology and Counselor Education (Psy, Coun)
- Sociology and Social Work (Soc, SoWk)
- Special Services
 - School Administration and Higher Education (EdAd)
 - Health Education (HEd)
 - Instructional Technology (InsT)
 - Recreation and Tourism (Rec, Tour)
 - Special Education (EdSp)

EDUCATIONAL DEVELOPMENT CENTER

- Personal Skills Development (Pers)
- University Orientation (Univ)

INTERDISCIPLINARY STUDIES (IndS)

INTERNATIONAL STUDIES (ISP)

INTEGRATIVE STUDIES

- General Integrative Studies (IGen)
- Capstone Integrative Studies (ICap)

LIBRARY SERVICES

- Library Science and Information Services (LIS)

Program codes are listed in parentheses below the program title. The listing of courses does not constitute a contract that they will be offered. All credits offered at Central Missouri State University are on the semester-hour basis.

College of Applied Sciences and Technology

Agriculture

In the Department of Agriculture, the second digit in the course number stands for the following: 0--General, 1--Agricultural Business and Economics, 2--Agricultural Mechanization, 3--Agronomy, 4-5--Animal Science, 6--Horticulture, 8-9--Professional and Agriculture Education.

AGRICULTURAL ECONOMICS Functional Major, B.S. Degree

(43 000101)

					Sem. Hours		
FUNCTIONAL MAJOR REQUIREMENTS					72		
Agri	1100	Introduction to Agriculture	1	Math	1131	Calculus for Business & Econ.	3
Agri	2110	Agricultural Records	3	Acct	2101	Principles of Financial Acct.	3
Agri	3110	Agri-Business Management	3	Acct	2102	Principles of Managerial Acct.	3
Agri	3120	Dist. & Mktg. Agri. Products	3	Econ	1011	Principles of Economics	3
Agri	3140	Agri. Analysis & Statistics	3	Econ	3010	Intermediate Macroeconomics	3
Agri	4110	Agricultural Futures Trading	3	Econ	3020	Money & Banking	3
Agri	4120	International Agriculture	3	Econ	3030	Intermediate Microeconomics	3
Agri	4130	Agricultural Prices	3	Mkt	3400	Principles of Marketing	3
Agri	4140	Agricultural Policy	3	BLaw	2720	Legal Environment of Business	3
Agri	4150	Natural Resource Econ. for Agri.	3	Agri	1420	Animal Husbandry, 3 or	
Agri	3210	Soil & Water Management	3	Agri	1510	The Elements of Dairying, 3	3
Agri	1310	Field Crops	3	Agri	4340	Agri. Sprays & Chemicals, 3 or	
Agri	2315	Field Crops	2	Agri	3610	Agricultural Insect Control, 3	3
Agri	2330	Introduction to Soil Science	3				
MINOR NOT REQUIRED							
UNIVERSITY STUDIES REQUIREMENTS					48		
SpCm	1000	Div. I B (required)	3	Econ	1010	Div. II B (required)	3
Math	1111	Div. I C (required)	3	Agri	2130	Div. II D (required)	3
Chem	1104	Div. II A (required)	4	ICap	4101	Div. III B (required)	3
FREE ELECTIVES					4		
MINIMUM TOTAL					124		

AGRICULTURAL TECHNOLOGY Functional Major, B.S. Degree

(43 000209)

					Sem. Hours		
FUNCTIONAL MAJOR REQUIREMENTS					71-72		
Agri	1100	Introduction to Agriculture	1	Econ	1011	Principles of Economics	3
Agri	3140	Agri. Analysis & Statistics	3	Agri	1310	Field Crops, 3 or	
Agri	1200	Agriculture Mechanics	3	Agri	2315	Field Crops, 2	2-3
Agri	2330	Introduction to Soil Science	3	Agri	3110	Agri-Business Management, 3 or	
Agri	4300	Soil Fertility & Fertilizers	3	Agri	3120	Dist. & Mktg. Agri. Products, 3	3
Agri	4310	Plant Improvement	3	Departmentally approved electives from			
Agri	1420	Animal Husbandry	3	one of the following areas			24
Agri	2425	Livestock Evaluation	3	Area 1 Animal Technology			
Agri	4410	General Veterinary Science	3	Area 2 Agronomic Technology			
Agri	1600	General Horticulture	3	Area 3 Horticultural Technology			
Agri	1610	Establishment & Care of		Area 4 Agricultural Mechanization			
		Greenhouse Plants	3	List of electives available from Chair,			
Agri	3610	Agricultural Insect Control	3	Department of Agriculture.			
Chem	2650	Elem. Organic & Biochemistry	5				
MINOR NOT REQUIRED							
UNIVERSITY STUDIES REQUIREMENTS					48		
SpCm	1000	Div. I B (required)	3	Agri	2130	Div. II D (required)	3
Math	1111	Div. I C (required)	3	ICap	4101	Div. III B (required)	3
Chem	1104	Div. II A (required)	4				
FREE ELECTIVES					4-5		
MINIMUM TOTAL					124		

AGRICULTURE Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)
(000110)

				Sem. Hours			
MINOR REQUIREMENTS				25			
Agri	3120	Dist. & Mkt. Agri. Products	3	Agri	1200	Agriculture Mechanics, 3 or	
Agri	1310	Field Crops	3	Agri	3200	Farm Power & Machinery, 3	3
Agri	2330	Introduction to Soil Science	3	Agri	1600	Gen. Horticulture, 3 or	
Agri	1420	Animal Husbandry	3	Agri	1610	Establishment & Care of	
Chem	1104	Intro. to the Sciences: Chemistry	4			Greenhouse Plants, 3	3
Econ	1011	Principles of Economics	3				
UNIVERSITY STUDIES REQUIREMENTS (In the minor, Chem 1104 fulfills 4 s.h. of Div. II A)							

AGRICULTURE-BUSINESS Functional Major, B.S. Degree

(43 000111)

				Sem. Hours			
FUNCTIONAL MAJOR REQUIREMENTS				69-71			
Agri	1100	Introduction to Agriculture	1	Agri	2425	Livestock Evaluation	3
Agri	2110	Agricultural Records	3	Agri	3420	Animal Nutrition	3
Agri	2120	Agricultural Cooperatives	1	Acct	2101	Principles of Financial Acct.	3
Agri	3110	Agri-Business Management	3	Econ	1011	Principles of Economics	3
Agri	3120	Dist. & Mktg. Agri. Products	3	Econ	3030	Intermediate Microeconomics ...	3
Agri	3130	Social Issues in Technology	3	Mgt	3325	Business Communications	3
Agri	3140	Agri. Analysis & Statistics	3	Agri	1200	Agriculture Mechanics, 3 or	
Agri	4110	Agricultural Futures Trading	3	Agri	3200	Farm Power & Machinery, 3	3
Agri	4120	International Agriculture	3	Agri	3210	Soil & Water Management, 3 or	
Agri	4130	Agricultural Prices	3	Agri	4230	Mechanized Feed Handling, 2	2-3
Agri	4140	Agricultural Policy	3	Agri	1310	Field Crops, 3 or	
Agri	4150	Natural Resource Econ. for Agri.	3	Agri	2315	Field Crops, 2	2-3
Agri	2330	Introduction to Soil Science	3	Agri	4320	Agricultural Plant Diseases, 3 or	
Agri	2331	Soils	3	Agri	4340	Agri. Sprays & Chemicals, 3	3
Agri	1420	Animal Husbandry	3				
MINOR NOT REQUIRED							
UNIVERSITY STUDIES REQUIREMENTS				48			
SpCm	1000	Div. I B (required)	3	Econ	1010	Div. II B (required)	3
Math	1111	Div. I C (required)	3	Agri	2130	Div. II D (required)	3
Chem	1104	Div. II A (required)	4	ICap	4101	Div. III B (required)	3
FREE ELECTIVES							
MINIMUM TOTAL							

VOCATIONAL AGRICULTURE EDUCATION Functional Major, B.S. in Ed. Degree

(Certification to teach vocational agriculture education in grades 9-12)
(41 000112)

				Sem. Hours				
FUNCTIONAL MAJOR REQUIREMENTS				55				
Agri	1100	Introduction to Agriculture	1	Agri	3420	Animal Nutrition	3	
Agri	3110	Agri-Business Management	3	Agri	1510	The Elements of Dairying	3	
Agri	3120	Dist. & Mktg. Agri. Products	3	Agri	1600	General Horticulture	3	
Agri	1200	Agriculture Mechanics	3	Agri	3900	Found. of Agri. Education	3	
Agri	3200	Farm Power & Machinery	3	Agri	4910	Agri. Occupations Exper. Prog. ...	2	
Agri	1310	Field Crops	3	Agri	4920	Agri. Mechanics in Agri. Ed.	2	
Agri	2315	Field Crops	2	Econ	1011	Principles of Economics	3	
Agri	2330	Introduction to Soil Science	3	Biol	1004	Intro. to the Sciences: Ecology ...	4	
Agri	3410	Animal Breeding	3	Electives in agriculture				8
MINOR NOT REQUIRED								
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Biol 1004 fulfills 3 s.h. of Div. II A)				45				
Math	1111	Div. I C (required)	3	PolS	1510	Div. II B (required)	3	
Chem	1104	Div. II A (required)	4	Psy	4230	Psy. of Adolescence	3	
Hist	1350	Div. II B or		ICap	4101	Div. III B (required)	3	
Hist	1351	Div. II B (required)	3					
Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. in Div. II B.								
PROFESSIONAL EDUCATION REQUIREMENTS (see page 183)				26				
Students shall substitute Agri 4900 for EdCI 3500 and EdCI 3550.								
MINIMUM TOTAL								

General

Agri 1010 Urban Life and Agriculture (3) Human and natural resources used in agriculture and production. Interdependence of rural and urban people as they live in a modern society.

Agri 4000 Special Projects in Agriculture (1-3) Investigation of contemporary problems and issues in agriculture by selected individuals or groups. May be repeated for a maximum of 9 semester hours.

Agricultural Business and Economics

Agri 1100 Introduction to Agriculture (1) Orientation to the philosophy, development and current trends in the professional preparation for careers in agriculture. Prerequisite: must be taken during the first year of the agriculture program.

Agri 2110 Agricultural Records (3) Fundamental principles and practices of record buyers as applied to the organization and operation of agricultural enterprises.

Agri 2120 Agricultural Cooperatives (1) Environment, organization and business function of modern agricultural cooperatives.

Agri 2130 Global Agriculture (3) Interaction of culture and farming/food systems worldwide emphasizing the interaction of cultures with agricultural production/food systems and the influence this has on social, economic, governmental, and environmental factors.

Agri 3100 Agricultural Business Leadership Development (1) Development of self-marketing skills needed for employment in agribusiness. Students will be required to demonstrate competency in both written and spoken English. Prerequisites: SpCm 1000 and completion of University Studies Div. II A. **To be deleted Summer 2001.**

Agri 3110 Agri-Business Management (3) Management functions and economics of agricultural organizations and operations, including input-output analysis, efficient allocations of resources, enterprise combinations, and budgeting analysis. Prerequisite: Econ 1011.

Agri 3120 Distribution and Marketing Agriculture Products (3) Principles governing the distribution, prices, and marketing of agriculture products. Prerequisite: Econ 1011.

Agri 3130 Social Issues in Technology (3) An in-depth consideration of the effects of technological transformations and innovations on society.

Agri 3140 Agricultural Analysis and Statistics (3) Statistical analysis and experimental designs as applied to agriculture. Prerequisite: Math 1111.

Agri 4110 Agricultural Futures Trading (3) Examination of techniques used in pricing products in the agricultural commodities futures market. Emphasis on futures trading as a marketing tool with some consideration of alternative speculating techniques. Prerequisites: Agri 3120 and Econ 1011, or equivalent.

Agri 4120 International Agriculture (3) Economic, cultural, governmental and environmental factors which influence agricultural production and trade among countries. Prerequisites: Econ 1010, Agri 3120 and Agri 2330.

Agri 4130 Agricultural Prices (3) The factors affecting agricultural commodity prices and related nonagricultural prices; factors affecting prices of individual farm products, their importance and behavior; analysis of price trends and seasonal variation; parity prices; methods of forecasting

demand and prices. Prerequisites: Agri 3120, Agri 3140 and Econ 3030.

Agri 4140 Agricultural Policy (3) History, principles, settings, objectives, and methods of policy development as applied to agriculture in our society. Prerequisites: Agri 3110 and Agri 3120.

Agri 4150 Natural Resource Economics for Agriculture (3) Nature of natural resources; economic efficiency as basis for natural resource use; externalities in natural resource use; factors influencing environmental quality; alternate public policy tools for influencing natural resource use. Prerequisite: Econ 3030.

Agri 5120 Agriculture in Developing Countries (3) Examination of agricultural and rural development issues in less developed countries. Alternative agricultural production systems are compared, development theories are examined, and consideration is given to the planning and implementation of development programs. Prerequisites: Econ 1010, Agri 3110 and Agri 3120.

Agri 5160 Statistical Analysis of Agriculture (3) The role of statistics in agriculture research. Statistical concepts include randomized complete blocks, factorials, latin squares, split-plot designs, time series, discriminant analysis, and various multiple regression analyses techniques. Prerequisite: Agri 3140.

Agri 5170 Linear Programming for Agricultural Management (3) Principles and applications of linear programming methods applied to problem solving in agricultural production, marketing and management. Prerequisites: Math 1131, Agri 3140 and 15 semester hours of agriculture courses.

Agricultural Mechanization

Agri 1200 Agriculture Mechanics (3) Selection and use of hand and power tools for the farm shop. Basic processes and procedures in hot metal work and elements of woodworking used in the repair and maintenance of the farm.

Agri 3200 Farm Power and Machinery (3) Mechanical work on the farm, including selection, cost, and care of farm machinery. Includes laboratory practices on tractors, gas engines, plows, mowers, and other farm machinery.

Agri 3210 Soil and Water Management (3) Soil and water conservation. Use of farm level, laying out and establishing terraces, water ways, diversion channels, and farm ponds. Prerequisite: Agri 2330.

Agri 4200 Advanced Agriculture Mechanics (3) Application of shop principles to the design and construction of farm mechanical projects. Prerequisite: Agri 1200.

Agri 4230 Mechanized Feed Handling (2) Modern feed handling systems for beef cattle, dairy, swine, and poultry. Application of automatic feeders, waterers, augers, mixers, and other mechanical devices for handling feed will be tested on the University Farm.

Agri 5230 Agricultural Machinery Management (3) The capacities, costs, and practicalities of various mechanical systems used in the agricultural industry. Prerequisite: 15 semester hours of agriculture courses.

Agronomy

Agri 1310 Field Crops (3) Principles and practices in cereal crop production.

Agri 2315 Field Crops (2) Principles and practices of forage crop production.

Agri 2330 Introduction to Soil Science (3) Chemical and physical properties of soils. Prerequisite: Chem 1104.

Agri 2331 Soils (3) Emphasis on soil formation, classification, and fertility. Prerequisite: Agri 2330.

Agri 3320 Field Crop Management (3) Management of crops, crop rotation, and crop utilization. Prerequisites: Agri 1310 or Agri 2315, and Agri 2330.

Agri 3332 Soils (2) Emphasis on the soil conservation and field plot techniques. Prerequisite: Agri 2330.

Agri 4300 Soil Fertility and Fertilizers (3) Theory and practice of utilizing agricultural fertilizers to maximize soil productivity. Prerequisite: Agri 2330.

Agri 4310 Plant Improvement (3) The principles and practices involved in the selection and breeding of farm crops. Prerequisites: Agri 1600 and Agri 3140.

Agri 4320 Agricultural Plant Diseases (3) Agricultural plant diseases with emphasis on recognition and control. Prerequisites: Chem 1104 and Agri 1310 or Agri 2315.

Agri 4330 Soils Management (3) Principles of soils management as applied to physical improvement and fertility maintenance of soils. Prerequisite: Agri 2330.

Agri 4340 Agricultural Sprays and Chemicals (3) Types of agricultural chemicals and their application in control of insects, parasites, and weeds. Prerequisite: Agri 2330.

Agri 4350 Soil Taxonomy (3) An in-depth study of soil taxonomy using comprehensive soil classification systems. Prerequisite: Agri 2330.

Agri 5310 Pasture Management (3) Maintenance and uses of grasses and legumes for pastures. Prerequisites: Agri 2330 and Agri 2315.

Agri 5330 Soil Chemistry (3) The theory and application of soil chemistry as it is used in today's agriculture. Prerequisites: Agri 2331 and Agri 3140.

Animal Science

Agri 1420 Animal Husbandry (3) A comprehensive view of the industry and the science of biology as utilized in modern livestock management.

Agri 2425 Livestock Evaluation (3) An advanced study of livestock evaluation with emphasis in selection of breeding and market animals. The evaluation of beef cattle, dairy cattle, and swine will be emphasized. Prerequisite: Agri 1420.

Agri 3410 Animal Breeding (3) Breeding methods and principles of animal reproduction in the improvement of livestock. Prerequisite: Agri 1420 or Agri 1510.

Agri 3420 Animal Nutrition (3) Basic principles of animal nutrition—including classification and composition of feedstuffs, factors that affect feed utilization by animals, feed formulation and a study of the basic nutrients and their use in the body. Prerequisite: Chem 1104.

Agri 4410 General Veterinary Science (3) Anatomy, physiology, disease control, parasitic control, and sanitation of farm animals.

Agri 4415 Reproduction of Farm Animals (3) Reproductive physiology of farm animals with practice in evaluation of semen, artificial insemination, and methods of pregnancy diagnosis. Prerequisites: Agri 1420 and Agri 3410.

Agri 4430 Animal Science: Beef (3) Systems of beef production. Includes breeding, feeding, and management of commercial and purebred beef. Prerequisites: Agri 1420, Agri 3410 and Agri 3420.

Agri 4435 Animal Science: Pork (3) Systems of pork production. Includes breeding, feeding, and management of commercial and purebred swine. Prerequisites: Agri 1420, Agri 3410 and Agri 3420.

Agri 4440 Animal Science: Sheep (3) Breeding, feeding, managing, and marketing of commercial and purebred sheep. Prerequisites: Agri 1420, Agri 3410 and Agri 3420.

Agri 5410 Advanced Animal Breeding (3) An in-depth study of methods of livestock selection utilizing genetic variation. Prerequisite: Agri 3410.

Agri 1510 The Elements of Dairying (3) The dairy industry including the composition of milk, its food value, Babcock test, quality testing, and problems in feeding and health.

Horticulture

Agri 1600 General Horticulture (3) A general survey dealing with the home garden and orchard; principles of landscape art and plant propagation.

Agri 1610 Establishment and Care of Greenhouse Plants (3) Identifying, establishing, maintaining, harvesting and displaying greenhouse plants.

Agri 3610 Agricultural Insect Control (3) Insect control with emphasis on recognition of destructive forms, general principles of insect habits and classification.

Agri 3620 Residential Landscape Design (3) Theory and practice of landscaping the home, farmstead, and small properties, including elementary design, soil preparation, selection of plant material, and cultural practices.

Agri 3640 Horticultural Propagation Materials (3) Includes materials, types of plants, structure of plants, and methods used in propagation. Prerequisite: Agri 1600.

Agri 4600 Horticultural Plants (3) Identification, description, adaptation, and classification of horticultural species. Prerequisite: Biol 1011.

Agri 4610 Turfgrasses (3) Selection, identification, establishment and maintenance of turfgrasses. Prerequisites: Biol 1011; and Agri 1310 or Agri 2315.

Professional and Agriculture Education

Agri 3810 Internship in Agriculture (1-3) Provides experiences for students in cooperating agricultural businesses, agencies and other organizations. May be repeated for a maximum of 3 semester hours. Prerequisite: consent.

Agri 4800 Topics in Agriculture (1-3) Individual investigation of a special problem in agriculture in the student's major field not available under regular classes. May be accomplished by reports, surveys, discussions, bibliographies, experiments, and library research. May be repeated for a maximum of 3 semester hours. Prerequisite: consent.

Agri 4820 Agricultural Safety (3) The history of and need for agricultural safety, operating guidelines for machines and chemical handling and application. A review of occupational health laws and how they relate to the agricultural workforce.

Agri 5800 Research Problems in Agriculture (1-3) Meets individual student needs for additional experience in selected areas of agricultural research. Requires the completion of an original research project, presentation of the results in a public forum, and the completion of a formal, bound research paper. May be repeated for a maximum of 6 semester hours. Prerequisites: Agri 5160 and IA&T 5130.

Agri 5830 Seminar in Modern Agricultural Research (1-3) A critical analysis of current research in agriculture allowing for independent study, oral reporting, personal interpretation, and defense of interpretation. May be repeated for a

maximum of 6 semester hours. Prerequisites: Agri 5160 and IA&T 5130.

Agri 5850 Research and Thesis (2-4) Designed to give experience in executing research and analyzing agricultural data. Required for collecting data to complete a thesis. May be repeated for a maximum of 6 semester hours. Prerequisites: Agri 5160 and IA&T 5130.

Agri 3900 Foundations of Agriculture Education (3) Objectives, organization, and purpose of vocational agricultural education in the secondary and post-secondary school systems.

Agri 4900 Planning Community Programs in Agriculture Education (2) Development of the vocational agriculture programs on the secondary level to meet the needs of the local community. Responsibilities of the teacher advisory council, school administration, and career centers will be studied. Prerequisite: Agri 3900.

Agri 4910 Agricultural Occupations Experience Programs (2) Understandings and competencies required to establish, administer, and evaluate supervised agricultural occupational experience programs. Prerequisite: Agri 3900.

Agri 4920 Agricultural Mechanics in Agriculture Education (2) The selection and organization of teaching materials; planning shop facilities and selection of equipment, hand tools, and shop supplies essential in establishing and teaching the agricultural mechanics program. Prerequisite: Agri 3900.

Integrative Studies Capstone

ICap 4101 Agricultural Capstone Experience* (3) Integration of agricultural knowledge and problem solving skills using case studies in a seminar forum. Prerequisites: 24 semester hours of agriculture courses and senior standing.

*Not available for graduate credit.

Electronics Technology

ELECTRONICS ENGINEERING TECHNOLOGY Functional Major, B.S. Degree (43 000225)

FUNCTIONAL MAJOR REQUIREMENTS				Sem. Hours
ET	1026	DC Circuit Analysis	3	79
ET	1027	AC Circuit Analysis	3	
ET	2048	Active Electronic Devices	3	
ET	2058	Operational Amplifiers--Theory & Applications	3	
ET	2060	Microprocessors: Theory & Appl.	3	
ET	2065	Computer Programming for Electronics Technology	3	
ET	3020	Electronic Circuit Design & Analysis	3	
EET	2300	Calculus for Electronics Engineering Technology	3	
EET	2310	Introduction to Digital Circuitry	3	
EET	2320	Advanced Digital Circuitry	3	
EET	2330	Transform Analysis	3	
EET	3310	Microprocessor Systems Design	3	
EET	3320	Intro. to Data Communications	3	
EET	3330	Intro. to Communication Systems	3	
EET	3340	Control Systems Design	3	
EET	4310	Fuzzy Logic Systems Design	3	
EET	4320	Adv. Control Systems Design	3	
EET	4330	Digital Signal Processing Systems Design	3	
EET	4340	Neural Network Systems Design	3	
Mf&C	2500	Applied Computer Technology	2	
IA&T	1042	Technical Mathematics II	3	
IA&T	2040	Calculus for Technology	3	
IA&T	3060	Technical Report Writing	2	
Phys	1101	College Physics I	4	
Phys	1102	College Physics II	4	
Departmentally approved electives				4
MINOR NOT REQUIRED				
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Phys 1101 and Phys 1102 are allowed to fulfill 3 s.h. of Div. II A)				45
SpCm	1000	Div. I B (required)	3	4
Chem	1104	Div. II A (required)	4	
Math	1111	Div. I C (required)	3	3
Econ	1010	Div. II B (required)	3	
MINIMUM TOTAL				124

ELECTRONICS TECHNOLOGY Functional Major, B.S. Degree
(43 000221)

						Sem. Hours		
FUNCTIONAL MAJOR REQUIREMENTS						79		
ET	1026	DC Circuit Analysis	3	ET	3041	Communication Systems	3	
ET	1027	AC Circuit Analysis	3	IA&T	1042	Technical Mathematics II	3	
ET	2030	Intro. to Programmable Controllers	3	IA&T	2040	Calculus for Technology	3	
ET	2048	Active Electronic Devices	3	IA&T	3060	Technical Report Writing	2	
ET	2050	Digital Principles & Applications	3	Mf&C	2500	Applied Computer Technology	2	
ET	2058	Operational Amplifiers--Theory & Applications	3	Phys	1104	Intro. to the Sciences: Physics	4	
ET	2060	Microprocessors: Theory & Appl.	3	Mgt	3310	Principles of Management, 3 or		
ET	2065	Computer Programming for Electronics Technology	3	IndM	4210	Industrial Management, 3	3	
ET	3014	Analog-Digital Circuitry	3	Electives in electronics technology			18	
						Electives in management		9
						Departmentally approved electives		5
MINOR NOT REQUIRED								
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Phys 1104 fulfills 3 s.h. of Div. II A)						45		
SpCm	1000	Div. I B (required)	3	Chem	1104	Div. II A (required)	4	
Math	1111	Div. I C (required)	3	Econ	1010	Div. II B (required)	3	
MINIMUM TOTAL						124		

ELECTRONICS TECHNOLOGY Minor for a Bachelor's Degree
(Central does not confer teacher certification for this minor)
(000220)

						Sem. Hours	
MINOR REQUIREMENTS						23-24	
ET	1026	DC Circuit Analysis	3	ET	2058	Operational Amplifiers--Theory & Applications	3
ET	1027	AC Circuit Analysis	3	ET	2060	Microprocessors: Theory & Appl.	3
ET	2048	Active Electronic Devices	3	Upper level electives in electronics technology			5-6
ET	2050	Digital Principles & Applications	3				

ELECTRONICS TECHNOLOGY, Associate in Science Degree

ELECTRICAL Option, Associate in Science Degree (22 000222)						Sem. Hours	
FIRST YEAR REQUIREMENTS						30	
ET	1026	DC Circuit Analysis	3	Math	1111	College Algebra	3
ET	1027	AC Circuit Analysis	3	IA&T	1042	Technical Mathematics II	3
ET	2048	Active Electronic Devices	3	Engl	1020	Composition I	3
ET	2050	Digital Principles & Applications	3	Hist	1350	History of the U. S. to 1877, 3 or	
ET	2065	Computer Programming for Electronics Technology	3	Hist	1351	History of the U. S. from 1877, 3 or	
Grap	1110	Fundamentals of Drafting	3	PolS	1510	American Government, 3	3
SECOND YEAR REQUIREMENTS						33	
ET	2020	Industrial Electricity	3	ET	3030	Electrical Drawing & Computation	2
ET	2030	Intro. to Programmable Controllers	3	ET	3034	Electronic Instruments & Measurements	3
ET	2058	Operational Amplifiers--Theory & Applications	3	ET	3048	Control & Maint. of Elec. Mach.	3
ET	2060	Microprocessors: Theory & Appl.	3	ET	4031	Intro. to Process Control	3
ET	3017	Industrial Electronics	2	IA&T	3060	Technical Report Writing	2
ET	3022	AC & DC Machines	3	Departmentally approved elective			3
MINIMUM TOTAL						63	

ELECTRONICS Option, Associate in Science Degree (22 000223)						Sem. Hours	
FIRST YEAR REQUIREMENTS						30	
ET	1026	DC Circuit Analysis	3	Math	1111	College Algebra	3
ET	1027	AC Circuit Analysis	3	IA&T	1042	Technical Mathematics II	3
ET	2048	Active Electronic Devices	3	Engl	1020	Composition I	3
ET	2050	Digital Principles & Applications	3	Hist	1350	History of the U. S. to 1877, 3 or	
ET	2065	Computer Programming for Electronics Technology	3	Hist	1351	History of the U. S. from 1877, 3 or	
Grap	1110	Fundamentals of Drafting	3	PolS	1510	American Government, 3	3

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SECOND YEAR REQUIREMENTS						33	
ET	2058	Operational Amplifiers--Theory & Applications	3	ET	3038	Audio Systems	2
				ET	3041	Communication Systems	3
ET	2060	Microprocessors: Theory & Appl.	3	ET	4044	Video Systems	3
ET	3014	Analog-Digital Circuitry	3	ET	4048	Advanced Communication Systems	3
ET	3017	Industrial Electronics	2				
ET	3020	Electronic Circuit Design & Analysis	3	IA&T	3060	Technical Report Writing	2
ET	3032	Drafting for Electronics	3				
ET	3034	Electronic Instruments & Measurements	3				
MINIMUM TOTAL						63	

COMPUTER ELECTRONICS Option, Associate in Science Degree (22 000224)

FIRST YEAR REQUIREMENTS						30	
ET	1026	DC Circuit Analysis	3	IA&T	1042	Technical Mathematics II	3
ET	1027	AC Circuit Analysis	3	Engl	1020	Composition I	3
ET	2048	Active Electronic Devices	3	Hist	1350	History of the U. S. to 1877, 3 or	
ET	2050	Digital Principles & Applications	3	Hist	1351	History of the U. S. from 1877, 3 or	
ET	2065	Computer Programming for Electronics Technology	3	PoJS	1510	American Government, 3	3
						Departmentally approved elective	3
Math	1111	College Algebra	3				
SECOND YEAR REQUIREMENTS						32	
ET	2058	Operational Amplifiers--Theory & Applications	3	ET	4040	Computer Networking	3
				ET	4041	Adv. Microcomputer Sys. Arch.	3
ET	2060	Microprocessors: Theory & Appl.	3	ET	4042	Advanced Computer Networking	3
ET	3014	Analog-Digital Circuitry	3	ET	4046	Digital Signal Processing	3
ET	3036	Microprocessor & Microcomputer Interfacing	3	IA&T	3060	Technical Report Writing	2
						Departmentally approved elective	3
ET	4038	Microcomputer Sys. Arch. & Des.	3				
MINIMUM TOTAL						62	

Electronics Technology

Most ET and EET courses have a zero-credit laboratory requirement. Labs are scheduled for ET 1026, ET 1027, ET 2030, ET 2048, ET 2050, ET 2058, ET 2060, ET 2065, ET 3014, and ET 3041. The majority of the remaining ET and/or EET courses utilize an open lab system (where the student is expected to complete laboratory work by the instructor's due date on his/her own time, as class schedules and lab equipment availability permit).

ET 1010 Applied Electricity (3) Provides basic theory together with appropriate shop experiences for introductory technical training in electrical principles. Includes basic circuits, Ohm's Law, A.C. and D.C. theory, as well as generation and application of electrical energy.

ET 1020 General Electronics (3) A general overview of several areas of electronics including the study of electronic measurements, active and passive devices, receiver and transmitter theory, basic digital theory, and electronic controls. Prerequisite: Not open to electronics majors or minors.

ET 1026 DC Circuit Analysis (3) Analysis and application of D.C. principles to passive networks. Laboratory experience in the use of basic test instruments. Prerequisite: IA&T 1040 or Math 1111 may be taken concurrently.

ET 1027 AC Circuit Analysis (3) Application of alternating current principles to resistive, capacitive, and inductive circuits. Phasor analysis of series-parallel impedance. Resonance and filters are covered. Laboratory experiments using typical test instruments. Prerequisites: Math 1112 or IA&T 1042 or either concurrently and ET 1026.

ET 2020 Industrial Electricity (3) Electrical practices as applied to modern industrial applications with an emphasis on the National Electrical Code, wiring diagrams, electrical distribution, and electrical/electronic control devices. Prerequisite: ET 1010 or ET 1027 or prior experience and consent of the instructor.

ET 2030 Introduction to Programmable Controllers (3) Installation, operation, and programming of programmable controllers/Programmable Logic Controllers (PLCs) with an emphasis upon laboratory activities. This course features both Allen-Bradley and Gould Modicon controllers. Prerequisite: ET 1010 or ET 1027, may be taken concurrently or with consent of instructor.

ET 2048 Active Electronic Devices (3) Theory of vacuum tube and semi-conductor operation and their application in selected circuits. Laboratory experiences include device testing, observation of characteristics, and circuit analysis techniques. Prerequisite: ET 1027 or concurrently.

ET 2050 Digital Principles and Applications (3) Binary numbers, logic gates, Boolean algebra, parity generation and detection, arithmetic circuits, flip-flops and latches, and troubleshooting digital circuits using current industry standard techniques. Prerequisite: ET 2048 or concurrently.

ET 2058 Operational Amplifiers--Theory and Applications (3) A study of integrated circuit operational amplifiers, their characteristics and a wide range of applications. Construction and testing of numerous circuits. Prerequisite: ET 2048.

ET 2060 Microprocessors: Theory and Application (3) The fundamental concepts of microprocessors including software development and hardware design. Design of input/output interface circuits together with numerous

applications to industrial controls. Prerequisite: ET 2050 or EET 2310 or concurrently.

ET 2065 Computer Programming for Electronics Technology (3) Contemporary computer programming languages for electronics technology. Programming techniques and skills as applied to troubleshooting industry standard computer hardware. May be repeated. If repeated, a different programming language must be studied. Prerequisite: ET 2050 or EET 2310 or concurrently.

ET 3014 Analog-Digital Circuitry (3) Counters, shift registers, monostable multivibrators, memories, A/D and D/A converters, phase-locked loops, digital simulation software, and troubleshooting digital circuits using current industry standard techniques. Prerequisite: ET 2050.

ET 3017 Industrial Electronics (2) Analysis of selected industrial controls and components to include transducers, sensors, time delay circuits, motor controls, and thyristors. Emphasis on commercial programmable logic controller installation and programming. Practical applications of industrial electronic devices and systems and further development of troubleshooting skills. Prerequisite: ET 2058.

ET 3020 Electronic Circuit Design and Analysis (3) Design of basic power supply and power amplifier circuits. Use of vendor catalogs for selection and pricing of electronic component parts. Design and analysis of selected circuits with the aid of manufacturer's schematics and technical information. Prerequisite: ET 2058.

ET 3022 AC and DC Machines (3) Basic principles of alternating and direct current motors and generators including construction, theory of operation, industrial uses and maintenance considerations. Prerequisite: ET 2020 or consent of instructor.

ET 3030 Electrical Drawing and Computation (2) Planning and drawing of circuits; estimating and computing circuits, loads, materials, and costs. Prerequisites: ET 1010 or ET 2020 or either concurrently and Grap 1110.

ET 3032 Drafting for Electronics (3) Representation of block, schematic and wiring diagrams. Printed circuit board layout, assembly, drill and contour, and master artwork drawings. Problems involved in critical electronic component placement. Concepts of computer-aided drafting (CAD) as related to circuit design. Prerequisites: Grap 1110 and ET 2058.

ET 3034 Electronic Instruments and Measurements (3) Design, operation and calibration of a variety of test instruments. Emphasis will be upon measurement procedures not normally practiced in introductory electronics courses. Prerequisite: ET 2050 or ET 2058 or concurrently.

ET 3036 Microprocessor and Microcomputer Interfacing (3) Input/output interfacing concepts as related to microprocessor and microcomputer systems. Hardware analysis of standard peripheral device operation and application including multiplexing, I/O control, A/D interfacing, and data communications. The development of test software and its application to industry standard systems troubleshooting. Prerequisites: ET 3014 or concurrently and ET 2065.

ET 3038 Audio Systems (2) Principles of sound and acoustics: audio amplifiers, microphones, speakers, mixers, and equalizers; magnetic tape and disc recording; audio measurement techniques. Prerequisite: ET 2058 or concurrently.

ET 3041 Communication Systems (3) A study of receiver and transmitter circuits and systems. Modulation methods, signal propagation, and antenna design. Practical alignment methods, measurement techniques, and troubleshooting procedures. Preparation for the F.C.C. commercial license. Prerequisite: ET 2058 or concurrently.

ET 3048 Control and Maintenance of Electrical Machinery (3) Analysis and application of electrical and electronic controls for industrial equipment. Programmable Logic Controllers are emphasized. Organization of an electrical maintenance group to perform the basic analysis of electrical malfunctions. Prerequisites: ET 2020 and ET 2030 or consent of instructor.

ET 4000 Special Projects in Electronics Technology (1-3) Investigation of contemporary problems and issues in electronics technology by selected individuals or groups. May be repeated for a maximum of 6 semester hours.

ET 4031 Introduction to Process Control* (3) Implementation, evaluation, tuning and troubleshooting of process control systems. Selection of sensing devices and final control elements. Emphasis on laboratory activities. Application of microprocessor-based systems including programmable controllers. Prerequisites: ET 2030 and ET 2060.

ET 4038 Microcomputer Systems Architecture and Design* (3) An in-depth study of the digital circuitry, systems design, and troubleshooting techniques used in selected microcomputers. Prerequisites: ET 3014 or concurrently and ET 2060.

ET 4040 Computer Networking* (3) A study and application of current networking topics. Emphasis is placed on the development of up-to-date system troubleshooting techniques. Prerequisites: ET 3014 or concurrently and ET 2060.

ET 4041 Advanced Microcomputer Systems Architecture* (3) Microprocessor, embedded controller, and embedded processor based systems. Emphasis is placed upon detailed circuit analysis of hardware currently used in industry and the development of troubleshooting software for these systems. Prerequisite: ET 4038.

ET 4042 Advanced Computer Networking* (3) A study and application of additional and advanced current networking topics. Emphasis is placed on the development of up-to-date system troubleshooting techniques. Prerequisite: ET 4040.

ET 4044 Video Systems* (3) Television cameras and the composite video signal. VHF, UHF, cable, and satellite TV distribution systems. Television receiver and monitor circuitry and troubleshooting techniques. Prerequisite: ET 2058.

ET 4046 Digital Signal Processing* (3) Principles of digital signal processing, operation and applications of digital signal processors, DSP programming, design and testing of digital filters, and use of commercial DSP software packages. Emphasis is placed upon developing system troubleshooting skills. Prerequisite: ET 4038.

ET 4048 Advanced Communication Systems* (3) Mobile radio repeater systems and signaling modes; spread spectrum communications; commercial broadcast installations; microwave signal sources; amplifiers; waveguides and cavities; antennas and radar systems. Prerequisite: ET 3041.

*Not available for graduate credit.

ET 5010 Special Problems in Electronics Technology (1-3) Meets individual student needs for additional research

and/or laboratory experiences in the development of technical knowledge and skills in electronics technology. May be repeated for a maximum of 6 semester hours.

EET 2300 Calculus for Electronics Engineering

Technology (3) Methods of integration, partial derivatives, double integrals, derivatives and integrals in polar coordinates; empirical curve fitting, power series expansions, first and second-order differential equations; and use of software. Prerequisite: IA&T 2040.

EET 2310 Introduction to Digital Circuitry (3) Number systems and conversions; Boolean algebra, Karnaugh maps, multi-level and multi-output combinational network design; latches, flip-flops, sequential network analysis and design; state tables and graphs; designing with programmable logic devices, and the use of software for design analysis. Prerequisite: ET 2048 or concurrently.

EET 2320 Advanced Digital Circuitry (3) Design of sequential networks, iterative networks, sequential networks with MSI integrated circuits, sequential networks using PLDs, state machines, asynchronous sequential networks, use of software for design analysis. Prerequisite: EET 2310.

EET 2330 Transform Analysis (3) Waveform analysis, Laplace transforms and their application to circuit analysis; Fourier analysis, use of z-transforms in discrete-time systems, and analysis software. Prerequisites: ET 2048 and EET 2300.

EET 3310 Microprocessor Systems Design (3)

Microprocessor/microcontroller internal architectures and timing; single and multiprocessor bus structures; memory subsystem design, designing polled I/O hardware/firmware, interrupt driven I/O hardware/firmware design, DMA, design of multiprocessor systems, segmentation and memory management, bit-sliced architectures, and use of manufacturer data sheets and application notes. Prerequisites: IA&T 2040, ET 2060, ET 2065 and EET 2320.

EET 3320 Introduction to Data Communications (3)

Fundamentals of data transmission, data encoding, multiplexing techniques, circuit and packet switching; local area networking, ISDN, frame relay, ATM, local area networking, and protocol analysis. Prerequisites: ET 2060, EET 2310 and EET 2330 or concurrently.

EET 3330 Introduction to Communication Systems (3)

Signal spectra, noise, AM transmitters, AM superheterodyne receivers, sideband systems, frequency modulation, phase modulation, phase-locked loops, FM transceivers, transmission lines, waveguides, radiowave propagation, antennas, and use of CAE software. Prerequisites: EET 2330 and EET 3310.

EET 3340 Control Systems Design (3) Introduction to analog control systems analysis and design including control system components, models of physical systems, state-variable models, system responses, control system characteristics, stability analysis, and use of CAE software. Prerequisites: ET 2058, EET 2330 and EET 3310.

EET 4300 Special Projects in Electronics Engineering

Technology* (1-3) Investigation of contemporary problems and issues in electronics engineering technology by selected individuals or groups. May be repeated for a maximum of 6 semester hours.

EET 4310 Fuzzy Logic Systems Design* (3) Fuzziness and uncertainty; fuzzy sets, fuzzy set operators, fuzzy set hedges, fuzzy reasoning, fuzzy models, building fuzzy systems, neurofuzzy technologies, and current applications of fuzzy systems. Prerequisite: EET 3340.

EET 4320 Advanced Control Systems Design* (3) Root-locus analysis and design; frequency response, modern control design, discrete-time systems, sampled-data systems, analysis and design of digital control systems; an introduction to nonlinear system analysis, and use of CAE software for the design, analysis, design, and simulation of control systems. Prerequisite: EET 3340.

EET 4330 Digital Signal Processing Systems Design* (3)

An introduction to the engineering fundamentals of digital signal processing. Emphasis is placed on the design, implementation, and testing of finite impulse response filters, infinite impulse response filters, adaptive digital filters, and sampling rate converter-decimators using DSP software design packages. Prerequisite: EET 3340.

EET 4340 Neural Network Systems Design* (3) A study of key artificial neural network architectures, operation, applications, and design. Use of pc-based simulators for analysis and design of neural networks with emphasis on the design of neural networks to solve engineering problems. Prerequisite: EET 3340.

*Not available for graduate credit.

Graphics

In the Department of Graphics, the second digit in the course number stands for the following: 0--Graphic Arts, 1--Drafting, 2--Photography, 5--General.

COMPUTER-AIDED DRAFTING AND DESIGN TECHNOLOGY Functional Major, B.S. Degree (43 000231)

		Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS		65
Grap 1100	Orientation to Drafting	1
Grap 1110	Fundamentals of Drafting	3
Grap 1120	Machine Drafting	3
Grap 2130	Technical Illustration	3
Grap 2150	Descriptive Geometry	3
Grap 2160	Structural Drafting	3
Grap 2170	Intro. to Computer-Aided Drafting	3
Grap 3150	Civil Drafting	3
Grap 3170	Computer Drafting Systems	3
Grap 3175	Managing Computer Applications for Drafting	3
Grap 4170	Computer-Aided Draft. & Design	3
Grap 4180	Industrial Design	3
IA&T 3060	Technical Report Writing	2
Mf&C 2020	Mechanics of Materials	3
Mf&C 2530	Machine Tool Technology	3
Math 1112	College Trigonometry	2
Electives from the following		6
Mgt 3310	Prin. of Management	3
HRM 3920	Human Resource Mgt., 3 or	3
IndM 4210	Industrial Management, 3	3
IndM 4260	Industrial Supervision	3
Electives from one of the following areas		15
Area 1 CAD/CAM		
Area 2 Multimedia		
Area 3 Graphic Design		
Area 4 Mechanical		
Area 5 Architectural		
Area 6 Electricity/Electronics		
Area 7 Civil/Cartographic		
Area 8 Structural/Construction		
Area 9 Aerospace		
Area 10 Management & Supervision		
Area 11 Industrial Training		
Area 12 Technical Sales		
MINOR NOT REQUIRED		
UNIVERSITY STUDIES REQUIREMENTS		48
Math 1111	Div. I C (required)	3
Phys 1104	Div. II A (required)	4
I Gen 3116	Div. III A (required)	3
FREE ELECTIVES		11
MINIMUM TOTAL		124

DRAFTING TECHNOLOGY, Associate in Science Degree

ARCHITECTURAL DRAFTING Option, Associate in Science Degree (22 000215)

		Sem. Hours
FIRST YEAR REQUIREMENTS		30-31
Grap 1100	Orientation to Drafting	1
*Grap 1110	Fundamentals of Drafting	3
Grap 2150	Descriptive Geometry	3
Grap 2160	Structural Drafting	3
Grap 2170	Intro. to Computer Aided Drafting	3
ET 1010	Applied Electricity	3
Mf&C 1010	Materials for Mfg. & Construction	3
Engl 1020	Composition I	3
*Grap 1110 must be taken first semester of enrollment or graduation will be delayed.		
Electives from the following		5-6
IA&T 1040	Technical Mathematics I	3
IA&T 1042	Technical Mathematics II	3
or		
Math 1111	College Algebra	3
Math 1112	College Trigonometry	2
Departmentally approved electives		3
SECOND YEAR REQUIREMENTS		31-32
Grap 2130	Technical Illustration	3
Grap 3150	Civil Drafting	3
*Grap 3160	Residential Arch. Drawing	3
Grap 4162	Commercial Arch. Drawing	3
IA&T 3060	Technical Report Writing	2
Phys 1104	Intro. to the Sciences: Physics ..	4
Hist 1350	History of the U.S. to 1877, 3 or ..	3
Hist 1351	History of the U.S. from 1877, 3 or ..	3
PolS 1510	American Government, 3	3
Departmentally approved electives		8-9
Elective		2
*Grap 3160 must be taken before or during fall semester or graduation will be delayed.		
MINIMUM TOTAL		62

COMPUTER-AIDED INDUSTRIAL DESIGN Option, Associate in Science Degree (22 000216)

		Sem. Hours
FIRST YEAR REQUIREMENTS		31-32
Grap 1100	Orientation to Drafting	1
*Grap 1110	Fundamentals of Drafting	3
*Grap 1120	Machine Drafting	3
*Grap 2150	Descriptive Geometry	3
Grap 2170	Intro. to Computer-Aided Drafting ...	3
Engl 1020	Composition I	3
Phys 1104	Intro. to the Sciences: Physics	4
Hist 1350	History of the U.S. to 1877, 3 or	
Hist 1351	History of the U.S. from 1877, 3 or	
PolS 1510	American Government, 3	3
*IA&T 1040 or Math 1111 and Grap 1110 must be taken the first semester of enrollment or graduation may be delayed. Grap 1120, Grap 2150, and IA&T 1042 or Math 1112 must be taken the second semester of enrollment or graduation will be delayed.		
SECOND YEAR REQUIREMENTS		30-31
Grap 2130	Technical Illustration	3
*Grap 3124	Production Design Drafting	3
Grap 3126	Machine Design	3
Grap 3170	Computer Drafting Systems	3
*Grap 3175	Managing Computer Applications for Drafting	3
Mf&C 2530	Machine Tool Technology	3
IA&T 3060	Technical Report Writing	2
Departmentally approved electives		7-8
Elective		3
*Grap 3124, and Grap 3175 must be taken before or during fall semester or graduation will be delayed.		
MINIMUM TOTAL		62

GRAPHIC ARTS TECHNOLOGY, Associate in Science Degree

(22 000145)

		Sem. Hours
FIRST YEAR REQUIREMENTS		30-32
*Grap 1000	Orientation to Graphic Arts	1
*Grap 1010	Introduction to Desktop Publishing & Printing	3
*Grap 2030	Desktop Publishing for Printing Applications	3
*Grap 2032	Film Imaging Technology	3
*Grap 2035	Image Assembly	3
Engl 1020	Composition I	3
*Grap 1000 and Grap 1010 should be taken during the first semester of enrollment or graduation will be delayed.		
Grap 2030, Grap 2032, and Grap 2035 should be taken the second semester of enrollment or graduation may be delayed.		
SECOND YEAR REQUIREMENTS		30-32
*Grap 2031	Electronic Publishing Systems	3
*Grap 3024	Flexographic Technology	3
Grap 3034	Lithographic Press Technology	3
Grap 3040	Screen Printing	3
*Grap 3043	Binding & Finishing	3
*Grap 2031 and Grap 3043 should be taken during the fall semester of the second year or graduation will be delayed.		
Grap 3024 should be taken during the spring semester of the second year or graduation will be delayed.		
Grap 3016 or IA&T 3022 should be taken near or during the final semester of enrollment.		
MINIMUM TOTAL		60

GRAPHIC ARTS TECHNOLOGY-MANAGEMENT Functional Major, B.S. Degree

(43 000146)

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						66	
Grap	1000	Orientation to Graphic Arts	1	Mgt	3325	Business Communications	3
Grap	1010	Introduction to Desktop Publishing & Printing	3	Grap	3016	Graphic Arts Practicum, 3 or	
Grap	2030	Desktop Publishing for Printing Applications	3	IA&T	3022	Internship in Technology, 3	3
Grap	2031	Electronic Publishing Systems	3	IndM	4210	Industrial Management, 3 or	
Grap	2032	Film Imaging Technology	3	Mgt	3310	Principles of Management, 3	3
Grap	2035	Image Assembly	3	Electives from one of the following areas			18
Grap	3034	Lithographic Press Technology	3	Area 1	Cost Analysis		
Grap	3045	Substrates & Inks	3	Area 2	Graphic Design		
Grap	3051	Graphic Arts Management	3	Area 3	Industrial Safety & Hygiene		
Grap	3057	Graphic Arts Quality Assurance	3	Area 4	Industrial Training		
Grap	4038	Principles of Color Reproduction	3	Area 5	Production Management & Supervision		
Grap	4053	Graphic Arts Production Analysis	3	Area 6	Customer Service & Sales		
Grap	4055	Printing Estimating	2	Area 7	Technical Application		
Acct	2101	Principles of Financial Acct.	3	Area 8	Administration		
						List of courses available from Department of Graphics.	
MINOR NOT REQUIRED							
UNIVERSITY STUDIES REQUIREMENTS							48
Chem	1104	Div. II A (required) or		IGen	3116	Div. III A (required)	3
Phys	1104	Div. II A (required)	4				
FREE ELECTIVES							10
MINIMUM TOTAL							124

GRAPHICS Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)

(000147)

						Sem. Hours	
MINOR REQUIREMENTS						20	
Electives from the following		6	Electives (continued)				
Grap	1010	Introduction to Desktop Publishing & Printing	3	Grap	1110	Fundamentals of Drafting	3
				Grap	1210	Elementary Photography	3
						14	
						Departmentally approved electives in graphics	

PHOTOGRAPHY Major, B.S. Degree

(43 000228)

						Sem. Hours	
MAJOR REQUIREMENTS						44	
Grap	1210	Elementary Photography	3	Grap	4252	Portfolio Photography	3
Grap	2200	Color Transparency Photography	3	Grap	3230	Electronic Imaging	3
Grap	2210	Applied Photography	3	Electives from one of the following areas			15
Grap	2220	Photographic Materials & Processes	3	Area 1	Commercial		
Grap	2270	Zone System of Photography	3	Area 2	Media		
Grap	3200	Color Negative Photography	3	Area 3	Digital Imaging		
Grap	3215	Photographer's Forum	2	Area 4	Portrait		
Grap	3250	Portrait Photography	3	Area 5	Technical		
MINOR REQUIREMENTS						18-25	
UNIVERSITY STUDIES REQUIREMENTS						48	
IGen	3116	Div. III A (required)	3				
FREE ELECTIVES						7-14	
MINIMUM TOTAL						124	

PHOTOGRAPHY Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)

(000148)

						Sem. Hours	
MINOR REQUIREMENTS						20-21	
Grap	1210	Elementary Photography	3	Grap	3250	Portrait Photography	3
Grap	2200	Color Transparency Photography	3	Grap	4260	Advertising Photography	3
Grap	2210	Applied Photography	3	Elective in graphics			2-3
Grap	3200	Color Negative Photography	3				

Graphic Arts

Grap 1000 Orientation to Graphic Arts (1) Orientation to the philosophy, development, and current trends in the professional preparation for careers in graphic arts.

Grap 1010 Introduction to Desktop Publishing and Printing (3) Desktop publishing and graphic arts printing production processes, materials, and equipment. Laboratory experiences support lecture/theory content.

Grap 2030 Desktop Publishing for Printing Applications (3) Electronic page layout and image generation using desktop software. Comparison to manual methods of preparing camera ready copy. Laboratory experiences support lecture/theory content. Prerequisite: Grap 1010.

Grap 2031 Electronic Publishing Systems (3) Electronic publishing systems as applied to both print and digital distribution. Typography as related to digital image generation. Laboratory experiences support lecture/theory content. Not available for those with credit in Grap 2022 (previous catalogs). Prerequisite: Grap 2030.

Grap 2032 Film Imaging Technology (3) Investigation of photographic and electronic technology used to produce line, halftone and color separation negatives/positives for printing processes. Laboratory experiences support lecture/theory content. Prerequisite: Grap 1010.

Grap 2035 Image Assembly (3) Industrial techniques for assembling films for platemaking. Imposition methods, film contacting, image distortion, film compositing, prepress proofing, electronic masking, step and repeat, electronic prepress and lithographic platemaking are studied. Laboratory experiences support lecture/theory content. Prerequisite: Grap 1010.

Grap 3016 Graphic Arts Practicum (3) Supervised work on selected aspects of producing the printed product and/or managing a printing plant. May be repeated for a maximum of 6 semester hours. Prerequisite: 2.00 grade-point average overall; application approved by the Chair of the Department of Graphics.

Grap 3024 Flexographic Technology (3) Flexographic printing technology from prepress through postpress operations for both wide and narrow web applications. Instruction on rotary letterpress will also be included. Laboratory experiences support lecture/theory content. Prerequisite: Grap 1010.

Grap 3034 Lithographic Press Technology (3) Lithographic sheet fed and web press operation and maintenance with emphasis on sources of image problems. Solutions for interrelated substrate, ink, and plate problems. In-line finishing and image carrier technology as they relate to quality image transfer. Laboratory experiences support lecture/theory content. Prerequisite: Grap 1010.

Grap 3036 Offset Lithography (3) General photo-offset lithography from copy preparation through post-press operations. Laboratory experiences support lecture/theory content. Prerequisites: Grap 2030, Grap 2031, Grap 2032, Grap 2035 and Grap 3034.

Grap 3040 Screen Printing (3) Screen printing copy preparation, photographic and nonphotographic plates, emphasizing industrial methods and equipment. Laboratory experiences support lecture/theory content. Prerequisite: Grap 1010.

Grap 3043 Binding and Finishing (3) A survey of binding and finishing operations. Policies, techniques, operations, and equipment for cutting, folding, assembling, case binding, perfect binding, shipping, mailing, and numerous specialty finishing operations are included. Prerequisite: Grap 1010.

Grap 3045 Substrates and Inks (3) Properties, specification, pricing and procurement of ink and printing substrates (especially paper) relative to commercial printing with emphasis on offset lithography. Prerequisite: Grap 1010.

Grap 3051 Graphic Arts Management (3) Principles and practical application of management functions as related to the production of printed materials. Instruction includes classroom simulation of management roles. Prerequisite: 12 semester hours of graphic arts.

Grap 3057 Graphic Arts Quality Assurance (3) Application of statistical quality control as it relates to graphic arts production; includes material acceptance, process control, product evaluation, and problem solving techniques for management. Prerequisite: Grap 2032 or Grap 3034 or Grap 3045.

Grap 4014 Advanced Technical Problems in Graphic Arts (1-3) Individual/group work on recent developments and advanced technical concepts. Experimentation and technical exploration of content not available through formal course offerings in the department. By arrangement for qualified students. May be repeated for a maximum of 6 semester hours. Prerequisite: written contract/proposal with objectives and written department consent.

Grap 4038 Principles of Color Reproduction (3) Technical aspects of process color reproduction; includes color theory, ink evaluation, densitometry, tone reproduction, printing characteristics, color correction, gray balance, color separation, and proofing. Laboratory experiences support lecture/theory content. Prerequisite: Grap 2032.

Grap 4045 Color Electronic Prepress Systems (3) Study of color electronic prepress systems used in the graphic arts to manipulate and modify images for graphic design, photographic illustration, page layout, prepress assembly, and printing. Activities using computer application software are included. Laboratory experiences support lecture/theory content. Prerequisite: Grap 2031.

Grap 4053 Graphic Arts Production Analysis (3) A variety of printing requests are analyzed to determine printing specifications, production sequence, cost factors, material ordering, and technical problems that may arise during the actual printing. Course emphasis utilizes this analysis into a planning sequence of communications, scheduling, routing, dispatching, and work and material flow required for printing production. Prerequisites: Grap 2035, Grap 3034 and Grap 3045.

Grap 4055 Printing Estimating (2) Identification and determination of costs relative to materials, operations, and factors involved in the production of printed matter. Prerequisites: Grap 3051 and Grap 4053.

Drafting

Grap 1100 Orientation to Drafting (1) Orientation to the philosophy, development, and current trends in the professional preparation for careers in drafting.

Grap 1110 Fundamentals of Drafting (3) Multiview and pictorial technical drawing using freehand, manual and computer-aided drafting techniques. Drafting majors should take Grap 1100 concurrently.

Grap 1120 Machine Drafting (3) Working drawings of machine parts, using tables, tolerancing, sheet metal and welding drawings. Prerequisite: Grap 1110.

Grap 2130 Technical Illustration (3) Pictorial representation using various illustrative media. Prerequisite: Grap 1110.

Grap 2150 Descriptive Geometry (3) A basic course in graphic science for engineers, drafters or drafting teachers. Prerequisite: Grap 1110.

Grap 2160 Structural Drafting (3) A study of structural systems utilizing metal, concrete, masonry and wood, and including the development of appropriate engineering calculations and working drawings. Prerequisite: Grap 1110.

Grap 2170 Introduction to Computer-Aided Drafting (3) Fundamental applications of computer-aided drafting to the solution of two-dimensional drawing problems for industry. Prerequisite: Grap 1110.

Grap 3124 Production Design Drafting (3) Tool and die, jig and fixture, casting, weldment, and hydraulic/pneumatic plumbing design problems are studied and drawings are developed using manual and computer-aided drafting techniques. Prerequisite: Grap 1120.

Grap 3126 Machine Design (3) Drafting problems involving the elements of the designing and/or redesigning of mechanisms and machines. Prerequisites: Grap 1120 and Grap 2150.

Grap 3140 Seminar in Drafting (1) Seminar for study of current topics in drafting through discussions, activities and outside speakers. May be repeated for a maximum of 3 semester hours. Prerequisites: Grap 1100 and Grap 1110.

Grap 3150 Civil Drafting (3) Civil drafting problems using survey data applicable to grading cuts and fills, drainage systems, municipal utilities, plotting and zoning are studied. Drawings are developed using manual and computer-aided drafting techniques. Prerequisite: Grap 1110.

Grap 3160 Residential Architectural Drawing (3) Principles of planning residential structures including selection of materials, methods of construction, and development of detailed working drawings. Prerequisite: Grap 1110.

Grap 3170 Computer Drafting Systems (3) Computer-aided drafting involving operating systems, programming languages, macros, networks, and customization of software. Prerequisite: Grap 2170.

Grap 3175 Managing Computer Applications for Drafting (3) Management of computer-aided drafting and design hardware, applications software, laboratories, and the media and methods of reproducing engineering documents. Prerequisite: Grap 2170.

Grap 4114 Advanced Technical Problems in Drafting (1-3) Individual or group work on advanced technical problems in drafting. Provide exploration of content not available through normal course offerings. May be repeated for a maximum of 6 semester hours. Prerequisites: 2.5 GPA, written contract/proposal with objectives and written department consent.

Grap 4162 Commercial Architectural Drawing* (3) Light commercial architectural plans and problems are studied and drawings are developed using manual and computer-aided drafting techniques. Prerequisite: Grap 3160.

*Not available for graduate credit.

Grap 4170 Computer-Aided Drafting and Design (3) Advanced industrial applications of computer-aided drafting systems. Three dimensional modeling and design using interactive graphics techniques and standard design elements. Prerequisite: Grap 2170.

Grap 4180 Industrial Design (3) Study and application of the design process and design principles related to industrial products. Prerequisite: Grap 1110.

Photography

Grap 1210 Elementary Photography (3) Picture taking, film developing and making enlargements. Discussion of equipment and materials, composition and history of photography. (Student must furnish a focusing camera with adjustable f-stops and shutter speeds. Automatic cameras must have manual override. A light meter which is integrated, or separate from the camera, must be furnished.)

Grap 2200 Color Transparency Photography (3) In-depth experience in exposing and processing color transparency materials. Prerequisite: Grap 1210.

Grap 2210 Applied Photography (3) Theory and laboratory experiences involving problems associated with a variety of photographic situations applicable to commercial photography. Prerequisite: Grap 1210.

Grap 2220 Photographic Materials and Processes (3) Properties of photographic materials, processes and systems will be studied. Laboratory experiences include process control, masking, copying, duplicating, and processing positive and negative photographic materials. Prerequisite: Grap 1210.

Grap 2270 Zone System of Photography (3) Techniques for controlling tonal values in the black and white photographic process. Emphasis is on production and enhancement of photographic control through the acquisition and refinement of personal technique. Prerequisite: Grap 1210.

Grap 2280 Creative Photography (3) Analysis of a variety of processes and influences upon which the student can draw to develop their photographic sensibilities of creative self-expression. Prerequisite: Grap 1210.

Grap 3200 Color Negative Photography (3) In-depth experiences in exposing and printing color negatives to produce color prints. Prerequisites: Grap 1210 and 3 semester hours of photography.

Grap 3210 Investigative Photography (3) Exploratory experiences in the accepted photographic techniques for civil and criminal photographic documentation. Prerequisite: Grap 1210.

Grap 3215 Photographer's Forum (0.5) Seminar for student portfolio presentation and for study of current events in photography through open discussions, activities, and outside speakers. May be repeated for a maximum of 3 semester hours. Prerequisite: Grap 1210 and 6 semester hours of photography coursework.

Grap 3230 Electronic Imaging (3) Applications-oriented introduction to electronic imaging. Provides knowledge and develops skill in image digitizing, output options, image enhancement and manipulation. Prerequisites: Grap 1210 and 3 additional semester hours of photography course work.

Grap 3240 Nature and Scenic Photography (3) Photographic techniques used to illustrate the natural features of plants, animals, and the landscape. The student must furnish a focusing 35mm or larger format camera with adjustable f-stops and shutter speeds and a macro lens, diopters, or other close-up equipment. Prerequisite: Grap 1210.

Grap 3250 Portrait Photography (3) Experiences in portrait photography with an emphasis on professional techniques, and the operation of specialized equipment utilized in the field. Prerequisite: Grap 1210.

Grap 3260 Slide Show Production (3) Provide knowledge and develop skill in planning, researching, photographing, sequencing, and producing slide presentations. Prerequisite: Grap 2200.

Grp 4210 Origins of Photography (3) A survey of the people, styles, inventions, and processes in photography from early developments to present day.

Grp 4214 Advanced Technical Problems in Photography (1-3) Individual or group work on advanced technical problems in photography. Provide exploration of content not available through normal course offerings. May be repeated for a maximum of 6 semester hours. Prerequisites: minimum 2.5 GPA, written contract/proposal with objectives and written department consent.

Grp 4222 Scientific and Technical Photography (3) Theories and practices used in scientific and technical photography with emphasis on close-up, photomacrography, and photomicrography. Prerequisite: Grp 1210.

Grp 4230 Computer Applications for Photographic Management (3) Exploratory experiences, information and techniques concerning the use of computer hardware and software use for photographic business management.

Grp 4250 Advanced Color Portraiture (3) Commercial photography providing experiences in posing, exposure, and composition for a color portrait. Precise camera room techniques will be emphasized to ensure the most salable product from machine proofing. Prerequisites: Grp 1210 and Grp 3250.

Grp 4252 Portfolio Photography (3) Culminating experience in photography providing for the creation of a successful interview strategy and the production of a portfolio to reflect personal career goals. Prerequisite: 9 semester hours of photography.

Grp 4260 Advertising Photography (3) Theories and practices of advertising photography as a marketing medium with in-depth experience in procedures and techniques. Prerequisite: Grp 2210.

General

Grp 2500 Communication Technology (3) Technological concepts fundamental to the operation of common static, mechanical, electrical, and electromagnetic communication systems and their impact on individuals and groups.

Grp 4500 Special Projects in Graphics (1-3) Investigation of contemporary problems and issues in graphics by selected individuals or groups. May be repeated for a maximum of 6 semester hours.

Grp 4570 Computer Graphics (3) Computer generated presentation graphics utilizing a variety of software programs on numerous hardware configurations. Experiences will include production of laser prints, ink-jet prints, transparencies, color slides, and plots.

Grp 5500 Special Problems in Graphics (2-6) Meets individual student needs for additional research and/or laboratory experiences in the development of technical knowledge and skills in the areas of graphics. May be repeated for a maximum of 6 semester hours.

Integrative Studies General

IGen 3116 Creative Problem Solving (3) A broad approach to formal techniques in creative problem solving applicable to any field of endeavor and interest.

Fashion and Apparel Merchandising

CLOTHING Minor for a Bachelor's Degree
(Central does not confer teacher certification for this minor)
(000123)

		Sem. Hours
MINOR REQUIREMENTS		20
FAME 1420	Applied Design in Fashion & Apparel Merchandising	2
FAME 2430	Fashion in Dress	3
FAME 2442	Textiles	3
	Departmentally approved electives	12

FASHION MERCHANDISING, Associate in Science Degree

(22 000508)

						Sem. Hours	
FIRST YEAR REQUIREMENTS						28	
FAMe	1400	Intro. to Fashion Merchandising	3	Econ	1010	Principles of Economics	3
FAMe	1420	Applied Design in Fashion & Apparel Merchandising	2	Mkt	3400	Principles of Marketing	3
Mf&C	2500	Applied Computer Technology	2	Psy	1100	General Psychology	3
SpCm	1000	Public Speaking	3	Hist	1350	History of the U. S. to 1877, 3 or	
Engl	1020	Composition I	3	Hist	1351	History of the U. S. from 1877, 3 or	
				PolS	1510	American Government, 3	3
				Elective in math			3
SECOND YEAR REQUIREMENTS						33	
HES	2424	Clothing Construction	3	FAMe	3444	Fashion Products	3
FAMe	2430	Fashion in Dress	3	Acct	2101	Principles of Financial Acct.	3
FAMe	2440	Fashion Merchandising Practicum	3	Mkt	3410	Retail Management	3
FAMe	2442	Textiles	3	Mkt	3420	Principles of Advertising	3
FAMe	3425	Apparel Performance Evaluation	3	Mkt	3430	Personal Selling	3
FAMe	3440	Fashion Promotion	3				
MINIMUM TOTAL						61	

FASHION: TEXTILES AND CLOTHING IN BUSINESS**Functional Major, B.S. Degree**

(43 000118)

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						71	
FAMe	1400	Intro. to Fashion Merchandising	3	FAMe	4444	Fashion Merchandising	3
FAMe	1420	Applied Design in Fashion & Apparel Merchandising	2	FAMe	4445	Senior Seminar in Fashion & Apparel Merchandising	3
FAMe	2430	Fashion in Dress	3	FAMe	4490	Internship in Fashion & Apparel Merchandising	3
FAMe	2440	Fashion Merchandising Practicum	3	HES	2424	Clothing Construction	3
FAMe	2442	Textiles	3	Acct	2101	Principles of Financial Acct.	3
FAMe	3425	Apparel Performance Evaluation	3	Mgt	3310	Principles of Management	3
FAMe	3440	Fashion Promotion	3	Mkt	3400	Principles of Marketing	3
FAMe	3444	Fashion Products	3	Mkt	3410	Retail Management	3
FAMe	4410	Architectural Interiors	3	Mkt	3420	Principles of Advertising	3
FAMe	4430	Merchandising Applications	3	Mkt	3430	Personal Selling	3
FAMe	4433	International Apparel Technology	3	Mkt	3480	Consumer Behavior	3
FAMe	4434	Fashion History	3				
FAMe	4442	Advanced Textiles	3				
MINOR NOT REQUIRED							
UNIVERSITY STUDIES REQUIREMENTS						48	
Chem	1104	Div. II A (required)	4	Agri	2130	Div. II D (required)	3
Econ	1010	Div. II B (required)	3	IGen	3116	Div. III A (required)	3
FREE ELECTIVES						5	
MINIMUM TOTAL						124	

FAMe 1400 Introduction to Fashion Merchandising (3) Survey of the field of fashion merchandising. Emphasis on trends and developments of fashion marketing operations.

FAMe 1420 Applied Design in Fashion and Apparel Merchandising (2) Application of the elements and principles of design to planning apparel and home or commercial interiors.

FAMe 1450 Textile and Apparel Fabrications I (3) An introductory course with an emphasis on textiles and apparel goods as they relate to computerized equipment and software.

FAMe 2430 Fashion in Dress (3) Wardrobe planning from aesthetic, social, psychological, and economic viewpoints. Prerequisite: FAMe 1420 or equivalent.

FAMe 2440 Fashion Merchandising Practicum (2-3) Supervised fashion merchandising--training and experience in an approved retail establishment with emphasis on apparel selection, merchandise sales, and floor management. May be repeated for a maximum of 12 semester hours.

Prerequisites: 30 hours completed in program and consent of instructor.

FAMe 2442 Textiles (3) Characteristics of fibers, yarns, finishes and consideration of fabric construction, color application. Textile behavior, performance, maintenance and legislative developments pertaining to textiles. Prerequisite: sophomore standing.

FAMe 2450 Textile and Apparel Fabrications II (3) Application of technological skills, problem solving techniques and creativity through the use of computerized equipment and software as it relates to apparel production and merchandising. Prerequisites: FAMe 1420 and FAMe 1450.

FAMe 3425 Apparel Performance Evaluation (3) Principles and techniques of fitting and evaluating material, construction, finishes, and quality of ready-to-wear garments. Prerequisites: HES 2424 and FAMe 2442.

FAMe 3440 Fashion Promotion (3) Researching, planning, and presenting fashion promotion activities appropriate for the apparel and textile industries, including fashion show production.

FAMe 3444 Fashion Products (3) Production and merchandising of fashion products, their relationship to

industrial trends and the economy. Prerequisites: 3 semester hours of clothing construction, FAME 2442 and Econ 1010.

FAME 4410 Architectural Interiors (3) The application of architectural designs, materials, and furnishings in the interior environment. A concentration of textile products for residential and nonresidential settings that reflect today's lifestyle. Prerequisites: FAME 1420 and FAME 2442.

FAME 4414 Advanced Technical Problems in Fashion (1-3) Individual or group work on advanced technical problems in Fashion/Apparel Merchandising. Provide exploration of content not available through normal course offerings. May be repeated for a maximum of 6 semester hours. Prerequisites: minimum 2.5 Cumulative GPA, written contract/proposal with objectives/learning competency and written department consent.

FAME 4422 Tailoring (3) Construction of custom tailored garment; comparison of tailoring methods, fitting problems and their treatment. Prerequisite: 3 semester hours of clothing construction.

FAME 4424 Pattern Design (3) The design and construction of garments from a basic pattern, using the principles of art as applied to dress design. Prerequisites: FAME 2430 and 3 semester hours of clothing construction.

FAME 4427 Dressmaking (2) Advanced clothing construction with emphasis on custom dressmaking techniques. Analyzes and compares home sewing, couture design, and quantity production.

FAME 4430 Merchandising Applications (3) Builds upon the necessary understanding, knowledge, and working applications of the basics for profitable fashion merchandising. Prerequisites: Acct 2101 and must be taken concurrently with FAME 4444.

FAME 4433 International Apparel Technology (3) An analysis of economic, political, and cultural systems affecting the importing and exporting of textiles and apparel. Technology affecting the global fashion

marketplace will be emphasized. Prerequisite: Senior standing and approval of department advisor.

FAME 4434 Fashion History (3) Analysis of the evolution of fashion in Western civilization. Prerequisite: FAME 2430.

FAME 4442 Advanced Textiles (3) Comparative study of factors influencing the properties of fibers and fabrics as well as the performance of textile and apparel products. Lab period is used to test textile performance with standardized test procedures. Prerequisites: Chem 1104 or equivalent and FAME 2442.

FAME 4444 Fashion Merchandising (3) Principles and practices of fashion manufacturing and merchandising. Prerequisites: FAME 3444, Mkt 3410 and must be taken concurrently with FAME 4430.

FAME 4445 Senior Seminar in Fashion and Apparel Merchandising (3) Philosophy, current issues and trends in fashion and apparel merchandising will be covered. Focus on problem-solving styles leading to group and individual research problems. Prerequisites: senior standing and approval of department advisor.

FAME 4450 Special Problems in Textiles and Clothing (2-3) Recent trends. Group and individual problems which will include reports, discussions, bibliographies, research, and experiments. May be repeated for a maximum of 6 semester hours. Prerequisite: FAME 2442.

FAME 4490 Internship in Fashion and Apparel Merchandising (2-3) Provides experience for students in cooperating businesses. May be repeated for a maximum of 12 semester hours with no more than 6 semester hours graduate credit. Prerequisite: departmental approval.

FAME 5460 Seminar in Textiles and Clothing (2-3) Investigation and discussion of particular problems in fashion and apparel merchandising. Students may carry on minor research studies of a professional nature which may lead to a thesis.

Industrial Arts and Technology

In Industrial Arts and Technology, the second digit in the course number stands for the following: 0--General, 1--Professional.

TECHNOLOGY EDUCATION Major, B.S. in Ed. Degree

(Certification to teach technology education in grades 9-12)

(41 000229)

				Sem. Hours
MAJOR REQUIREMENTS				39
		Communication Technology		
Grap	1010	Introduction to Desktop Publishing & Printing	3	
Grap	1110	Fundamentals of Drafting	3	
Grap	4570	Computer Graphics	3	
		Energy and Power Technology		
ET	1020	General Electronics	3	
ET	1010	Applied Electricity, 3 or		
ET	2020	Industrial Electricity, 3	3	
Pr&T	1010	Power Mechanics	3	
		Materials and Processes Technology		
		Mf&C 1010	Mat. for Mfg. & Construction	3
		Mf&C 2310	Construction Techniques	3
		Mf&C 3550	Principles of Numerical Control, 3 or	
		Mf&C 4520	Robotics and Automation, 3	3
		Organization and Administration		
		IA&T 3110	Selection & Org. of Subject Matter for Ind. Voc. Tech. Ed.	3
		Electives		
		Grap 2500	Communication Technology	3
		IA&T 2000	Technology & Change	3
		IGen 3116	Creative Problem Solving	3
MINOR REQUIREMENTS				18-24
(continued on next page)				

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UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, IA&T 2000 fulfills 2 s.h. in Div. II A;					
IGen 3116 fulfills 3 s.h. in Div. III A)					
Biol	1003	Div. II A (required)	3	PoS	1510 Div. II B (required)
Phys	1104	Div. II A (required)	4	Psy	4230 Psy. of Adolescence
Hist	1350	Div. II B or		Geog	3201 Div. II D (required)
Hist	1351	Div. II B (required)	3		
Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. in Div. II B.					
PROFESSIONAL EDUCATION REQUIREMENTS (see pages 181-183)					
MINIMUM TOTAL					

TECHNOLOGY EDUCATION Minor, B.S. in Ed. Degree(Certification to teach technology education in grades 5-9 available only with a major in middle school-junior high school)
(000241)

MINOR REQUIREMENTS						Sem. Hours	
IA&T	2000	Technology & Change	3	Grap	1110	Fundamentals of Drafting	3
IA&T	3110	Selection & Org. of Subject		Grap	2500	Communication Technology	3
		Matter for Ind. Voc. Tech. Ed.	3	Mf&C	1010	Mat. for Mfg. & Construction	3
ET	1010	Applied Electricity	3	Pr&T	1010	Power Mechanics	3
UNIVERSITY STUDIES REQUIREMENTS (In the minor, IA&T 2000 fulfills 2 s.h. of Div. II A)							21

General

IA&T 1040 Technical Mathematics I (3) Application of the principles of algebra, geometry, and the fundamental concepts of trigonometry to technical work. Designed for associate degree technical programs. Prerequisite: Pers 1030 or one unit of high school algebra.

IA&T 1042 Technical Mathematics II (3) Application of the principles of numerical and analytical trigonometry, complex numbers, vector algebra and oblique triangle, logarithms, basic analytic geometry and probability theory. Prerequisite: Math 1111 or concurrently; or IA&T 1040.

IA&T 2000 Technology and Change (3) Explores the nature of technology, technological systems found in all cultures, the control of technology, and implications for change.

IA&T 2040 Calculus for Technology (3) Application of the fundamental concepts of differential and integral calculus to technology. Prerequisites: Math 1111; and IA&T 1042 or Math 1112.

IA&T 3022 Internship in Technology (1-9) Provides practical application and experience in cooperating industry and business. Students submit written reports. Evaluation by on-job supervisor and internship coordinator. May be repeated for a maximum of 12 semester hours.

Prerequisites: 20 semester hours of program offerings, minimum undergraduate GPA 2.00 and permission of department chair.

IA&T 3060 Technical Report Writing (2) Techniques of collecting and presenting scientific data for formal and informal reports and technical papers.

IA&T 4000 Special Projects in Industrial Arts and Technology (1-3) Investigation of contemporary problems and issues in industrial arts and technology by selected individuals or groups. May be repeated for a maximum of 6 semester hours.

IA&T 4010 Experimental Crafts (3) Variety of materials for those who want to teach or do creative crafts.

IA&T 4020 Crafts for Elementary Schools (3) Students will design, construct, and finish inexpensive three-dimensional projects for the purpose of developing skills and understandings in the use of tools, materials and processes as they relate to the integration of constructional activities in the elementary school.

IA&T 4090 Special Problems in Industrial Arts and Technology (1-3)

Meets student needs for additional research and/or laboratory experience in the development of technical knowledge and skills in the areas of industrial arts and technology. May be repeated for a maximum of 6 semester hours.

IA&T 5022 Internship in Applied Sciences (1-6) Provides experience for students in cooperating industries. Students rotate assignment. Written reports are required. May be repeated for a maximum of 6 semester hours. Prerequisites: approval of graduate advisor and Technology Internship Coordinator; graduate GPA 3.00 or above; minimum of one semester graduate work completed.

Professional**IA&T 3110 Selection and Organization of Subject Matter for Industrial Vocational Technical Education (3)**

Selecting and organizing subject matter for teaching industrial and technical education.

IA&T 4110 Philosophy of Occupational Education and Training (3) Study of social, economic, and political structures which form the philosophical basis for occupational education and training programs.

IA&T 4180 Adult Programs in Practical Arts, Vocational and Technical Education (3) Principles, objectives, philosophies, organization, administration, and supervision of adult health, agricultural, industrial, and homemaking occupations.

IA&T 5110 Development of the Industrial Education Program (3) Objectives and changes in philosophy and their significance; interpretation of industrial arts, vocational industrial and technical education in the modern school.

IA&T 5120 Preparation of Instructional Materials (3) Organization of instructional materials including outlines, courses of study, and visual aids.

IA&T 5130 Research Methods in Applied Sciences and Technology (3) Research methodology with emphasis on research design, data interpretation and techniques of developing research proposals, and report writing.

IA&T 5140 Organization and Administration of Industrial Education (3) Organizing and administering various types of industrial schools and classes. Federal laws, state administration and local practices will be considered.

IA&T 5150 Introduction to Vocational Administration (3)

Role, responsibilities, and activities associated with the administration of secondary and post-secondary vocational programs.

IA&T 5160 Legal Issues in Vocational Education (2)

Current and existing legislation which form the statutory basis of school law affecting vocational education through a study of case law and the Carl Perkins Reauthorization Act.

IA&T 5170 Financing Vocational Education (2) Analyze and develop a financial plan for obtaining, managing and administering vocational resources.

IA&T 6120 Current Issues and Topics in Industrial Arts and Technology (3) A seminar type course dealing with philosophy, new issues and recent literature, and research in the field.

IA&T 6130 Special Investigations in Industrial Arts and Technology (2-3)

Advanced and specialized problems in industrial arts and technology selected with approval of department advisers and graduate committees. May be repeated for a maximum of 8 semester hours. Prerequisite: 5 semester hours in the area concerned.

IA&T 6132 Research in Industrial Arts and Technology (2-3) Special investigations and the completion of a major research problem or thesis in industrial arts and technology. May be repeated for a maximum of 6 semester hours.

Manufacturing and Construction

In the Department of Manufacturing and Construction, the second digit in the course number stands for the following: 0--General, 1--Metals, 2--Woods, 3--Construction, 4--Plastics, 5--Manufacturing.

Air Conditioning and Refrigeration

INDUSTRIAL MAINTENANCE Associate in Science Degree

(22 000238)

						Sem. Hours	
FIRST YEAR REQUIREMENTS						35	
ACR	1111	Fund. of Air Conditioning	3	SpCm	1000	Public Speaking	3
ACR	2103	Principles of Refrigeration	3	Engl	1020	Composition I	3
Mf&C	1120	Welding	2	Math	1111	College Algebra	3
ET	1010	Applied Electricity	3	CIS	1610	Impact of Computer-Based Tech.	2
ET	2030	Intro. to Programmable Controllers	3	Hist	1350	History of the U. S. to 1877, 3 or	
Grap	1110	Fundamentals of Drafting	3	Hist	1351	History of the U. S. from 1877, 3	3
Phys	1104	Intro. to the Sciences: Physics	4				
SECOND YEAR REQUIREMENTS						29	
ACR	3101	Appl. Air Cond. & Refrigeration	3	ET	3048	Control & Maint. of Elec. Mach.	3
ACR	2105	Prin. of Commercial Refrigeration	3	IA&T	3060	Technical Report Writing	2
ACR	3107	Winter Envir. Comfort Systems	3	Pr&T	4032	Hydraulics & Pneumatics	3
ET	2020	Industrial Electricity	3	BLaw	2720	Legal Environment of Business	3
ET	3022	AC & DC Machines	3	Departmentally approved electives			3
MINIMUM TOTAL						64	

Construction

CONSTRUCTION MANAGEMENT Functional Major, B.S. Degree

(43 000239)

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						82	
Mf&C	1010	Mat. for Mfg. & Construction	3	Grap	1110	Fundamentals of Drafting	3
Mf&C	2020	Mechanics of Materials	3	IA&T	3022	Internship in Technology	1
Mf&C	2040	Materials Testing	3	EaSc	2100	Engineering Geology	4
Mf&C	2050	Applied Strength of Materials	3	Math	1112	College Trigonometry	2
Mf&C	1301	Sem. in Construction Mgt.	2	Math	1131	Calculus for Business & Econ.	3
Mf&C	2310	Construction Techniques	3	CS	1000	BASIC Programming	1
Mf&C	2320	Heavy Equipment	3	Acct	2101	Principles of Financial Acct.	3
Mf&C	2325	Project Cost Estimating	3	Fin	2801	Business Statistics I	3
Mf&C	2340	Surveying & Construction Layout	3	Mgt	3310	Principles of Management	3
Mf&C	3320	Prin. of Construction Mgt.	3	Grap	2160	Structural Drafting, 3 or	
Mf&C	3330	Building Codes & Code Adm.	3	Grap	3150	Civil Drafting, 3 or	
Mf&C	3350	Building Structures	3	Grap	3160	Residential Arch. Drawing, 3	3
Mf&C	3355	Scheduling for Mfg. & Const.	3	Acct	2102	Principles of Managerial Acct., 3 or	
Mf&C	4310	Construction Safety	3	BLaw	2720	Legal Environment of Business, 3 or	
Mf&C	4325	Computer Estimating & Cost Analysis	3	Mkt	3400	Principles of Marketing, 3	3
Mf&C	4330	Mechanical Systems for Buildings	3	HRM	3920	Human Resource Management, 3 or	
Mf&C	4355	Computer Scheduling & Project Analysis	3	Fin	3805	Real Estate Prin. & Practices, 3	3
MINOR NOT REQUIRED							
UNIVERSITY STUDIES REQUIREMENTS						48	
Math	1111	Div. I C (required)	3	Econ	1010	Div. II B (required)	3
Phys	1104	Div. II A (required)	4	ICap	4109	Div. III B (required)	3
CIS	1610	Div. II A (required)	2				
MINIMUM TOTAL						130	

CONSTRUCTION TECHNOLOGY, Associate in Science Degree

(22 000150)

						Sem. Hours	
FIRST YEAR REQUIREMENTS						31	
Mf&C	1010	Mat. for Mfg. & Construction	3	Engl	1020	Composition I	3
Mf&C	2040	Materials Testing	3	Math	1111	College Algebra	3
ACR	1111	Fund. of Air Conditioning	3	Math	1112	College Trigonometry	2
ET	1010	Applied Electricity	3	Hist	1350	History of the U.S. to 1877, 3 or	
Grap	1110	Fundamentals of Drafting	3	Hist	1351	History of the U.S. from 1877, 3	3
Phys	1104	Intro. to the Sciences: Physics	4	Applied Phys. Ed. 1			
SECOND YEAR REQUIREMENTS						32	
Mf&C	2020	Mechanics of Materials	3	Grap	3160	Residential Arch. Drawing	3
Mf&C	2310	Construction Techniques	3	IA&T	3060	Technical Report Writing	2
Mf&C	2320	Heavy Equipment	3	Grap	2160	Structural Drafting, 3 or	
Mf&C	2325	Project Cost Estimating	3	Grap	3150	Civil Drafting, 3, or	
Mf&C	2340	Surveying & Construction Layout	3	Grap	4162	Commercial Arch. Drawing, 3	3
Mf&C	3350	Building Structures	3	Mf&C	3330	Building Codes & Code Adm.	3
SpCm	1000	Public Speaking	3				
MINIMUM TOTAL						63	

Manufacturing

INDUSTRIAL TECHNOLOGY-MANUFACTURING MANAGEMENT Functional Major, B.S. Degree (43 000240)

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						82	
Mf&C	1010	Mat. for Mfg. & Construction	3	Mf&C	3562	Computer Numerical Control	3
Mf&C	2020	Mechanics of Materials	3	Mf&C	4520	Robotics & Automation	3
Mf&C	2040	Materials Testing	3	Mf&C	4580	Quality Systems	3
Mf&C	2050	Applied Strengths of Materials	3	IndM	4220	Work Design & Ergonomics	3
Mf&C	1501	Seminar in Manufacturing	2	IndM	4240	Plant Layout & Mat. Handling	3
Mf&C	1510	Intro. to Manufacturing Processes	3	IndM	4260	Industrial Supervision	3
Mf&C	2515	Applied Manufacturing Processes	3	Grap	1110	Fundamentals of Drafting	3
Mf&C	2530	Machine Tool Technology	3	Grap	2170	Intro. to Computer-Aided Drafting	3
Mf&C	3501	Computer Prog. for Manufacturing	3	Pr&T	4032	Hydraulics & Pneumatics	3
Mf&C	3510	Mfg. Planning & Control	3	SS&T	3120	Intro. to Industrial Hygiene, 3 or	3
Mf&C	3520	Manufacturing Economy	3	SS&T	3430	Industrial Hazard Control, 3	3
Mf&C	3530	Inspection & Quality Control	3	Math	1112	College Trigonometry	2
Mf&C	3550	Principles of Numerical Control	3	Departmentally approved electives			12
MINOR NOT REQUIRED							
UNIVERSITY STUDIES REQUIREMENTS						48	
Math	1111	Div. I C (required)	3	CIS	1610	Div. II A (required)	2
Phys	1104	Div. II A (required)	4	ICap	4110	Div. III B (required)	3
Chem	1103	Div. II A (required)	3				
MINIMUM TOTAL						130	

MANUFACTURING TECHNOLOGY, Associate in Science Degree (22 000154)

						Sem. Hours	
FIRST YEAR REQUIREMENTS						32	
Mf&C	1010	Mat. for Mfg. & Construction	3	Engl	1030	Composition II	3
Mf&C	1501	Seminar in Manufacturing	1	Math	1111	College Algebra	3
Mf&C	1510	Intro. to Manufacturing Processes	3	Math	1112	College Trigonometry	2
Mf&C	2530	Machine Tool Technology	3	CS	1000	BASIC Programming	1
Grap	1110	Fundamentals of Drafting	3	Hist	1350	History of the U. S. to 1877, 3 or	3
Phys	1104	Intro. to the Sciences: Physics	4	Hist	1351	History of the U. S. from 1877, 3	3
Engl	1020	Composition I	3				
SECOND YEAR REQUIREMENTS						32	
Mf&C	2020	Mechanics of Materials	3	Mf&C	3530	Inspection & Quality Control	3
Mf&C	2040	Materials Testing	3	Mf&C	3550	Principles of Numerical Control	3
Mf&C	2325	Project Cost Estimating	3	Mf&C	3562	Computer Numerical Control	3
Mf&C	1501	Seminar in Manufacturing	1	Grap	2170	Intro. to Computer-Aided Drafting	3
Mf&C	2515	Applied Manufacturing Processes	3	SpCm	1000	Public Speaking	3
Mf&C	3510	Mfg. Planning & Control	3	Applied Physical Education			1
MINIMUM TOTAL						64	

Industrial Technology

INDUSTRIAL TECHNOLOGY Functional Major, B.S. Degree(This "2+2" program is designed to build upon an Associate Degree)
(43 000211)

						Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS						76-82
Associate Degree	42-48	Mf&C 3355	Scheduling for Mfg. & Const.	3		
Construction Technology and Manufacturing Technology Associate in Science Degrees from Central or an Associate Degree from an accredited community college or technical institute in a field of study related to Industrial Technology will be accepted. Thirty-seven semester hours of upper division courses must be taken at Central. Total credit from the associate degree program may not exceed 64 semester hours including 42 to 48 semester hours in the technical/management area and 16 to 22 semester hours in University Studies.		Mf&C 4580	Quality Systems	3		
		IndM 4220	Work Design & Ergonomics	3		
		IndM 4260	Industrial Supervision	3		
		SS&T 3000	Prin. of Acc. Causation & Prev.	3		
		Mf&C 2515	Applied Manufacturing Processes, 3 or			
		Mf&C 3320	Prin. of Construction Mgt., 3	3		
		Mf&C 3520	Manufacturing Economy, 3 or			
		Mf&C 4325	Comp. Est. & Cost Analysis, 3	3		
		Departmentally approved upper level electives		13		
MINOR NOT REQUIRED						
UNIVERSITY STUDIES REQUIREMENTS						48
From the Associate Degree, 16 to 22 semester hours may apply to University Studies.						
Math 1111	Div. I C (required)	3	ICap 4109	Div. III B or		
Phys 1104	Div. II A (required)	4	ICap 4110	Div. III B (required)	3	
MINIMUM TOTAL						124

INDUSTRIAL TECHNOLOGY Major, B.S. Degree

(43 000210)

						Sem. Hours
MAJOR REQUIREMENTS						52
ET 1020	General Electronics	3	Mf&C 3550	Principles of Numerical Control	3	
Grap 1010	Introduction to Desktop Publishing & Printing	3	IndM 4210	Industrial Management	3	
			ICap 4110	Industrial Problem Solving	3	
Grap 1110	Fundamentals of Drafting	3	Pr&T 1010	Power Mechanics	3	
Grap 1120	Machine Drafting	3	ET 1010	Applied Electricity, 3 or		
Grap 2170	Intro. to Computer-Aided Drafting	3	ET 2020	Industrial Electricity, 3	3	
Mf&C 1010	Mat. for Mfg. & Construction	3	Electives in Math and/or Phys		6	
Mf&C 1510	Intro. to Manufacturing Processes	3	Upper level electives in ET, Grap, Mf&C, IndM, Pr&T, or IA&T		4	
Mf&C 2515	Applied Manufacturing Processes	3				
Mf&C 2530	Machine Tool Technology	3				
MINOR REQUIREMENTS						18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, ICap 4110 fulfills 3 s.h. of Div. III B)						45
FREE ELECTIVES						2-9
MINIMUM TOTAL						124

MANUFACTURING AND CONSTRUCTION Minor for a Bachelor's Degree(Central does not confer teacher certification for this minor)
(000153)

						Sem. Hours
MINOR REQUIREMENTS						21
Mf&C 1010	Mat. for Mfg. & Construction	3	Electives from the following (continued)			
Mf&C 2020	Mechanics of Materials	3	Mf&C 3355	Scheduling for Mfg. & Const.	3	
Mf&C 2040	Materials Testing	3	Mf&C 1510	Intro. to Mfg. Processes	3	
Mf&C 2325	Project Cost Estimating	3	Mf&C 2515	Applied Manufacturing Processes	3	
Grap 1110	Fundamentals of Drafting	3	Mf&C 2530	Machine Tool Technology	3	
Electives from the following -- select manufacturing or construction courses		6	Mf&C 3510	Mfg. Planning & Control	3	
Mf&C 2310	Construction Techniques	3	Mf&C 3550	Prin. of Numerical Control	3	
Mf&C 2320	Heavy Equipment	3	Grap 2170	Intro. to Computer-Aided Drafting	3	
Mf&C 3320	Prin. of Construction Mgt.	3				
Mf&C 3350	Building Structures	3				

Air Conditioning and Refrigeration

ACR 1111 Fundamentals of Air Conditioning (3) The psychometrics of air, calculations of heat loads and conditioned air supply. Fundamentals of engineering as applied to the design of air conditioning systems.

ACR 2103 Principles of Refrigeration (3) Fundamental principles and their application to major refrigeration system components including tools, accessories and the refrigeration cycle. Emphasis on laboratory experiences.

ACR 2105 Principles of Commercial Refrigeration (3) Theory of operation of commercial equipment, construction, technical characteristics, and service problems in the refrigeration industry. Prerequisite: ACR 2103.

ACR 3101 Applied Air Conditioning and Refrigeration (3) Installation, operation, balancing, and troubleshooting refrigeration and air conditioning equipment with actual and simulated problems. Prerequisite: ACR 2103.

ACR 3105 Planning and Estimating Environmental and Refrigeration Systems (2) Principles of job planning, estimating, and contracting with related information on public and labor relations and business management in the field of refrigeration and air conditioning.

ACR 3107 Winter Environmental Comfort Systems (3) Engineering, installation, operation, and adjustment of residential and commercial winter indoor comfort systems. Actual and simulated service problems provided.

Industrial Management

IndM 4210 Industrial Management (3) A survey of operations management in industry today. Industrial management principles and applications, management science, operations analysis and design, manufacturing processes, process life cycle, production inventory, and quality control are emphasized.

IndM 4220 Work Design and Ergonomics (3) Integration of concepts involved in providing safe and comfortable work places (Ergonomics) with concepts directed toward increased productivity and profitability (Work Design).

IndM 4230 Quality Control Management (3) Overall approach to quality and the control activities of management. Technical aspects of management control systems, statistical analysis, statistical quality control, and management concepts are emphasized. Prerequisite: background statistics course.

IndM 4240 Plant Layout and Materials Handling (3) Principles and procedures of effective industrial plant layout, plant location and design, materials handling, and equipment installation.

IndM 4260 Industrial Supervision (3) Various types and styles of supervisory leadership in the industrial setting. Emphasis is placed on human relations aspects of leadership in the line and staff organizational structure.

IndM 5212 Production and Operations Management (3) Production/operations concepts with emphasis upon systems, systems design and analysis, strategies, productivity, planning, forecasting, deterministic and stochastic inventory control, MRP scheduling, and project planning.

IndM 5220 Applied Operations Research (3) Systems and modeling in industrial management situations. General models, and models such as linear programming, transportation assignment, dynamic programming, and queuing theory are discussed.

IndM 5230 Seminar in Industrial Management (1-3) To provide individual research and experimentation opportunities for industrial management majors. May be repeated for a maximum of 3 semester hours. Prerequisite: 10 semester hours of graduate study in industrial management.

IndM 5240 Engineering Economy (3) Principles and techniques needed for making decisions about the acquisition and retirement of capital goods by industry. Emphasis on techniques which produce long-run economy in industrial operations.

IndM 5260 Systems Analysis and Management Information Systems (3) Development of material requirements planning within the context of management information systems.

Manufacturing & Construction

General

Mf&C 1010 Materials for Manufacturing and Construction (3) Construction materials, including sources, characteristics, uses, and standard sizes and packaging, with relative values of different grades.

Mf&C 1012 Global Production Technology (3) Study of production technology along with the problems, successes and challenges of the application of technology globally.

Mf&C 1024 Computer Skills for Technical Personnel (3) Standard interface, system customization and optimization, use of system resources, multitasking, object linking and embedding, multimedia applications, and graphic based applications software. Prerequisite: CIS 1600 or consent of instructor.

Mf&C 2020 Mechanics of Materials (3) An introduction to the basic concepts of strengths of materials, statics and dynamics as they relate to the design and analysis of materials, machines, and structures. Prerequisite: Math 1101 or one unit of high school algebra.

Mf&C 2024 Spreadsheets for Technical Applications (3) Principles and applications of electronic spreadsheets. Includes graphics, macro and data management features of electronic spreadsheets. Problem-solving with an emphasis on business and industrial applications. Prerequisite: CIS 1600 or consent of instructor.

Mf&C 2040 Materials Testing (3) Theory and practical applications of measuring, inspecting and testing properties of ceramic, composite, metallic and organic materials according to ASTM standards.

Mf&C 2050 Applied Strength of Materials (3) Selection and application of sizes, shapes, and materials required for the construction of a member of a machine or structure in order to resist an applied load in a safe and economical manner. Prerequisites: Mf&C 2020 and Mf&C 2040.

Mf&C 3010 Man and Construction (2) A look at the construction industry as it relates to the consumer.

Mf&C 3050 Technical Career Subjects (1-3) In-depth competency, skill development, and advanced concepts taught in formal course offerings through explorations of innovative techniques and procedures used in business and industry. May be repeated for a maximum of 12 semester hours. Prerequisite: consent of a review committee of three faculty members in the department.

Mf&C 4000 Special Projects in Manufacturing and Construction (1-3) Investigation of contemporary problems and issues in manufacturing and construction by selected individuals or groups. May be repeated for a maximum of 6 semester hours.

Mf&C 4010 Current Issues in Industry (3) Identify, discuss, and research current issues, trends, and technological changes affecting industry as related to corporate planning, decision making, and managing for the future. Prerequisites: junior or senior standing for undergraduate credit.

Mf&C 4020 Industrial Energy Management (3) Energy efficient techniques in a variety of industrial settings.

Mf&C 4050 Equipment Installation and Maintenance (2) Technical problems in the installation of power equipment; care and maintenance of tools and machines; servicing school equipment; safety.

Mf&C 5000 Special Problems in Manufacturing and Construction (2-6) Meets individual student needs for additional research and/or laboratory experiences in the development of technical knowledge and skills in the areas of manufacturing and construction. May be repeated for a maximum of 6 semester hours.

Mf&C 5010 Applied Research for Industrial Technology (3) Research investigation of a technical problem. The course will culminate in a research report. May be repeated to a maximum of 6 semester hours per degree program. Prerequisite: IA&T 5130.

Mf&C 5015 Legal Aspects of Industry (3) Identify, discuss, and research legal issues affecting industry as related to corporate planning, decision making, and management. The role of corporate and social responsibility will also be developed.

Mf&C 5020 International Technology Management (3) Develop an understanding of international technology management for graduate students in the international environment.

Metals

Mf&C 1120 Welding (2) Study and practice of four basic welding processes: oxyacetylene, metallic arc, MIG, and TIG.

Woods

Mf&C 2210 Finishing and Upholstering (3) Finishing materials, their application and treatment on various woods and metals; refinishing and upholstering.

Construction

Mf&C 1300 Construction Practices (2) General survey of the organization and functioning of the construction industry: legal, ethical, business, and management aspects.

Mf&C 1301 Seminar in Construction Management (0.5) Forum to provide students an opportunity to learn about current events in the construction industry through the use of guest speakers, open discussions and informative field trips. Students should expect to share cost of field trips and professional materials. May be repeated.

Mf&C 2310 Construction Techniques (3) An introductory course to construction management which provides a survey of light, civil, heavy highway and utility construction practices. Prerequisite: Mf&C 1010.

Mf&C 2320 Heavy Equipment (3) Survey of the types, uses, and economics of heavy equipment utilized in the construction industry.

Mf&C 2325 Project Cost Estimating (3) A quantitative take-off and survey of materials and productivity standards for industrial projects. Prerequisite: Mf&C 2310 or Grap 1110.

Mf&C 2340 Surveying and Construction Layout (3) Theory and practice of plane, topographic, and construction surveying and layout including care and use of instruments, note taking and computations. Prerequisite: Math 1112.

Mf&C 3320 Principles of Construction Management (3) Principles of construction contracting with related information on forms of business ownership, management, land development, labor relations, and project safety.

Mf&C 3330 Building Codes and Code Administration (3) In-depth study of national, state, and local regulations applicable to specification and performance of building construction standards.

Mf&C 3350 Building Structures (3) The types and nature of structural systems including the materials basic to the system: wood, steel, and concrete. Prerequisites: Mf&C 2020 and Mf&C 2310.

Mf&C 3355 Scheduling for Manufacturing and Construction (3) Theory and use of construction and production scheduling to control the acquisition, movement, storage, and utilization of workers and/or material with emphasis given to the Critical Path Method (CPM). Computer programming background recommended. Prerequisite: Grap 1110 or Mf&C 2310.

Mf&C 4310 Construction Safety (3) Construction safety and health conditions on the job as they relate to workers, supervisors, inspectors, and the public.

Mf&C 4325 Computer Estimating and Cost Analysis (3) An advanced course in construction cost estimating utilizing the computer and associated professional software to assist the estimator. Prerequisites: Mf&C 2310 and Mf&C 2325.

Mf&C 4330 Mechanical Systems for Buildings (3) Mechanical systems integrated with buildings and other equipment.

Mf&C 4340 Solar Energy for Building Construction (3) An analysis of solar energy systems and components as they apply to types of structure, sites, and climate regions.

Mf&C 4355 Computer Scheduling and Project Analysis (3) An advanced course in construction project scheduling utilizing the computer and associated professional software to assist the project scheduler. Prerequisites: Mf&C 2325 and Mf&C 3350.

Manufacturing

Mf&C 1501 Seminar in Manufacturing (0.5) Forum to provide students an opportunity to learn about current events in the manufacturing industry through the use of guest speakers, open discussions, and informative field trips. Students should expect to share cost of field trips and professional materials. May be repeated for a maximum of 2 semester hours.

Mf&C 1510 Introduction to Manufacturing Processes (3) An overview of the primary processes and a basic knowledge of secondary manufacturing processes which are classified as separating, casting, forming, conditioning, assembling, and finishing.

Mf&C 2500 Applied Computer Technology (2) Develops computer literacy through a study of microcomputers, peripherals and applications, and software.

Mf&C 2515 Applied Manufacturing Processes (3) The manufacturing processes used to fabricate and form engineering materials into useful products. Includes laboratory experiences using the common materials and basic processes. Prerequisite: Mf&C 1510.

Mf&C 2530 Machine Tool Technology (3) An introduction to machine tools with experiences in turning, drilling,

milling, grinding, and related bench work. Assigned projects.

Mf&C 3501 Computer Programming for Manufacturing (3)

Students will study control logic, data acquisition, data storage and computer programming as they relate to manufacturing. Prerequisite: CIS 1610 or equivalent.

Mf&C 3510 Manufacturing Planning and Control (3)

Planning and controlling the manufacturing process including materials, machines, people, and suppliers.

Mf&C 3520 Manufacturing Economy (3) Elements that influence the cost of manufactured products, the process of determining manufacturing costs, cost justification, value analysis and cost reduction analysis. Prerequisites: Mf&C 2515 and Mf&C 2530.

Mf&C 3530 Inspection and Quality Control (3) Principles and methods of controlling the quality of manufactured products. Emphasis will be on gauging and inspection.

Mf&C 3550 Principles of Numerical Control (3)

Introduction to N/C Machining Operations. Includes laboratory work in writing and executing manual program on N/C Machine Tools.

Mf&C 3562 Computer Numerical Control (3) Computerized numerical control programming of machine tools. Writing, debugging, and verifying part programs using the UNIAPT part programming language will be an integral part of the course. Prerequisite: Mf&C 3550.

Mf&C 4520 Robotics and Automation (3) Automated manufacturing equipment, computer integrated manufacturing systems, and the use of industrial robots. Computer programming background recommended.

Mf&C 4580 Quality Systems (3) The principles and practices of Total Quality Managements and the decision making tools and techniques utilized by professionals in today's successful industries.

Mf&C 5520 Computer Integrating Manufacturing (3)

Utilization of the computer in factory automation, engineering design, manufacturing control and manufacturing planning leading to the factory of the future. Prerequisite: general knowledge of the microcomputer and its use or Mf&C 2500 or CS 1100 or CIS 1600.

Mf&C 5562 Computer Numerical Control Applications (3)

Advanced applications in computer numerical control. Students will apply their knowledge of manufacturing processes and CNC programming in completing advanced projects. Prerequisite: Mf&C 3562.

Integrative Studies Capstone

ICap 4109 Construction Operations* (3) A detailed study of the knowledge, processes and operational procedures involved in a commercial construction project. Prerequisites: Mf&C 2310, Mf&C 2325, Mf&C 3320 and Mf&C 3355 and senior standing.

ICap 4110 Industrial Problem Solving* (3) Designed for students preparing for careers in manufacturing management. Student teams will analyze manufacturing problems, propose solutions, and present recommendations. Prerequisite: senior standing.

*Not available for graduate credit.

Military Science

In the Department of Military Science, the second digit in the course number stands for the following: 1--Freshman year, 2--Sophomore year, 3--Junior year, 4--Senior year, 5--Summer Camp.

Department of Military Science Statement of Policy

The Army Reserve Officers' Training Corps (ROTC) develops college-educated officers for the active Army and reserve components. It provides young men and women the opportunity to earn commissions as Army officers and at the same time work toward an academic degree.

There are two programs available, a four-year program and a two-year program, both culminating in a United States Army commission.

The **four-year program** is divided into two phases, Basic Military Science and Advanced Military Science. Basic Military Science is normally taken by students in their freshman and sophomore years. It provides instruction in the basic subject areas needed to establish a firm foundation in military skills. This foundation provides for continued professional development in the areas of leadership and management.

Advanced Military Science is normally taken during the junior and senior years. The program develops the student's ability to express himself/herself clearly and accurately. It teaches leadership by both classroom theory and the practical application of directing individuals and small units in the execution of simulated tactical missions. While enrolled in Advanced Military Science, the student is paid a monthly financial allowance by the U.S. Army.

Freshmen and sophomores who are veterans with a minimum of four months active service, or reserve/national guard personnel who have completed basic training in any of the armed services, may be granted advanced ROTC placement, not to exceed two years, at the discretion of the Professor of Military Science.

The **two-year program** is offered for students who have completed two years of college but have not completed a basic military science program or served on active duty with any of the armed services. Students attend a basic six-week summer training program at the end of their sophomore year. After successful completion of the basic camp, students will start Advanced Military Science with all the pay and entitlements of the four-year program cadet.

The **U.S. Army Scholarship program** provides an excellent way for young men and women to obtain assistance in financing a college education. All scholarships cover the cost of tuition, books, certain fees and educational supplies, as well as a monthly financial allowance. Additional scholarship information is available from the Department of Military Science.

To qualify for a commission as a Second Lieutenant, a student must comply with all terms of his/her contract; successfully complete Basic Military Science or equivalent; successfully complete MS 3310, MS 3320, MS 4410, MS 4420 and MS 4510; complete all University requirements for a bachelor's degree; meet the physical standards of current U.S. Army regulations and agree to accept an Active Army, Army National Guard or Army Reserve duty assignment. Additionally, candidates for a commission must complete at least one course from each of the following Professional Education subject areas: Written Communications, Human Behavior, Computer Literacy and Military History. A list of approved courses for each of the Professional Education subject areas may be obtained from the Department of Military Science.

MILITARY SCIENCE Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)
(000201)

		Sem. Hours
MINOR REQUIREMENTS		21-23
MS 3310	Officership As a Profession 3	
MS 3320	Military Operations & Techniques . . . 3	
MS 4410	Adv. Military Management Systems I . 3	
MS 4420	Adv. Military Management Systems II . 3	
MS 4510	Advanced Summer Camp 3	
Electives from the following 6-8		
MS 1110	Intro. to Military Science 2	
MS 1120	Basic Military Skills 2	
MS 2210	Basic Mil. Skills & Leadership . . . 2	
Electives (continued)		
MS 2220	Basic Military Tactics & Leadership 2	
or		
MS 2510	Basic Summer Camp 3	
Departmentally approved elective 3		
or		
Active duty or reserve forces basic training 3		
Departmentally approved elective 3		

Freshman Year

MS 1110 Introduction to Military Science (2) An introduction to military mountaineering, basic first aid, and fundamentals of leadership. Laboratory is required.
MS 1120 Basic Military Skills (2) An introduction to basic rifle marksmanship, land navigation skills, use of a compass, orienteering, and an overview of the organization of the Armed Forces which includes military traditions and courtesy. Laboratory is required.

Sophomore Year

MS 2210 Basic Military Skills and Leadership (2) Branches of the Army, customs and traditions, intermediate first aid and basic pistol marksmanship. Laboratory is required. Prerequisite: MS 1120 or equivalent or permission of the Professor of Military Science.
MS 2220 Basic Military Tactics and Leadership (2) A continuation of MS 2210 with emphasis on small unit tactics and small unit management skills. An introduction to military operations, squad tactics and survival training. Laboratory is required. Prerequisite: MS 2210 or equivalent or permission of the Professor of Military Science.

Junior Year

MS 3310 Officership as a Profession (3) Professionalism and the military with emphasis on the role and responsibilities of the officer corps and leadership development. Prerequisite: MS 2220 or equivalent.
MS 3320 Military Operations and Techniques (3) Designed to give experience in basic military skills common to new lieutenants, regardless of specialty. Emphasis on tactics and techniques. Prerequisite: MS 3310.

Senior Year

MS 4410 Advanced Military Management Systems I* (3) Principles of management and applications in a military organizational environment. Functional processes within resource systems. Interpersonal relationships and small group dynamics. Prerequisite: MS 3320.
MS 4420 Advanced Military Management Systems II* (3) In-depth study of principles and law of warfare with emphasis on the Military Justice System (process of the Uniform Code of Military Justice), personnel and organizational support systems. Prerequisite: MS 4410.

Summer Camp

MS 2510 Basic Summer Camp (3) Substitutes for the first two years of military science courses. Course is conducted during the summer for a period of six weeks. Transportation, room, board, military clothing and a salary are provided. Interested students should contact the Professor of Military Science between January and March of their sophomore year. Prerequisite: departmental consent.
MS 4510 Advanced Summer Camp* (3) Six weeks of advanced summer camp experience for advanced military science students. Required for completion of military science program and commissioning. Students receive financial assistance. Prerequisite: MS 3320 and departmental consent.

*Not available for graduate credit.

Nursing

In the Department of Nursing, the second digit in the course number stands for the following: 0--General Theory, 1--Fundamentals of Nursing, 2--Maternal and Child Health, 3--Medical-Surgical Nursing, 4--Community and Mental Health Nursing, 6--Professional Theory.

Department of Nursing Statement of Policy

Program

Central's Department of Nursing offers a baccalaureate in nursing. The program is accredited by the Missouri State Board of Nursing and the National League for Nursing.

Admission

Students entering Central as freshmen or by transfer should indicate a pre-nursing major. Admission to the nursing program is conditional upon completion of a minimum of sixty semester hours, completion of all prerequisites necessary for admission to the first semester in the nursing program and the requirements for admission listed below. Admission to the nursing program involves competition between all eligible candidates. The Department of Nursing reserves the right to select among all qualified candidates. Students are admitted in April for Fall semester nursing classes and in November for Spring. The necessary application and physical examination forms may be obtained from the Department of Nursing.

Students Meeting the Following Requirements Are Eligible to Apply for Admission to the Nursing Program:

1. Evidence of good moral character as determined by the Missouri State Board of Nursing in the Nurse Practice Act (1993) and by the American Nurses' Association Code for Nurses (1985).
2. All nursing prerequisites must be completed at the time of admission. Computer literacy is required to be admitted to the nursing program.
3. A minimum of a 2.50 cumulative grade-point average is required at the time of application. Because admission into the nursing major is competitive, contact the Department of Nursing for more information.
4. Minimum grade of **C** in all nursing prerequisites and nursing courses. A student receiving a grade lower than **C** in any nursing prerequisite may repeat that course only one time.
5. Students receiving more than one D or F grade in a course or courses with a nursing prefix will not be eligible for admission into the program.
6. Students will not be permitted to withdraw more than one time from a nursing prerequisite course or a nursing course without permission of the Department of Nursing.
7. Science prerequisites, as identified in NURSING Functional Major, B.S. Degree, must have been taken within 10 years of requested semester admission. Students will be categorized in two classifications for consideration for admission to the nursing program:
 - a. Students who have taken all nursing prerequisite courses at Central; and
 - b. Students who have transferred credit for one or more nursing prerequisite course(s) from another institution.

Nursing prerequisite courses are Nur 1600, Nur 2000, Biol 2401, Biol 2402, Biol 3611, Chem 1103, HES 3340, Psy 1100, Soc 1800. Grade-

- point averages are a determining factor in selection. Different cutoff scores for the different classifications of students may be established.
8. Completion of the American College Test (ACT) and the Nelson-Denny Reading Tests prior to admission to the nursing program. Information about the ACT may be obtained from the Testing Center (Humphreys 223). Information about the Nelson-Denny may be obtained from the EDC Learning Lab in Humphreys 110. Students must obtain a minimum grade level equivalent of 12 on the Nelson-Denny to be considered for admission.
 9. Completed application and examination forms are to be in the office of the Department of Nursing by January 1 for admission to Fall semester nursing classes and July 1 for admission to Spring semester nursing classes.
 - a. Application for admission to nursing program.
 - b. Required immunizations that will carry student through graduation.
 - c. Nelson-Denny exam.
 - d. Speech and hearing exam.
 - e. ACT scores.
 - f. Official transcripts--it is the student's responsibility to request ALL official transcripts from other universities and colleges be submitted to the Admissions Department of the University to be posted as part of the student's official transcript by 5 p.m., December 31 for Fall admission and June 30 for Spring admission.
 - g. Two letters of reference.
 10. Physical exams and required immunizations must be complete and validated before the first day of classes.
 11. Students may be interviewed in groups.
 12. Approval of Nursing Faculty based on recommendation of Admissions and Progression Committee.
 13. English as second language students (any student whose primary and secondary education was in a country where the native and official language was not English excluding native American citizens who attended American high schools in another country) must successfully complete the following requirements:
 - a. TOEFL - A score of 600 with a minimum of 55 on each sub-score.
 - b. Test of Spoken English - A minimum score of 250.
 - c. Test of Written English - A minimum score of 5.

Any student not obtaining these scores can receive assistance through the English Language Center.

Requirements for Progression in the Nursing Program:

1. A student who receives a **D** or **F** in a nursing course will be suspended from the program and is required to seek readmission in order to repeat the course. The readmission process is initiated by the student with the instructor whose course was failed. Completion and filing of the "Request of Readmission Form" is the responsibility of the student. If a student is not readmitted within a year, that student may be required to repeat all courses within the nursing major.
2. Students who withdraw from the nursing program must complete the "Request for Readmission Form" and compete with other students for readmission into the program. Students may be readmitted only once into the nursing program based on the decision of the Admission and Progression Committee.
3. A student receiving more than one **D** or **F** in a course or courses with a nursing prefix will not be allowed to apply, reapply, or progress in the nursing program.
4. Requirements for readmission to the program are all those set forth in this policy as well as those contained in the current Student Handbook for the Department of Nursing.
5. Students must be successful in receiving a grade of at least a **C** or **P** in each course in a particular semester in the program to progress to the next semester.

Transfer Into the Nursing Major:

Transfer of upper level nursing credit will be considered according to the following procedure:

1. Students will meet the University Studies requirements as listed in the current University Catalog.
2. Credits from an accredited baccalaureate nursing program will be evaluated and allowed in accordance with current Central and Department of Nursing policy.
3. Evaluation of each transfer student will be made within the Department of Nursing on an individual basis.
4. Students will take a minimum of 35 semester hours of upper level courses, with a minimum of 20 semester hours in nursing. Those courses required in the nursing major are Nur 4010, Nur 4011, Nur 4420, Nur 4421, Nur 4620, Nur 4621.
5. Students will apply for admission to the Department of Nursing and be subject to the regular program admission policy. In addition, the following evaluation process will be followed:
 - a) Credit for nursing courses will be based on a review of content, course description, syllabi, and catalog description.
 - (1) If content is basically the same, nursing faculty may approve the course for nursing credit. The credit hours approved may be at the maximum credit hour allocation for the Central nursing course.
 - (2) If the content is fairly similar, the nursing faculty may approve credit and in addition require Nur 4000, Special Projects (2-6 credits).
 - (3) Only discrete courses in the content areas of research and ethics, pharmacology and observation and

assessment will be considered for transfer as meeting the departmental required courses in these areas.

6. The students will have the Chair or Dean of the nursing school from which they are transferring write a letter to Central's Chair of Nursing stating they were a student in good standing.
7. All prospective transfer students will be interviewed by Central's Department Chair.

Special Expenses

1. Additional expenses for nursing majors include: uniforms, caps, shoes, name pin, watch with second hand, stethoscope, sphygmomanometer, health insurance, hepatitis B vaccination and other vaccinations and blood tests, and selected books.
2. Nursing students must have access to transportation upon admission to the nursing program and be certified in 2-person cardiopulmonary resuscitation for health care providers.
3. During the senior year certain standardized tests are required and paid for by the student. During the semester of anticipated graduation, the nursing school pin and graduation pictures are an additional expense.

Kansas City Experience

Theory and clinical learning occur in Kansas City during the last year. These experiences make possible exposure to nursing practice in both rural and urban settings.

Degree Program for Students Holding the R.N.

1. Credits from accredited nursing programs will be evaluated and allowed in accordance with current Central policy.
2. Students will meet the University Studies requirements as listed in the current University Catalog for nursing majors.
3. Evaluation of each R.N. student will be made within the Department of Nursing to determine placement in the program.
4. Students will take a minimum of 35 semester hours of upper level courses, with a minimum of 30 semester hours in nursing. Those required are Nur 3312, Nur 4010, Nur 4011, Nur 4050, Nur 4420, Nur 4421, Nur 4620, Nur 4621, and one nursing elective.
5. Students will apply for admission to the Department of Nursing and be subject to the regular program admission policy. In addition, the following criteria will be followed:
 - a. Applicants must have a current license to practice nursing in Missouri.
 - b. Credit for noncollege nursing courses may be applied to the nursing major upon successful performance on challenge examinations. A maximum of 30 credits can be awarded by challenge.
 - c. A maximum of 64 semester hours can be transferred from a community college.

NURSING Functional Major, B.S. Degree
(43 000133)

FUNCTIONAL MAJOR REQUIREMENTS				Sem. Hours			
Nur	2000	Nursing Concepts for Health Promotion & Maintenance	3	Nur	4420	Advanced Concepts of Community/Mental Health Nursing	5
Nur	3009	Concepts of Pharmacology	1	Nur	4421	Advanced Concepts of Community/Mental Health Nursing Pract.	4
Nur	3010	Pharmacology	3	Nur	1600	Intro. to Professional Nursing	1
Nur	4010	Research in Nursing	2	Nur	4620	Nursing Management	3
Nur	4011	Professional Issues & Ethics in Nursing	2	Nur	4621	Nursing Management Practicum	3
Nur	3110	Concepts of Nursing I	6	Biol	2401	Anatomy & Physiology I	4
Nur	3111	Concepts of Nursing I Practicum	2	Biol	2402	Anatomy & Physiology II	4
Nur	4210	Advanced Concepts of Nursing in Family Health	3	Biol	3611	Microbiology	4
Nur	4211	Advanced Concepts of Nursing in Family Health Practicum	2	HES	3340	Nutrition	3
Nur	3300	Concepts of Altered Health	5	Psy	4520	Statistics for the Behavioral Sciences	3
Nur	3312	Observ. & Assess. in Nursing	3	Electives from the following			2
Nur	3320	Concepts of Nursing II	4	Nur	2020	Health: Women's Perspective	2
Nur	3321	Concepts of Nursing II Practicum	4	Nur	4020	Grief & Loss	2
Nur	3322	Technology Applications in Nursing	2	Nur	4030	Human Sexuality	2
Nur	4310	Advanced Concepts of Adult Nursing	2	Nur	4040	Nursing Informatics	2
Nur	4311	Advanced Concepts of Adult Nursing Practicum	3	Nur	4405	Aging of Self & Others	2
MINOR NOT REQUIRED							
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Biol 2401 and Biol 2402 are allowed to fulfill 4 s.h. of Div. II A)							44
Chem	1103	Div. II A (required)	3	Soc	1800	Div. II B (required)	3
Psy	1100	Div. II B (required)	3	ICap	4111	Div. III B (required)	3
MINIMUM TOTAL							127

General Theory

Nur 2000 Nursing Concepts for Health Promotion and Maintenance (3) Overview of nursing concepts essential for promoting and maintaining health from birth to death. Physiological and psychosocial changes necessary for the promotion and maintenance of health will be explored and observed. Open to nonnursing majors. Prerequisites: Psy 1100, Biol 2402 and HES 3340.

Nur 2020 Health: The Women's Perspective (2) An introduction to the physiological, psychosocial, and economic factors that historically have impacted upon the health of women from selected cultural backgrounds with emphasis upon major health care issues currently affecting women. Open to nursing and nonnursing majors.

Nur 3009 Concepts of Pharmacology (1) Introduction to the concepts of calculation of pharmacological agents through a variety of routes. Prerequisite: Math 1111 or Math 1620.

Nur 3010 Pharmacology (3) Effect of chemicals used in the prevention, diagnosis and treatment of disease; with consideration of the interaction between these pharmaceuticals and the chemical components of the human body. Prerequisites: Nur 3300, Chem 1103, and achievement of 90% or higher on a pharmacotherapeutics calculation exam. Advanced Placement registered nurse students are exempt from the Nur 3300 prerequisite.

Nur 4000 Special Projects in Nursing (1-3) Investigation of contemporary problems and issues in nursing by selected individuals or groups. May be repeated for a maximum of 6 semester hours.

Nur 4010 Research in Nursing* (2) An overview of the research process designed to introduce the student to the intellectual skills needed to identify, conduct, report, and critique nursing research studies. Basic statistical processes are included. Prerequisites: Nur 3321, Nur 3322 and Psy 4520.

Nur 4011 Professional Issues and Ethics in Nursing* (2)

An overview of professional issues and ethics in nursing. Special emphasis on trends in health related legislation, credentialing, and economics and their impact on the nursing profession. Prerequisites: Nur 4010 and Nur 4311 or concurrently.

Nur 4020 Grief and Loss (2) A seminar designed to assist various pre-professionals to understand and deal with loss and death either in a professional capacity or on a personal basis. Open to nursing and nonnursing majors.

Nur 4030 Human Sexuality (2) Current theory regarding the biological, cultural, and behavioral parameters of human sexuality. Open to nursing and nonnursing majors.

Nur 4040 Nursing Informatics (2) Introduces the student to the synergistic use of nursing, information and computer sciences unique to nursing informatics. Explores impact on nursing practice roles and quality of patient care. Prerequisite: basic computer skills validated by a transcribed course or experience.

Nur 4050 Concepts and Theories for Role Transition* (6) Nursing concepts and theories for role transition and outcomes-based learning for the returning registered nurse. Prerequisite: Registered Nurse License and admission to the nursing program.

Maternal and Child Health

Nur 4210 Advanced Concepts of Nursing in Family Health* (3) Application of nursing process with emphasis on nursing science applicable to the family, including women's and children's health care issues. Prerequisites: Nur 3321 and Nur 3322; may be taken concurrently with Nur 4211, Nur 4310 and Nur 4311.

Nur 4211 Advanced Concepts of Nursing in Family Health Practicum* (3) Application of nursing process with emphasis on nursing science applicable to the family, including women's and children's health care issues.

Offered for Pass/Fail only. Prerequisite: Nur 4210 or concurrently.

*Not available for graduate credit.

Fundamentals of Nursing

Nur 3110 Concepts of Nursing I (6) An introduction to the basic concepts and principles of nursing with emphasis on nursing process and communication. Prerequisites: admission into the nursing program, Nur 3300 and Nur 3312 or concurrently; may be taken concurrently with Nur 3111.

Nur 3111 Concepts of Nursing I Practicum (2) Application of the basic concepts and principles of nursing with emphasis on nursing process and communication in health care settings. Offered Pass/Fail only. Prerequisite: Nur 3110 or concurrently and NUR 3312.

Medical-Surgical Nursing

Nur 3300 Concepts of Altered Health (5) An examination of common pathophysiological alterations in human structure and function across the lifespan. Prerequisites: Biol 2402 and Biol 3611.

Nur 3312 Observation and Assessment in Nursing (3) Professional nursing observation and physical assessment of the individual in the health care delivery system. Concurrent arranged lab is required. Prerequisite: Biol 2402 or consent of instructor.

Nur 3320 Concepts of Nursing II (4) Continuation of nursing process with emphasis on nursing science applicable to individuals experiencing chronic alterations in health. Prerequisites: Nur 3111; may be taken concurrently with Nur 3321 and Nur 3322.

Nur 3321 Concepts of Nursing II Practicum (4) Continued application of nursing process with emphasis on nursing science applicable to individuals experiencing chronic alterations in health. Offered Pass/Fail only. Prerequisite: Nur 3320 or concurrently; must be taken concurrently with Nur 3322.

Nur 3322 Technology Applications in Nursing (2) A performance based course focusing upon current clinical technology applications and their theoretical rationales in nursing. Prerequisite: Nur 3320 or concurrently; must be taken concurrently with Nur 3321.

Nur 4310 Advanced Concepts of Adult Nursing* (2) Continuation of nursing process with emphasis on nursing science applicable to acutely and critically ill adults. Prerequisites: Nur 3321 and Nur 3322; may be taken concurrently with Nur 4210, Nur 4211 and Nur 4311.

Nur 4311 Advanced Concepts of Adult Nursing Practicum* (3) Continued application of nursing process with emphasis on nursing science applicable to acutely and critically ill adults. Offered for Pass/Fail only. Prerequisites: Nur 4210, Nur 4211, Nur 4310 or concurrently.

Community and Mental Health Nursing

Nur 4405 Aging of Self and Others (2) Seminar concerning an individual's aging in our society. Focus is on how one perceives and adapts to the aging of self and others. Open to nursing and nonnursing majors.

Nur 4420 Advanced Concepts of Community/Mental Health Nursing* (5) Continuation of nursing process with emphasis on nursing science applicable to individuals, families, groups, and communities experiencing physical and psychosocial alterations or potential alterations in health. Prerequisites: Soc 1800, Nur 4211 and Nur 4311; may be taken concurrently with Nur 4421, Nur 4620 and Nur 4621; Nur 4050 for Advanced Placement registered nurse students only.

Nur 4421 Advanced Concepts of Community/Mental Health Nursing Practicum* (4) Continued application of nursing process with emphasis on nursing science applicable to individuals, families, groups, and communities experiencing physical and psychosocial alterations or potential alterations in health. Offered for Pass/Fail only. Prerequisites: Nur 4420 or concurrently; may be taken concurrently with Nur 4620 and Nur 4621.

Professional Theory

Nur 1600 Introduction to Professional Nursing (1) Introduces the learner to the outcomes assessment curriculum utilized by the Department of Nursing.

Nur 4620 Nursing Management* (3) Overview of the functions of management necessary for assuming management roles in health care settings. Prerequisites: Nur 4421 or concurrently; may be taken concurrently with Nur 4621; Nur 4050 for RN's only.

Nur 4621 Nursing Management Practicum* (3) Application of the management process to groups of clients and health care providers with integration of the nursing process. Offered Pass/Fail only. Prerequisite: Nur 4620 or concurrently.

*Not available for graduate credit.

Integrative Studies Capstone

ICap 4111 Socio-Economic Factors Impacting Health* (3) Examines selected socio-economic issues and their impact on health.

*Not available for graduate credit.

Power and Transportation

In the Department of Power and Transportation, the second digit in the course number stands for the following: 0--General and Professional, 1--Automotive, 2--Aviation Maintenance, 3--Aviation Flight, 4--Transportation.

Department of Power and Transportation Statement of Policy

A Pr&T prefix course with a grade lower than a "C" will not be allowed to fulfill a major or minor requirement in any program offered by the Department of Power and Transportation.

AUTOMOTIVE TECHNOLOGY, Associate in Science Degree

(22 000156)

						Sem. Hours	
FIRST YEAR REQUIREMENTS						31	
Pr&T	1010	Power Mechanics	3	Mf&C	1120	Welding	2
Pr&T	2110	Engine Theory & Maintenance	3	Mf&C	2500	Applied Computer Technology ..	2
Pr&T	2130	Automotive Electrical Systems	3	Engl	1020	Composition I	3
Pr&T	2132	Fuel Systems & Emission Controls ..	3	Hist	1350	History of the U.S. to 1877, 3 or	
Grap	1110	Fundamentals of Drafting	3	Hist	1351	History of the U.S. from 1877, 3	3
IA&T	1040	Technical Mathematics I	3	Mgt	1300	Introduction to Business	3
SECOND YEAR REQUIREMENTS						31	
Pr&T	3110	Automotive Engine Overhaul	3	ET	1026	DC Circuit Analysis	3
Pr&T	3120	Steering, Suspension & Brakes	3	Mf&C	2020	Mechanics of Materials	3
Pr&T	3130	Computerized Engine Diag.	3	Mf&C	2530	Machine Tool Technology	3
Pr&T	3140	Transmissions & Drivelines	3	IA&T	3060	Technical Report Writing	2
Pr&T	3150	Diesel Technology	3	Electives		5
MINIMUM TOTAL						62	

AVIATION Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)

(000157)

						Sem. Hours
MINOR REQUIREMENTS						20-21
Pr&T	1020	Aeronautics	2	Electives in aviation		15-16
Pr&T	3340	Aircraft Systems & Components	3			

AVIATION TECHNOLOGY, Associate in Science Degree

AVIONICS Option, Associate in Science Degree (22 000136)

						Sem. Hours	
FIRST YEAR REQUIREMENTS						30	
ET	1026	DC Circuit Analysis	3	Engl	1020	Composition I	3
ET	1027	AC Circuit Analysis	3	Math	1111	College Algebra	3
ET	2048	Active Electronic Devices	3	Math	1112	College Trigonometry	2
ET	2050	Digital Principles & Applications	3	Hist	1350	History of the U.S. to 1877, 3 or	
Grap	1110	Fundamentals of Drafting	3	Hist	1351	History of the U.S. from 1877, 3	3
IA&T	3060	Technical Report Writing	2	Elective		2
SECOND YEAR REQUIREMENTS						30	
Pr&T	2230	Aircraft Electrical Systems	3	ET	3014	Analog-Digital Circuitry	3
Pr&T	3260	Aircraft Radio Installation & Oper.	1	ET	3025	Computer Programming for	
Pr&T	3262	Aircraft Com./Navigation Sys.	4			Electronics Technology	3
Pr&T	3264	Aircraft Pulse & Related Systems	4	ET	3036	Microprocessor & Microcomputer	
ET	2058	Operational Amplifiers--Theory				Interfacing	3
		& Applications	3	ET	4038	Microcomputer Sys. Arch. & Des.	3
ET	2060	Microprocessors: Theory & Appl.	3				
Students should plan to enroll in ET 2060 during the summer session between the first and second year.							
MINIMUM TOTAL						60	

(other options listed on next page)

FLIGHT Option, Associate in Science Degree (22 000160)

						Sem. Hours	
FIRST YEAR REQUIREMENTS						33	
Pr&T	1010	Power Mechanics	3	Pr&T	3311	Commercial Flight B	1
Pr&T	1020	Aeronautics	2	ET	1010	Applied Electricity	3
Pr&T	1210	Aircraft Recip. Power Plants	3	Grap	1110	Fundamentals of Drafting	3
Pr&T	1310	FAA Private Requirements	3	Psy	1320	Psy. of Personal Adjustment	3
Pr&T	1320	Private Flight A	1	SpCm	1000	Public Speaking	3
Pr&T	1321	Private Flight B	1	Hist	1350	History of the U.S. to 1877, 3 or	
Pr&T	3305	FAA Commercial Requirements	3	Hist	1351	History of the U.S. from 1877, 3	3
Pr&T	3310	Commercial Flight A	1				
SECOND YEAR REQUIREMENTS						31	
Pr&T	4010	Aerodynamics	3	Pr&T	3325	FAA Instrument Requirements	3
Pr&T	3215	Gas Turbine Engines	3	Pr&T	3340	Aircraft Systems & Components	3
Pr&T	3312	Commercial Flight C	1	Pr&T	4320	Physiology & Flying	2
Pr&T	3313	Instrument Flight A	1	IA&T	1040	Technical Mathematics I	3
Pr&T	3314	Instrument Flight B	1	IA&T	3060	Technical Report Writing	2
Pr&T	3315	Commercial Flight D	1	Engl	1020	Composition I	3
Pr&T	3316	Commercial Flight E	1	EaSc	3114	Meteorology	3
Pr&T	3317	Commercial Flight F	1				
MINIMUM TOTAL						64	

MAINTENANCE Option, Associate in Science Degree (22 000161)

						Sem. Hours	
FIRST YEAR REQUIREMENTS						35	
*Pr&T	1200	General Mechanics	3	*ET	1010	Applied Electricity	3
*Pr&T	1210	Aircraft Recip. Power Plants	3	*Grap	1110	Fundamentals of Drafting	3
*Pr&T	1255	Basic Airframe Maintenance	3	*Mf&C	1120	Welding	2
*Pr&T	2230	Aircraft Electrical Systems	3	Engl	1020	Composition I	3
*Pr&T	3220	Aircraft Engine Testing	3	*Pr&T	4240	Aircraft Engine Instr. & Syst., 3 or	
*Pr&T	3230	Aircraft Ignition-Starting Systems	3	Pr&T	4010	Aerodynamics, 3	3
*Pr&T	3255	Metal Airframe Processing	3				
SECOND YEAR REQUIREMENTS						35-36	
*Pr&T	2220	Aircraft Carburetion & Lubrication Systems	4	*Pr&T	4230	Aircraft Instrument Systems	3
*Pr&T	3210	Aircraft Hydraulic Systems	3	*IA&T	1040	Technical Mathematics I	3
*Pr&T	3215	Gas Turbine Engines	3	IA&T	3060	Technical Report Writing	2
*Pr&T	3225	Propellers & Components	3	Pr&T	4220	Transport Aircraft Systems, 2 or	
*Pr&T	3240	Aircraft Air Conditioning & Pressurization Systems	2	*Pr&T	3250	Complex Aircraft Systems, 3	2-3
*Pr&T	3260	Aircraft Radio Installation & Oper.	1	*Pr&T	4080	Nondestructive Insp. & Test., 3 or	
*Pr&T	4210	Aircraft Insp., Weight & Balancing	3	Mf&C	2040	Materials Testing, 3	3
				Hist	1350	History of the U. S. to 1877, 3 or	
				Hist	1351	History of the U. S. from 1877, 3	3
MINIMUM TOTAL						70-71	

*Courses comprise the FAA-certified Airframe and Powerplant (A&P) curriculum. Students electing to enroll in the A&P curriculum who also wish to complete the associate degree in two years should plan to enroll in the University Studies courses during the summer sessions.

AVIATION TECHNOLOGY Functional Major, B.S. Degree

(43 000159)

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						72-76	
Pr&T	4010	Aerodynamics	3	IA&T	2040	Calculus for Technology, 3 or	
Pr&T	4040	Aviation Management	3	Math	1131	Calculus for Business & Econ., 3	3
Pr&T	4050	Aviation Safety	3	Departmentally approved electives from one of the six areas listed below. A listing of courses is available from the Chair of the Department			
Pr&T	4090	Aviation Law	3				
Pr&T	4420	Air Transportation	3				
IA&T	3060	Technical Report Writing	2	Area 1 Professional Pilot			
Math	1112	College Trigonometry	2	*Area 2 Maintenance Management			
Pr&T	1020	Aeronautics, 2 or		Area 3 Aviation Management			
Pr&T	1310	FAA Private Requirements, 3	2-3	Area 4 Avionics Management			
IndM	4210	Industrial Management, 3 or		Area 5 Agricultural Aviation			
Mgt	3310	Principles of Management, 3	3	Area 6 Systems Design Technology			
MINOR NOT REQUIRED							
(continued on next page)							

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UNIVERSITY STUDIES REQUIREMENTS				48
Math	1111	Div. I C (required)	3	Econ 1010 Div. II B (required) 3
Phys	1104	Div. II A (required)	4	ICap 4113 Div. III B (required) 3
FREE ELECTIVES				0-4

*Students choosing Area 2 will not take FREE ELECTIVES of 0-4, but will take 16 additional semester hours for Airframe and Powerplant certification. This brings the MINIMUM TOTAL to 138-139 hours.

MINIMUM TOTAL	124
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NOTE: Students interested in courses related to Airway Science should contact the Chairperson of the Department of Power and Transportation for additional details.

POWER AND TRANSPORTATION Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)
(000162)

MINOR REQUIREMENTS	Sem. Hours	21
Pr&T 1010 Power Mechanics	3	
Pr&T 4030 Power Technology	3	
Elect one of the following groups	15	
General		
Pr&T 1020 Aeronautics	2	
Pr&T 4020 Automotive Systems	3	
Pr&T 4410 Intermodal Surface Trans.	3	
Electives in power & transportation	7	
Automotive		
Pr&T 2110 Eng. Theory & Maintenance . . .	3	
Pr&T 2130 Auto. Electrical Systems	3	
Pr&T 2132 Fuel Sys. & Emission Control . . .	3	
Pr&T 3120 Steering, Susp. & Brakes	3	
Pr&T 3130 Computerized Engine Diag.	3	

AUTOMOTIVE/POWER TECHNOLOGY Functional Major, B.S. Degree

(43 000838)

FUNCTIONAL MAJOR REQUIREMENTS	Sem. Hours	65
Pr&T 1010 Power Mechanics	3	Mf&C 2530 Machine Tool Technology 3
Pr&T 3020 Digital Control of Power Systems	3	IA&T 3060 Technical Report Writing 2
Pr&T 4032 Hydraulics & Pneumatics	3	IndM 4210 Industrial Management, 3 or
Pr&T 2110 Engine Theory & Maintenance	3	Mgt 3310 Prin. of Management, 3 3
Pr&T 2130 Auto. Electrical Systems	3	
Pr&T 2132 Fuel Systems & Emission Controls . . .	3	
Pr&T 3150 Diesel Technology	3	
Pr&T 4410 Intermodal Surface Transportation . . .	3	
ET 1026 DC Circuit Analysis	3	
Grap 1110 Fundamentals of Drafting	3	

Departmentally approved electives from one of the three areas listed below. A listing of courses is available from the Chair of the Department 27

- Area 1 Automotive Technology
- Area 2 Engineering Technology
- Area 3 Management Technology

MINOR NOT REQUIRED

UNIVERSITY STUDIES REQUIREMENTS	48	
Math 1111 Div. I C (required)	3	ICap 4112 Div. III B (required) 3
Phys 1104 Div. II A (required)	4	
FREE ELECTIVES	11	
MINIMUM TOTAL	124	

General and Professional

Pr&T 1010 Power Mechanics (3) Power sources and methods of transferring power. Theory of internal combustion engines. Laboratory experiences with emphasis on small gasoline engines. Each student must disassemble and overhaul at least one engine.

Pr&T 1020 Aeronautics (2) An overview of aviation and aerospace related industries. Consideration is given to the development of aviation and resulting social and economic factors, theory of flight, problems of weather and navigation, occupational opportunities, and government interest, promotion and regulation.

Pr&T 3010 Transportation Systems (3) Characteristics and significance of transportation technology as applied to people, their society and economic systems, analyzed through a review of water, highway, rail, air and pipeline transport.

Pr&T 3020 Digital Control of Power Systems (3) The impact of digital technology on aircraft and automotive power systems. Emphasis will be placed on the methods of controlling these systems. Prerequisite: ET 1010 or ET 1026.

Pr&T 4000 Special Projects in Power and Transportation (1-3) Investigation of contemporary problems and issues in power and transportation by selected individuals or groups. May be repeated for a maximum of 6 semester hours.

Pr&T 4010 Aerodynamics* (3) Theories of flight and factors affecting aircraft in flight, including drag, velocity, lift, thrust and wing loading. Comparative analysis of design features in modern aircraft.

*Not available for graduate credit.

Pr&T 4020 Automotive Systems (3) Serves driver and safety education needs concerning theory and operation of

the ignition, cooling, fuel, electrical, steering and braking systems of the automobile.

Pr&T 4025 Motorcycle Systems Maintenance (3) Theory, maintenance and repair of motorcycles and systems. Special emphasis on diagnostics, repair, and adjustment procedures. Students will need to provide a motorcycle.

Pr&T 4030 Power Technology (3) Transmission of power by mechanical, hydraulic and pneumatic means. Power sources considered include internal combustion, gasoline and diesel engines, gas and steam turbines, and atomic solar energy. Prerequisite: background knowledge of internal combustion engine or Pr&T 1010.

Pr&T 4032 Hydraulics and Pneumatics (3) Fluid power principles with practical application of hydraulics, pneumatics, and fluidics. Prerequisite: Math 1111.

Pr&T 4034 Mechanical Power Systems (3) Analysis of mechanical devices, their theory, applications, and design.

Pr&T 4036 Pneumatic and Fluidic Control Systems (3) Design, construction, and operation of complex pneumatic control systems. Prerequisites: Pr&T 3020 or concurrently and Pr&T 4032.

Pr&T 4038 Advanced Hydraulics (3) Hydraulic system analysis and troubleshooting along with servo and electronic control theory and application. Prerequisites: Pr&T 3020 or concurrently and Pr&T 4032.

Pr&T 4040 Aviation Management (3) Aviation/airport management and administrative functions, issues, and problems involving both large and small airports, heliports, sea plane bases and related fixed base operations.

Pr&T 4050 Aviation Safety (3) To develop a knowledge of contributing factors affecting aviation safety and fostering control methods and techniques to reduce accidents related to aircraft and the aviation field.

Pr&T 4060 Aerospace Education (2-3) Basic aerospace information dealing with the social, scientific, and technological importance of aviation and space with special applications for teachers who desire to utilize such information in the elementary and secondary school.

Pr&T 4070 Aviation History (3) Major events, people, and changing technologies in the development of the present day air transportation system.

Pr&T 4080 Nondestructive Inspection and Testing (3) Magnetic particle, eddy current, dye penetrant, ultrasonic vibration analysis, acoustics, radiographic, infrared, and liquid crystal methods of nondestructive inspection. Prerequisites: Phys 1101 or Pr&T 1200; and ET 1010; or either/both concurrently.

Pr&T 4090 Aviation Law (3) Legal foundations and the federal and state regulatory functions which influence aviation and those who work in the industry.

Pr&T 5010 Special Problems in Power and Transportation (2-6) Meets individual student needs for additional research and/or laboratory experiences in the development of technical knowledge and skills in the areas of power and transportation. May be repeated for a maximum of 6 semester hours.

Pr&T 5020 Aircraft Accident Investigation (3) Principles and procedures for investigating aircraft accidents to determine probable causes and to make recommendations which will prevent the reoccurrence of accidents and factors which led to them.

Pr&T 5030 Airport Planning and Design (3) Criteria involved in the planning, design, development, and improvement of airports. Includes planning for normal operating procedures of modern airport facilities.

Automotive

Each student enrolled in an automotive course is expected to pay a shop fee to cover the cost of consumable supplies which cannot be conveniently charged to a particular project. In addition, each student will provide appropriate vehicle(s) with necessary materials and replacement parts for assigned laboratory experiences.

Pr&T 2110 Engine Theory and Maintenance (3) Examines through practical application the theories of operation, construction, maintenance, disassembly, and assembly of motor vehicle engines and their supporting systems. Emphasis on operating principles and maintenance procedures. Prerequisite: Pr&T 1010 or background experience.

Pr&T 2130 Automotive Electrical Systems (3) Procedures for testing, adjusting, repairing, and servicing of electrical components in automotive charging, starting, ignition, and accessory systems. Prerequisite: Pr&T 1010.

Pr&T 2132 Fuel Systems and Emission Controls (3) Fuel and related emission control systems. Basic carburetion, fuel injection, and emission control devices. Prerequisite: Pr&T 2130.

Pr&T 3110 Automotive Engine Overhaul (3) Theory and practice of disassembling, cleaning, inspecting, and repairing automotive engines. Removal and overhaul of engine according to accepted industry practice is a required activity for each student in the course. Prerequisite: Pr&T 2110.

Pr&T 3120 Steering, Suspension and Brakes (3) Classroom and laboratory activity in the diagnosis, service and repair of steering, suspension and braking systems. Prerequisite: Pr&T 1010 or background experience.

Pr&T 3130 Computerized Engine Diagnostics (3) Utilization of computerized diagnostic methods and equipment in testing and servicing computerized engines in conjunction with automotive tune-up. Prerequisite: Pr&T 2132.

Pr&T 3140 Transmissions and Drivelines (3) In-depth classroom and laboratory experiences in the diagnosis, service and repair of transmissions and drivelines. Prerequisite: Pr&T 1010 or background experience.

Pr&T 3150 Diesel Technology (3) Survey of diesel engine theory, diagnosis, service and maintenance with emphasis in diesel fuel systems, injection pump designs, construction, operation, and maintenance. Prerequisite: Pr&T 2110.

Aviation Maintenance

Pr&T 1200 General Mechanics (3) Power mechanics, measurement and transmission. Theory of internal combustion engines. Principles of simple machines, sound, fluid and heat dynamics. Fabrication of fluid lines and fittings. Disassembly, repair and reassembly of a small reciprocating engine.

Pr&T 1210 Aircraft Reciprocating Power Plants (3) Aircraft reciprocating power plants, construction, operation, overhaul, and engine logs. Laboratory experience in disassembling, cleaning, inspection, and assembling.

Pr&T 1215 General A&P Applications (3) General A&P related course and laboratory material necessary to transition from military to civilian applications. Prerequisite: Release from the Federal Aviation Administration (FAA sign-

off) for General, Airframe, and Powerplant or permission of instructor.

Pr&T 1216 Airframe Applications (3) Airframe related course and laboratory material necessary to transition from military to civilian applications. Prerequisite: Release from the Federal Aviation Administration (FAA sign-off) for General, Airframe, and Powerplant or permission of instructor.

Pr&T 1217 Powerplant Applications (3) Powerplant related course and laboratory material necessary to transition from military to civilian applications. Prerequisite: Release from the Federal Aviation Administration (FAA sign-off) for General, Airframe, and Powerplant or permission of instructor.

Pr&T 1218 Federal Aviation Regulations & Records Keeping Applications (3) Federal aviation regulations and records keeping related course and laboratory material necessary to transition from military to civilian applications. Prerequisite: Release from the Federal Aviation Administration (FAA sign-off) for General, Airframe, and Powerplant or permission of instructor.

Pr&T 1255 Basic Airframe Maintenance (3) Selecting airframe materials, repairing, rigging, and caring for fabric covered airframes. Prerequisite: Mf&C 1120.

Pr&T 2220 Aircraft Carburetion and Lubrication Systems (4) Operation of fuel, induction and lubrication systems. Type, composition and characteristics of various fuels and oils. Inspection, maintenance, and overhaul of fuel, induction and lubrication systems' components.

Pr&T 2230 Aircraft Electrical Systems (3) The theory, operation, and repair of aircraft electrical systems and components. Prerequisite: ET 1010 or ET 1027.

Pr&T 3210 Aircraft Hydraulic Systems (3) Theory and practice in the operation, maintenance, and overhaul of hydraulic systems and components.

Pr&T 3215 Gas Turbine Engines (3) Application, design, construction, operation, and overhaul of gas turbine power plants. Laboratory experiences in disassembling, inspection and assembling.

Pr&T 3220 Aircraft Engine Testing (3) Theory and practice in installing, trouble shooting, testing, and repairing of aircraft engines.

Pr&T 3225 Propellers and Components (3) Propellers, governors, and de-icing systems. Inspection, servicing, and overhaul of propellers.

Pr&T 3230 Aircraft Ignition-Starting Systems (3) Theory and practice in the operation, maintenance, and overhaul of ignition and starting systems and their components.

Pr&T 3240 Aircraft Air Conditioning and Pressurization Systems (2) Theory and practice with pneumatic, anti-icing, cabin pressurization, and air conditioning systems.

Pr&T 3250 Complex Aircraft Systems (3) Theory, operation and repair of complex aircraft fuel systems, position and warning systems, ice and rain protection systems. Prerequisites: Pr&T 2230 and Pr&T 3210.

Pr&T 3255 Metal Airframe Processing (3) Theory and practice in the construction and repair of metal airframes.

Pr&T 3260 Aircraft Radio Installation and Operation (1) Theory and practice with communication and navigation radio equipment. Prerequisite: Pr&T 2230.

Pr&T 3262 Aircraft Communication/Navigation Systems (4) Theory, operation, maintenance and repair of aircraft communication and navigation systems. Course includes lectures, demonstrations, and mandatory laboratory activities. Prerequisites: ET 2060, ET 2058, and ET 3014.

Pr&T 3264 Aircraft Pulse and Related Systems (4) Theory, operation, maintenance and repair of aircraft pulse and related systems. Course includes lectures, demonstrations, and mandatory laboratory activities. Prerequisites: ET 2060, ET 2058, and ET 3014.

Pr&T 4210 Aircraft Inspection, Weight and Balancing* (3) Theory and practice of repairing, maintaining, ground handling, jacking, weighing aircraft, and performing inspection. Prerequisite: 10 semester hours of aircraft maintenance or flight courses.

Pr&T 4220 Transport Aircraft Systems* (2) Comparison studies of systems on major types of transport category aircraft and the in-flight management of those systems. Field trips to major airlines are included in the instructional sequence of the course. Prerequisite: 10 semester hours of aircraft maintenance courses.

Pr&T 4230 Aircraft Instrument Systems* (3) Theory and practice of installing, operating, marking, adjusting, and interpreting aircraft instruments.

Pr&T 4240 Aircraft Engine Instruments and Systems* (3) Theory and practice in the operation and repair of aircraft engine instruments, fire detection and extinguishing systems, engine cooling systems and exhaust systems.

*Not available for graduate credit.

Pr&T 5200 Aviation Hazard Control and Analysis (3) Provides background necessary to identify, analyze, and control hazards involved with the air transportation system.

Pr&T 5210 Aviation Safety Program Management (3) Provides the student with prevention information and activities necessary to enable the graduate to perform effectively as an aviation safety program manager.

Aviation Flight

Aircraft user charges are based on flying time and vary with the type of aircraft. Advance deposits of \$500 or more for each course are required. Contact the Department of Power and Transportation or Chief Flight Instructor for current hourly flight fee rates. Additional Federal financial aid may be received by students who incur documented costs for aviation flight training.

Pr&T 1310 FAA Private Requirements (3) Basic ground school in support of flight training to prepare for the FAA examination for the Private Pilot Certificate. A fee of \$100 is charged for pilot supplies and ground school materials.

Pr&T 1320 Private Flight A (1) Increase the student's knowledge and aeronautical experience to operate an airplane in solo flight and in night conditions. Third class medical required. Student should plan to fly approximately 20 hours.

Pr&T 1321 Private Flight B (1) Increase the student's knowledge and aeronautical experience to operate an airplane on dual and solo cross-country flights. Third class medical required. Student should plan to fly approximately 20 hours. Prerequisite: Pr&T 1320.

Pr&T 2310 Propulsion Systems (3) Operation and theory of aircraft propellers and both reciprocating and gas turbine engines. Laboratory activity includes testing and troubleshooting major functional components and systems. Prerequisite: Pr&T 1010.

Pr&T 3305 FAA Commercial Requirements (3) Commercial ground school subjects in support of flight training to prepare for FAA examination for Commercial

Pilot Certificate. Prerequisite: Pr&T 1310 or Private Pilot Certificate.

Pr&T 3310 Commercial Flight A (1) Increase the student's knowledge and aeronautical experience in dual and solo cross country flying in both day and night conditions. Student should plan to fly approximately 20 hours. Second class medical required. Prerequisite: Pr&T 1321 or Private Pilot Certificate.

Pr&T 3311 Commercial Flight B (1) Increase the student's knowledge and aeronautical experience in solo and cross country flying. Student should plan to fly approximately 20 hours. Second class medical required. Prerequisite: Pr&T 3310.

Pr&T 3312 Commercial Flight C (1) Increase the student's knowledge and aeronautical experience in solo cross country flying. Student should plan to fly approximately 20 hours. Second class medical required. Prerequisite: Pr&T 3311.

Pr&T 3313 Instrument Flight A (1) Increase the student's knowledge and aeronautical experience in maneuvering the aircraft solely by reference to the flight instruments. Includes the use of full and partial panel reference. The student should plan to fly approximately 20 hours. Prerequisite: Pr&T 3312 or instructor's written consent.

Pr&T 3314 Instrument Flight B (1) Increase the student's knowledge and aeronautical experience in IFR cross-country and emergency procedures. Student should plan to fly approximately 20 hours. Prerequisite: Pr&T 3313 or instructor's written consent.

Pr&T 3315 Commercial Flight D (1) Increase the student's knowledge and the skill necessary to safely fly a complex aircraft. Student should plan to fly approximately 20 hours. Second class medical required. Prerequisite: Pr&T 3314.

Pr&T 3316 Commercial Flight E (1) Increase the student's knowledge and provide the skill necessary to safely fly a complex aircraft. Additionally, the commercial flight maneuvers are introduced. Student should plan to fly approximately 20 hours. Second class medical required. Prerequisite: Pr&T 3315.

Pr&T 3317 Commercial Flight F (1) Increase the student's knowledge and provide the aeronautical skill necessary for the issuance of the Commercial Pilot Certificate. Student should plan to fly approximately 20 hours. Second class medical required. Prerequisite: Pr&T 3316.

Pr&T 3325 FAA Instrument Requirements (3) Instrument ground school subjects in support of flight training to prepare for FAA examination for instrument rating. Prerequisite: Private Pilot Certificate with 80 flight hours.

Pr&T 3330 Multi-Engine Certification (1) Classroom and laboratory instruction to provide aeronautical knowledge and skills for multi-engine pilot certification. Prerequisite: FAA Airplane Certificate with Instrument Airplane Rating.

Pr&T 3340 Aircraft Systems and Components (3) Design, construction and operation of aircraft mechanical, electrical hydraulic, and pneumatic systems with emphasis on trouble analysis, servicing methods, and safety precautions.

Pr&T 3360 Flight Instructor--Airplane (3) Combines classroom and flight laboratory experience to prepare for FAA written examination and flight test for flight instructor rating. Student should plan to fly 30 hours. Prerequisite: Commercial Pilot Certificate with instrument rating.

Pr&T 3362 Flight Instructor - Instrument (1) Instruction, flight training and practice teaching to obtain the aeronautical skills and knowledge necessary for FAA Certified Flight Instructor, Instruments. Prerequisite: FAA Certified Flight Instructor with Airplane Category.

Pr&T 3364 Flight Instructor - Multi-Engine (1) Instruction, flight training and practice teaching to obtain the aeronautical skills and knowledge necessary for FAA Certified Flight Instructor, Multi-Engine. Prerequisites: FAA Multi-Engine Rating and Flight Instructor Certificate.

Pr&T 3390 Turboprop Familiarization (2) Systems operation and flying procedures for multi-engine turboprop aircraft with particular emphasis on current complex aircraft. Class will involve both ground school and flying a minimum of five hours. Prerequisite: multi-engine Commercial Pilot Certificate.

Pr&T 4310 Air Traffic Control (2) Purposes, activities and operational procedures of air traffic control centers, towers and flight service stations. Study will include both standard and emergency services available from ATC/FSS systems.

Pr&T 4320 Physiology and Flying (2) Physiological factors related to flying, including those related to changes in pressure, supply of oxygen, spatial disorientation, and both positive and negative effects of chemicals in the body.

Pr&T 4330 Sport Aviation (2) Sailplanes, hot air balloons, and related sport aircraft. Students will have flying experience in either sailplanes or hot air balloons. Flight fees are required to cover expenses of flight instruction. Principles of organizing fly-ins, air shows, and contests.

Pr&T 4340 Flight Engineer (2) Flight engineer regulations and duties with respect to the principles and operations of turbojet aircraft systems. Preparation for FAA written examination. Prerequisites: Pr&T 4220 and Commercial Pilot Certificate.

Pr&T 4370 Advanced Flight Crew Management (3) Advanced flight crew operations with emphasis on the transition of the professionally qualified pilot into a highly skilled member of a flight management team with knowledge of cockpit resource management, high speed and high altitude flight techniques, turbine-powered operations and advanced avionics systems. Prerequisite: Commercial Pilot Certificate.

Transportation

Pr&T 4410 Intermodal Surface Transportation (3) Surface transportation (motor vehicle, pipeline, rail, and water) in the United States as seen from an integrated, intermodal viewpoint. Major aspects include systems analysis, organization, operations, financing, research and development, training, and regulation. Economic, social, and political factors are considered.

Pr&T 4420 Air Transportation (3) Organization and administration of the air transportation industry with attention to airline regulations, rate and route structures, air cargo and freight, scheduled and nonscheduled operations, and contract air transport.

Integrative Studies Capstone

ICap 4112 Automotive Systems for Contemporary Society* (3) Integration of communication, technology, sociology, economics, and ecology with automotive engineering, management and service, emphasizing their reciprocal effects on each other. Prerequisite: senior standing in automotive technology.

ICap 4113 Air Operations Management* (3) Challenges the student to perform as an effective member of an air operations management team using critical thinking, decision making and ethics. Prerequisite: senior standing in aviation technology.

*Not available for graduate credit.

Safety Science and Technology

In the Department of Safety Science and Technology, the second digit in the course number stands for the following:
 0--General Safety, 1--Industrial Hygiene, 2--Transportation Safety, 3--Systems Safety, 4--Industrial Safety, 5--Loss Control,
 7--Security, 8--Fire Science, 9--Individual Study and Research.

SAFETY MANAGEMENT Functional Major, B.S. Degree

(43 000204)

Admission Statement: Students seeking admission to this program must have a minimum 2.20 cumulative grade-point average and have completed a semester each of college algebra (or higher math), chemistry with lab, and physics with lab, and achieve a grade-point of 2.00 averaged over the three courses. These courses meet basic program assessment outcomes in science and math.

Application should be made when the student has completed more than 30 semester hours and has at least 30 semester hours remaining. An assessment examination must be completed during the last semester of course work. Students may apply to the program by obtaining a degree audit from the Office of Academic Advisement and submitting it to the department for approval.

				Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS				73	
SS&T 3000	Prin. of Accident Causation & Prev.	3	SS&T 4510	Loss Control	3
SS&T 3070	Psychology & Philosophy of Safety	3	SS&T 4520	Safety & Risk Analysis	3
SS&T 4000	Ergonomics in Safety & Health	3	SS&T 1700	Introduction to Security	3
SS&T 4010	Accident Investigation	3	SS&T 1800	Introduction to Fire Science	3
SS&T 4020	Legal Aspects of Safety & Health	3	IA&T 3060	Technical Report Writing	2
SS&T 4035	Safety Program Development	3	Chem 1104	Intro. to the Sciences: Chemistry	4
SS&T 3120	Introduction to Industrial Hygiene	3	Departmentally approved electives		
SS&T 4140	Safety & Health Laboratory	2	from one of the following areas		15
SS&T 4215	Transportation & Storage of Hazardous Materials	3	Area 1 Environmental Protection		
SS&T 4360	Introduction to Systems Safety	3	Area 2 General Safety		
SS&T 3430	Industrial Hazard Control	3	Area 3 Industrial Safety		
SS&T 4425	Safety & Health Legislation & Standards	3	Area 4 Loss Control		
SS&T 4430	Workers Compensation Legislation	2	Area 5 Fire Science		
SS&T 4435	Environmental Compliance	3	Area 6 Security		
			List of courses available from Chair, Safety Science and Technology.		
MINOR NOT REQUIRED					
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Chem 1104 fulfills 3 s.h. of Div. II A)					45
Math 1111	Div. I C (required)	3	Psy 1100	Div. II B (required)	3
Phys 1104	Div. II A (required)	4	ICap 4115	Div. III B (required)	3
FREE ELECTIVES					6
MINIMUM TOTAL					124

SAFETY Minor for a Bachelors Degree

(Central does not confer teacher certification for this minor)
 (000193)

				Sem. Hours	
MINOR REQUIREMENTS				23	
SS&T 3000	Prin. of Accident Causation & Prev.	3	SS&T 4425	Safety & Health Legislation & Standards	3
SS&T 3015	Emergency Preparedness	3	SS&T 4430	Workers Compensation Legislation	2
SS&T 4010	Accident Investigation	3	SS&T 4940	Introductory Quantitative Methods	3
SS&T 4035	Safety Program Development	3			
SS&T 3120	Introduction to Industrial Hygiene	3			

FIRE SCIENCE Minor for a Bachelor's Degree(Central does not confer teacher certification for this minor)
(000177)

						Sem. Hours	
MINOR REQUIREMENTS						24	
SS&T	4020	Legal Aspects of Safety & Health	3	SS&T	4830	Fire Investigation	3
SS&T	1800	Introduction to Fire Science	3	SS&T	4850	Industrial Fire Protection	3
SS&T	2800	Fire Prevention & Protection	3	Mf&C	3330	Bldg. Codes & Code Adm.	3
SS&T	4800	Water & Sprinkler Systems Analysis	3				
SS&T	4810	Fire Extinguishing & Alarm Sys.	3				

SECURITY Minor for a Bachelor's Degree(Central does not confer teacher certification for this minor)
(000185)

						Sem. Hours	
MINOR REQUIREMENTS						21	
SS&T	1700	Introduction to Security	3	Acct	2101	Principles of Financial Acct.	3
SS&T	3700	Security Org. & Management	3	Mgt	1300	Introduction to Business	3
SS&T	4710	Security Technology	3	BLaw	2720	Legal Environment of Business	3
SS&T	4830	Fire Investigation	3				

DRIVER EDUCATION Minor, B.S. in Ed. Degree(Certification to teach driver education in grades 9-12 with secondary major. This minor is not available to meet area of concentration requirements for the Elementary Education Functional Major or the Middle School-Junior High School Major.)
(000213)

						Sem. Hours	
MINOR REQUIREMENTS						21	
DrEd	2010	Introduction to Safety Education	3	SS&T	3070	Psychology & Philosophy of Safety	3
DrEd	2020	Driver Education I	3	SS&T	4250	Traffic Engineering	3
DrEd	2030	Driver Education II	3	HEd	1350	Std. First Aid & Personal Safety	3
DrEd	4010	Driving Simulators & Multiple-Car Driving Ranges	3				

OCCUPATIONAL SAFETY AND HEALTH Functional Major, B.S. Degree

(43 000226)

Admission Statement: Students seeking admission to this program must have a minimum 2.20 cumulative grade-point average and have completed a course in college algebra (or higher math), Chem 2650, and Phys 1101, with a minimum 2.00 grade-point average for the three courses combined. These three courses meet basic program assessment outcomes in science and math. Application

should be made when the student has completed more than 30 semester hours and has at least 30 semester hours of course work remaining. An assessment examination must be completed during the last semester of course work. Students may apply upon completion of the above requirements to the program by obtaining a degree audit from the Office of Academic Advisement and submitting it to the department for approval.

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						71	
SS&T	3000	Prin. of Accident Causation & Prev.	3	SS&T	3430	Industrial Hazard Control	3
SS&T	4000	Ergonomics in Safety & Health	3	SS&T	4425	Safety & Health Legislation & Standards	3
SS&T	4010	Accident Investigation	3	SS&T	4430	Workers Compensation Legislation	2
SS&T	4020	Legal Aspects of Safety & Health	3	SS&T	4435	Environmental Compliance	3
SS&T	4035	Safety Program Development	3	SS&T	4850	Industrial Fire Protection	3
SS&T	3120	Introduction to Industrial Hygiene	3	SS&T	4940	Introductory Quantitative Methods	3
SS&T	4140	Safety & Health Laboratory	2	Biol	2401	Anatomy & Physiology I	4
SS&T	4150	Noise Measurements	2	Chem	2650	Elem. Organic & Biochemistry	5
SS&T	4160	Ind. Vent. for Envir. Safety & Hlth.	3	Phys	1101	College Physics I	4
SS&T	4170	Industrial Toxicology	3	Phys	1102	College Physics II	4
SS&T	4180	Principles of Epidemiology	3	Math	1131	Calculus for Business & Econ.	3
SS&T	4360	Introduction to Systems Safety	3				
MINOR NOT REQUIRED							
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Phys 1101 and Phys 1102 are allowed to fulfill 3 s.h. of Div. II A)						45	
Math	1111	Div. I C (required)	3	Psy	1100	Div. II B (required)	3
Chem	1104	Div. II A (required)	4	ICap	4115	Div. III B (required)	3
FREE ELECTIVES						8	
MINIMUM TOTAL						124	

General Safety

SS&T 2010 Safety: A Personal and Societal Focus (3) A critical examination of the role of safety in today's world. Enhances the student's critical thinking processes so the learner can analyze variables influencing risks associated with life's activities.

SS&T 3000 Principles of Accident Causation and Prevention (3) Traces the development of the safety movement, provides a background useful in handling problems and procedures of typical school, industrial, transportation, civil defense, and emergency safety programs.

SS&T 3010 Product Safety (3) An examination of product safety from an industrial and consumer perspective. Legislation, product liability, product safety, and consumer behavior will be reviewed.

SS&T 3015 Emergency Preparedness (3) Legal responsibilities of environmental and human protection. An examination of staff functions and responsibilities during major emergencies, resulting from human errors and natural disasters, as they influence human and environmental loss potentials.

SS&T 3040 Energy Resource Management (3) Concepts of energy, the energy crisis and consequences, alternative energy technologies and issues facing the individual in society.

SS&T 3070 Psychology and Philosophy of Safety (3) Problems of behavior, causes of accidents, and the application of principles of psychology, philosophy, and ethics in the development and management of safe behavior on and off the job.

SS&T 4000 Ergonomics in Safety and Health (3) An introduction into the role and application of ergonomics in a comprehensive safety program. Prerequisite: SS&T 3000 or equivalent.

SS&T 4010 Accident Investigation (3) Fundamentals and techniques of investigating accidents. Prerequisite: SS&T 3000 or SS&T 3120.

SS&T 4020 Legal Aspects of Safety and Health (3) An investigation of the legal problems confronting the safety and health specialist. Prerequisite: SS&T 3000.

SS&T 4035 Safety Program Development (3) The development of materials, techniques, and procedures in the implementation of safety programs and their application in a variety of occupational settings. Prerequisite: 21 semester hours of SS&T courses.

SS&T 4085 Problems With Alcohol and Other Drugs (3) An investigation of the effects of alcohol and other drugs as a contributing variable to the cause of accidents. Methods of identification of use and abuses are examined.

SS&T 5010 Organization, Administration, and Supervision of Safety Programs (3) Management styles and their effects upon safety and health programs.

SS&T 5015 Emergency Planning and Operations (3) The role and responsibilities of private and public officials in the development of emergency plans to reduce the human and material losses in time of an emergency.

Industrial Hygiene

SS&T 3120 Introduction to Industrial Hygiene (3) The recognition, evaluation and control of workplace health hazards.

SS&T 4140 Safety and Health Laboratory (2) A lab course using instrumentation commonly used in the

evaluation of the workroom environment and equipment for safety. Prerequisites: SS&T 3120 and SS&T 3430, or equivalent.

SS&T 4150 Noise Measurements (2) Physics of sound, measurement and control of noise. Laboratory required. Prerequisite: one year of college physics or equivalent.

SS&T 4160 Industrial Ventilation for Environmental Safety and Health (3) Industrial ventilation systems designed to control health and safety hazards in the work environment with emphasis given to the design of local exhaust systems. Prerequisite: SS&T 3120 or equivalent.

SS&T 4170 Industrial Toxicology (3) Chemical composition of cells, chemical processes of life, and the effects thereon of selected corrosive and toxic substances. Prerequisite: Chem 2650 or equivalent.

SS&T 4180 Principles of Epidemiology (3) Introduction to the nature and scope of epidemiology. Principles and application of epidemiological methods in the investigation and control of safety and health problems stemming from environmental hazards.

SS&T 5120 Principles of Industrial Hygiene (3) The role and responsibilities of an industrial hygienist; the application of industrial hygiene methods to the recognition, evaluation and control of health hazards arising in or from the workplace.

SS&T 5130 Industrial Environmental Monitoring (3) Fundamentals of sample collection, precision and reliability of measurements, and methods for detecting and measuring trace contaminants in air and water. Prerequisite: Chem 2650 or equivalent.

Transportation Safety

SS&T 4215 Transportation and Storage of Hazardous Materials (3) A study of the state-of-the-art of safe methods for the transportation and storage of hazardous materials. Prerequisite: SS&T 3000 or equivalent.

SS&T 4250 Traffic Engineering (3) Planning, design and operation of effective and efficient traffic movement systems. Various types of traffic studies, traffic control techniques and devices, traffic flow patterns, street lighting and street and parking are presented and discussed. Students participate in field studies.

SS&T 4260 Management of Fleet Safety Programs (3) The role and responsibilities transportation officials have in the administration and operation of a motor fleet safety program; the study of U.S. Department of Transportation Regulations.

SS&T 5220 Management of Safe Transportation Systems (3) Safety and management considerations specific to the five modes of transportation: water, rail, motor vehicle, air, and pipe. Development and importance of each mode; intermodalism.

SS&T 5230 Traffic Safety Program Management (3) The process of preparing a traffic safety program plan, arranging for its implementation and monitoring the program administration of identified countermeasures.

Systems Safety

SS&T 4360 Introduction to System Safety (3) Techniques and concepts of hazard control within the constraints of operational effectiveness, time, and cost attained through the specific application of management and scientific principles throughout all phases of a system life cycle. Prerequisite: SS&T 3000 or equivalent.

Industrial Safety

SS&T 3430 Industrial Hazard Control (3) The techniques for the control of mechanical, electrical and chemical hazards. The Occupational Safety and Health Standards which interface with these areas will also be included. Prerequisite: SS&T 3000 or SS&T 3120.

SS&T 4425 Safety and Health Legislation and Standards (3) A comprehensive study of legislation and standards designed to protect the worker. Prerequisite: SS&T 3000.

SS&T 4430 Workers Compensation Legislation (2) An overview of the principles and statutes that govern workers compensation as they apply to the industrial setting. Prerequisite: SS&T 3000.

SS&T 4435 Environmental Compliance (3) Comprehensive study of federal and state environmental legislation and standards to protect the health and safety of citizens. Prerequisite: SS&T 3000.

SS&T 5430 Industrial Hazard Management (3) The examination of the management of hazards in the industrial environment. Industry standards affecting the management of hazards will be reviewed. Prerequisite: safety background or consent of instructor.

Loss Control

SS&T 4510 Loss Control (3) Provides a background in loss control by investigating professional safety management. Emphasis is placed on incident recall, management's role in loss control, total job observation, total job analysis, and supervisory training. Techniques of implementing a total loss control program are explored. Prerequisite: SS&T 3000.

SS&T 4520 Safety and Risk Analysis (3) Identification of safety risks and analytical treatment of those risks in various work settings. Prerequisites: SS&T 3000 or equivalent.

SS&T 5530 Loss Control Management (3) Development, management and evaluation of a comprehensive loss control program for business, industry, and government.

Security

SS&T 1700 Introduction to Security (3) A survey of the role of security in society with emphasis on industrial and government security.

SS&T 2700 Physical Security Systems (3) Physical security hardware as applied in business, industry, and government. Includes instruction on the safe handling and discharge of firearms. A small fee is required.

SS&T 3700 Security Organization and Management (3) Organization and management of security programs in business, industry, and government.

SS&T 4700 Special Security Problems (3) An overview of security as applied to contemporary situations in business, industry, and government.

SS&T 4710 Security Technology (3) A survey of security detection, including electromechanical and electronic systems. Future applications of technology are discussed. Prerequisite: college level math course.

SS&T 4720 Personnel and Information Security (3) Methods used in screening personnel and safeguarding information.

SS&T 5710 History of Security (3) The security of humans from primitive to modern times.

SS&T 5740 Commercial and Institutional Security (3)

Security applications in commerce and institutions.

SS&T 5760 Security Statutes and Codes (3) Examination of state and federal statutes, ordinances as they relate to the field of security.

Fire Science

SS&T 1800 Introduction to Fire Science (3) An overview of the principles of fire protection and fire prevention as they apply to the industrial setting. Emphasis on the chemistry of fire, classification of fires, factors contributing to fires, identification of hazardous materials, techniques of fire prevention, and considerations in fire protection.

SS&T 2800 Fire Prevention and Protection (3) Provide a background in fire related codes, laws, and ordinances. Emphasis on the implementation of prevention, protection, investigation, and inspection programs. Prerequisite: SS&T 1800.

SS&T 4800 Water and Sprinkler Systems Analysis (3) Water supply, how to determine quantity, and basic fire service water requirements. An in-depth study of the design, installation, operations and maintenance of sprinkler systems that use water. Prerequisite: Math 1111 or equivalent.

SS&T 4810 Fire Extinguishing and Alarm Systems (3) Basic types of extinguishing systems, other than sprinkler systems, and their use. Fire alarm systems, their use, installation and components.

SS&T 4830 Fire Investigation (3) Fire investigation techniques with emphasis on fire causation, equipment, evidence, and reporting. Prerequisite: SS&T 1800 or equivalent.

SS&T 4850 Industrial Fire Protection (3) The recognition, control or elimination of fire hazards in industrial settings. Prerequisites: Chem 1104 or Math 1111, or consent of instructor.

Individual Study and Research

SS&T 4900 Directed Studies (1-6) Individual or group study of problems in special areas of interest. May be repeated for a maximum of 6 semester hours.

SS&T 4910 Special Projects in Safety Science and Technology (1-3) Individual or group study of problems in special areas of interest. May be repeated for a maximum of 6 semester hours.

SS&T 4940 Introductory Quantitative Methods (3) Mathematical and statistical methods designed for the efficient collection and rational interpretation of data by individuals responsible for analysis in a variety of settings. Prerequisite: high school algebra or equivalent.

SS&T 4990 Internship in Safety Science and Technology* (1-6) Internships are based upon student preparation and interest. Actual work experiences in education, institutions, government, industry, or business are provided. May be repeated for a maximum of 6 semester hours. Prerequisite: departmental approval and must have completed one-half of major/minor courses in area of study.

*Not available for graduate credit.

SS&T 5940 Current Literature and Research in Safety (3) Current research in the area of safety, research techniques and design in proposal and other technical writing. Prerequisite: SS&T 4940 or equivalent.

SS&T 5950 Readings in Safety Science and Technology

(1-6) Readings in the student's field of interest or in related areas designed to enhance knowledge and/or skills. May be repeated for a maximum of 6 semester hours. Prerequisite: 9 semester hours of graduate credit.

SS&T 6920 Seminar in Safety Science and Technology (1)

A seminar designed to investigate a broad spectrum of current problems and innovations in the field of safety. Consideration of criteria for the identification of problems and a critical analysis of present practices toward improving the quality and management of safety programs. May be repeated for a maximum of 2 semester hours.

SS&T 6930 Individual Research Problems (3) Independent study and investigation of a pertinent problem confronting the safety science and technology professional that will culminate in a research paper. Prerequisite: SS&T 5940 or equivalent.

SS&T 6940 Internship in Safety Science and Technology

(1-6) Internships are based on student needs and educational goals. Actual work experiences in education, government, industry or business are provided. May be repeated for a maximum of 6 semester hours for each degree program. Prerequisite: departmental approval.

SS&T 6950 Thesis (3) An extensive investigation into a selected problem on an original research topic, culminating in a thesis. May be repeated for a maximum of 6 semester hours for each degree program. Prerequisite: SS&T 5940 or equivalent.

Integrative Studies Capstone

ICap 4115 Safety and Health Management* (3) Integration of safety information using conceptual and technical data to resolve safety and health issues. The case study approach will be emphasized. Prerequisites: admission to program, 27 semester hours of SS&T courses and senior standing.

*Not available for graduate credit.

Driver Education

DrEd 2010 Introduction to Safety Education (3) Provides a background in safety that will give insight to the possible accident situations present in various school situations.

DrEd 2020 Driver Education I (3) Curriculum content overview for driver and traffic safety education in secondary schools; classroom instruction and laboratory experience; driving skills and abilities of future teachers are evaluated. Prerequisite: DrEd 2010.

DrEd 2030 Driver Education II (3) A methods and materials course for driver education in the secondary schools. Techniques of teaching beginning drivers in both classroom and laboratory settings. Practicum arranged as a portion of the course. Prerequisite: DrEd 2020.

DrEd 4010 Driving Simulators and Multiple-Car Driving Ranges (3) Operation, maintenance, and techniques of teaching with driving simulators and multiple-car driving ranges. Practicum arranged as a portion of the course. Prerequisite: DrEd 2030.

College of Arts and Sciences

Pre-Professional Programs

Students interested in the premedical, pre-osteopathy, and pre-veterinary medicine program should plan to attend the University for four years and graduate with a B.S. degree. The student should major in biology and minor in chemistry or major in chemistry and minor in biology. Additional electives are required depending upon the student's needs and interest area.

Students interested in pre-dental, pre-optometry, and

pre-physical therapy should plan to attend the University two or more years to meet the minimum requirements in biology, chemistry, mathematics, and physics required by the professional school. Additional electives are required depending upon the student's needs and interest area.

Students interested in the pre-pharmacy program should consult the Chair of the Chemistry and Physics Department for suggested curriculum.

Integrative Studies General

IGen 4234 Arts: An Integrated Approach* (3) An exploration of the integrative elements and commonalities among music, theatre, and the visual arts.

IGen 4244 Comparative Cross-Cultural Cinema* (3) Comparison of films with various sub-themes relating to cross-cultural topics such as internationalism, racism and gender.

*Not available for graduate credit.

Art

In the Department of Art, the second digit in the course number stands for the following: 0--Art Problems, 1--Drawing, 2--Figure Drawing and Life Drawing, 3--Design, 4--Sculpture and Ceramics, 5--Painting, 6--Commercial Art, 7--Printmaking, 8--Art History, 9--Art Education.

NOTE: The Department of Art is an accredited institutional member of the National Association of Schools of Art and Design.

Department of Art Statement of Policy

Students in studio courses in art are required to furnish their own materials except certain studio equipment and some highly specialized materials provided by the Department. All work when completed is under the control of the Department until the end of the academic year. The student is expected to have a representative portfolio of his/her work available for presentation at any time prior to graduation.

Each candidate for a degree may be required to leave with the Department of Art one or more pieces of original work. These are added to the collection of the work of graduates and will form a permanent University collection.

During the sophomore year or during the first semester after transferring from another institution, all candidates for degrees will present a portfolio of work to be reviewed by the faculty for the purpose of acceptance into the B.F.A. program.

During the senior year, all candidates for degrees will present an exhibition of representative work to be reviewed by the faculty as partial graduation approval. Specific information about reviews and exhibitions may be obtained in the Department of Art Office.

ART Functional Major, B.S. in Ed. Degree

(Certification to teach art in grades K-12)

(41 000375)

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						57	
Art	1110	Drawing I	3	Art	1815	Art History Survey I	3
Art	1120	Drawing II	3	Art	1825	Art History Survey II	3
Art	3209	Figure Construction	3	Art	4850	20th Century Art & Architecture	3
Art	1315	Design I	3	Art	3915	Prob. in Elementary Art Education	3
Art	1325	Design II	3	Art	3920	Prob. in Secondary Art Education	3
Art	3314	Fibers	3	ICap	4221	Artists in Contemporary Society	3
Art	2412	Ceramics I	3	Upper level concentration in studio art in one of the following areas: drawing, painting, watercolor, sculpture, fibers, printmaking, ceramics			6
Art	2420	Sculpture I	3				
Art	2511	Painting I	3				
Art	2710	Introduction to Printmaking	3				
Art	1800	Ideas & the Visual Arts	3				
MINOR NOT REQUIRED							
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Art 1800 fulfills 3 s.h. of Div. II C; ICap 4221 fulfills 3 s.h. of Div. III B.)						42	
Secondary Education students must have one course in a physical or earth science and one in a biological science in Div. II A.							
Hist	1350	Div. II B or		PolS	1510	Div. II B (required)	3
Hist	1351	Div. II B (required)	3	Psy	4230	Psy. of Adolescence	3
Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. of Div. II E.							
PROFESSIONAL EDUCATION REQUIREMENTS (see pages 181-183)						28	
MINIMUM TOTAL						127	

ART Minor, B.S. in Ed. Degree

(Certification to teach art in grades K-9. Secondary majors should see the Director of Clinical Services and Certification.) (000369)

						Sem. Hours	
MINOR REQUIREMENTS						27	
Art	1110	Drawing I	3	Art	3915	Prob. in Elementary Art Ed.	3
Art	1315	Design I	3	Art	2511	Painting I, 3 or	
Art	3314	Fibers	3	Art	3510	Watercolor, 3	3
Art	2412	Ceramics I	3	Art	1815	Art History Survey I, 3 or	
Art	2420	Sculpture I	3	Art	1825	Art History Survey II, 3	3
Art	2710	Introduction to Printmaking	3				

ART Minor for a Bachelor's Degree

(Except for a B.S. in Ed. Degree) (000484)

						Sem. Hours	
MINOR REQUIREMENTS						24	
Art	1110	Drawing I	3	Art	1325	Design II	3
Art	1120	Drawing II	3	Art	1815	Art History Survey I	3
Art	3209	Figure Construction	3	Art	1825	Art History Survey II	3
Art	1315	Design I	3	Elective in Art			3

COMMERCIAL ART Functional Major, B.F.A. Degree

(47 000372)

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						87	
Art	4020	Studio Seminar (Portfolio)	3	Art	1825	Art History Survey II	3
Art	1110	Drawing I	3	Art	4850	20th Century Art & Architecture	3
Art	1120	Drawing II	3	Art	2412	Ceramics I, 3 or	
Art	1315	Design I	3	Art	2420	Sculpture I, 3	3
Art	1325	Design II	3	ICap	4221	Artists in Contemporary Society	3
Art	2335	Design III	3	Electives in art			3
Art	2511	Painting I	3	Departmentally approved electives from one of the following areas			36
Art	3510	Watercolor	3	Area 1 Graphic Design			
Art	2610	Introduction to Commercial Art	3	Area 2 Illustration			
Art	2710	Introduction to Printmaking	3	(List available from the Chair of the Art Department.)			
Art	1800	Ideas & the Visual Arts	3				
Art	1815	Art History Survey I	3				
MINOR NOT REQUIRED							
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Art 1800 fulfills 3 s.h. of Div. II C; ICap 4221 fulfills 3 s.h. of Div. III B)						42	
MINIMUM TOTAL						129	

INTERIOR DESIGN Functional Major, B.F.A. Degree

(47 000374)

Sem. Hours

FUNCTIONAL MAJOR REQUIREMENTS				87	
Art	4020	Studio Seminar	3	Art 4850 20th Century Art & Architecture	3
Art	1110	Drawing I	3	FAME 2442 Textiles	3
Art	1120	Drawing II	3	Grap 1110 Fundamentals of Drafting	3
Art	3209	Figure Construction	3	Grap 2170 Intro. to Computer-Aided Drafting	3
Art	1315	Design I	3	Grap 3160 Residential Arch. Drawing	3
Art	1325	Design II	3	Mf&C 2210 Finishing & Upholstering	3
Art	2310	Introduction to Interior Design	3	Art 2412 Ceramics I, 3 or	
Art	2320	Residential Interior Design	3	Art 2420 Sculpture I, 3	3
Art	2335	Design III	3	ICap 4221 Artists in Contemporary Society	3
Art	3310	Traditional Interiors	3	Electives from the following	6
Art	3320	Prof. Practice for Interior Designers	3	Art 3314 Fibers	3
Art	3330	Restaurant & Store Planning	3	Art 4310 Design Internship	3
Art	4340	Corporate & Institutional Design	3	Art 2610 Intro. to Commercial Art	3
Art	2511	Painting I	3	*FAME 4442 Advanced Textiles	3
Art	3510	Watercolor	3	Grap 4162 Commercial Arch. Drawing	3
Art	2710	Introduction to Printmaking	3	Grap 1210 Elementary Photography	3
Art	1800	Ideas & the Visual Arts	3	*HES 3510 Housing & Home Furnishings	3
Art	1815	Art History Survey I	3	Thea 1600 Stagecraft & Lighting	3
Art	1825	Art History Survey II	3		
MINOR NOT REQUIRED					
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Art 1800 fulfills 3 s.h. of Div. II C; ICap 4221 fulfills 3 s.h. of Div. III B)				42	
MINIMUM TOTAL				129	

*Course has prerequisite(s) not listed in the program.

STUDIO ART Functional Major, B.F.A. Degree

(47 000378)

Sem. Hours

FUNCTIONAL MAJOR REQUIREMENTS				86	
Art	1110	Drawing I	3	Electives (continued)	
Art	1120	Drawing II	3	Area 2 - Painting	
Art	3110	Drawing III	3	Art 3510 Watercolor	3
Art	3209	Figure Construction	3	Art 3511 Painting II	9
Art	1315	Design I	3	Art 4511 Painting III	9
Art	1325	Design II	3	Area 3 - Ceramics	
Art	2335	Design III	3	Art 4020 Studio Seminar	3
Art	2412	Ceramics I	3	Art 3412 Ceramics II	9
Art	2420	Sculpture I	3	Art 4412 Ceramics III	9
Art	2511	Painting I	3	Area 4 - Printmaking	
Art	2710	Introduction to Printmaking	3	Art 3710 Intaglio	3
Art	1800	Ideas & the Visual Arts	3	Art 3720 Lithography	3
Art	1815	Art History Survey I	3	Art 3730 Serigraphy	3
Art	1825	Art History Survey II	3	Art 3740 Relief Printmaking	3
Art	4850	20th Century Art & Architecture	3	Electives in Printmaking	9
ICap	4221	Artists in Contemporary Society	3	Departmentally approved electives related to area of specialization	3
Electives in art				14	
Elect one of the following areas of specialization				21	
Area 1 - Sculpture					
Art	4020	Studio Seminar	3		
Art	3420	Sculpture II	9		
Art	4420	Sculpture III	9		
MINOR NOT REQUIRED					
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Art 1800 fulfills 3 s.h. of Div. II C); ICap 4221 fulfills 3 s.h. of DIV. III B)				42	
MINIMUM TOTAL				128	

Art Problems

Art 4010 Special Projects in Art (1-3) May be repeated for a maximum of 6 semester hours.

Art 4020 Studio Seminar (3) By arrangement, with consent of the instructor involved, and through individual directed study. May be repeated for a maximum of 6 semester hours. Prerequisite: senior year with consent.

Art 6010 Research Problems in Art (3) May be repeated for a maximum of 6 semester hours. Prerequisite: 20 semester hours of graduate credit toward appropriate degree in art including Art 5910.

Drawing

Art 1110 Drawing I (3) Basic principles of perspective and composition through problems in landscape and still life.

Art 1120 Drawing II (3) Compositional drawing in various media including ink wash and pen and ink. Prerequisite: Art 1110.

Art 3110 Drawing III (3) The application of fundamentals of drawing to creative problems in figure, still life, and landscape composition. May be repeated for a maximum of 9 semester hours. Prerequisites: Art 1120 and Art 3209.

Art 5110 Special Problems in Drawing (3) Drawing in all media from models and from imagination leading to finished drawings. Emphasis on composition. Study of old masters and contemporary drawings. May be repeated for a maximum of 9 semester hours. Prerequisite: Art 3110.

Figure Drawing and Life Drawing

Art 3209 Figure Construction (3) The skeletal and muscular construction of the human figure as it relates to the action and proportions of the figure. Drawing from life. Prerequisite: Art 1110.

Art 3210 Life Drawing (3) Drawing from a live model with the emphasis on techniques. May be repeated for a maximum of 6 semester hours. Prerequisite: Art 3209.

Art 5210 Advanced Life Drawing (3) Drawing from the model at rest and in action in all media. Studies in composition and the analysis of the work of the old and modern masters. Special emphasis given to techniques. May be repeated for a maximum of 9 semester hours. Prerequisite: Art 3209.

Design

Art 1315 Design I (3) Introduces the use of the visual elements within the context of the principles of design.

Art 1325 Design II (3) The study of color, its application within the design process and its use as an integral component in design. Prerequisite: Art 1315.

Art 2310 Introduction to Interior Design (3) A practical guide to the fundamentals of interior design and an overview of the interior design profession. Prerequisites: Art 1110 and Art 1315.

Art 2320 Residential Interior Design (3) The design process as it is applied to interior design problems. An emphasis on residential design and a survey of major historical furniture styles and interiors. Prerequisites: Art 1120, Art 1325 and Art 2310 for art majors; Grap 1110 or consent of instructor for nonmajors.

Art 2335 Design III (3) Creative applications of color and design theory in a variety of design situations. Prerequisite: Art 1325.

Art 3310 Traditional Interiors (3) Traditional interior design problems, rendering techniques, and historical furniture styles. An emphasis on architectural interior elements, interior surfaces, finishes, and application. Prerequisites: Art 2320 and Grap 3160 for art majors; Grap 1110 or consent of instructor for nonmajors.

Art 3314 Fibers (3) Basic course in the fundamentals and techniques of creating on and off loom structures and fabrics. May be repeated for a maximum of 9 semester hours.

Art 3320 Professional Practice for Interior Designers (3) The study of interior design business practices. The history of the profession and considerations required when organizing and managing a business. Prerequisite: Art 2310.

Art 3330 Restaurant and Store Planning (3) Intermediate work in interior design, studio problems, lighting, and full presentation techniques with emphasis on store and restaurant planning. Prerequisite: Art 3310 for art majors; Grap 1110 or consent of instructor for nonmajors.

Art 4310 Design Internship (2-3) An elective course for interior design and commercial art majors operated in conjunction with various business firms, wherein students are afforded the opportunity of working alongside professional designers in the field. May be repeated for a maximum of 6 semester hours. Prerequisite: a major on the undergraduate level of either interior design or commercial art and with approval of departmental committee.

Art 4324 Creative Craft Studio (3) Introduces and allows the student to explore a variety of three-dimensional mediums while creating mixed-media projects. A broad range of materials and techniques will be utilized. May be repeated for a maximum of 9 semester hours. Prerequisite: 20 semester hours of art.

Art 4340 Corporate and Institutional Design (3) Increasing emphasis on space arrangement for commercial and institutional use; introduction to specifications of materials and specification writing; emphasis in office design. May be repeated for a maximum of 6 semester hours. Prerequisite: Art 3330 for art majors; Grap 3160 or consent of instructor for nonmajors.

Sculpture and Ceramics

Art 2412 Ceramics I (3) Basic skills on the three pottery making methods: e.g., slab, coil, and pottery wheel with emphasis on aesthetic qualities. Wheel throwing will be accented. Basic experiences in kiln stacking and firing.

Art 2420 Sculpture I (3) Fundamentals in sculpture including additive, subtractive, and construction techniques.

Art 3412 Ceramics II (3) Extended studio research in pottery design and forming. Technical methods in the preparation of clay bodies, glazes, and kiln firing and maintenance. May be repeated for a maximum of 9 semester hours. Prerequisite: Art 2412.

Art 3420 Sculpture II (3) Individual problems in techniques of sculpture utilizing a variety of media. May be repeated for a maximum of 9 semester hours. Prerequisite: Art 2420.

Art 4412 Ceramics III (3) Production of advanced ceramics projects with emphasis on the search for individual styles and choices of forming methods. Advanced study of glaze chemistry, clay body formulation, and kiln construction. May be repeated for a maximum of

9 semester hours. Prerequisite: Art 3412 or consent of instructor.

Art 4420 Sculpture III (3) Advanced individual problems in techniques of sculpture utilizing a variety of media. May be repeated for a maximum of 9 semester hours. Prerequisite: Art 3420.

Art 5410 Sculpture Studies (3) Stylistic direction involving preliminary cartoons and scale model forms with an evaluation of the work problems in sculpture. Materials will include clay (terra cotta), plaster, wood, metal, and cast metals with special emphasis placed upon originality, finish, and presentation. The student will be encouraged to select his/her own media. May be repeated for a maximum of 9 semester hours. Prerequisite: Art 2420.

Art 5412 Ceramics Studio (3) Encourages the development of stylistic direction and exhibition involvement through the intensive study of student/instructor selected areas of ceramics. May be repeated for a maximum of 9 semester hours. Prerequisite: Art 4412.

Painting

Art 2511 Painting I (3) The creative art process with emphasis on the basic visual concepts and styles, ranging from the care and use of painting tools to the execution of paintings, and including some painting history. Prerequisites: Art 1110 and Art 1315.

Art 3510 Watercolor (3) Application of principles of composition in the medium of transparent watercolor. May be repeated for a maximum of 9 semester hours.

Art 3511 Painting II (3) Study and practice in basic painting techniques. May be repeated for a maximum of 9 semester hours.

Art 4511 Painting III (3) Application of principles of composition in the medium of oil or acrylic paint. May be repeated for a maximum of 9 semester hours.

Art 5511 Advanced Oil Painting (3) Pictorial organization and the methods and techniques of painting in oils. Analysis of subject matter, preliminary sketches, and preparation of frames for exhibitions. May be repeated for a maximum of 9 semester hours. Prerequisites: Art 1325 and Art 4511.

Art 5520 Advanced Watercolor (3) The methods and techniques of painting in watercolor and gouache. Special attention to subject matter, preliminary sketches, and composition. May be repeated for a maximum of 9 semester hours. Prerequisite: Art 3510.

Commercial Art

Art 2610 Introduction to Commercial Art (3) Basic orientation to the field of commercial art. Presentation skills, use of tools and materials. Creative problem solving in the areas of advertising, publication, graphic design, and illustration. Usually offered each semester. Prerequisites: Art 1110 and Art 1315. Graphic arts majors--Grap 2030 and Grap 2031.

Art 3610 Typography (3) Principles of design and usage of letter forms and alphabet styles provide the basis for experiments in spacing, arrangement, and integration of typographic and other graphic elements on the printed page. Usually offered each semester. Prerequisites: Art 1110 and Art 1315. Graphic arts majors--Grap 2030 and Grap 2031.

Art 3620 Logo/Trademark Design (3) The design of symbolic and lettergraphic identifiers, practical application of symbols, signs, and visual metaphors from simple logotypes to sophisticated corporate identity programs. Usually offered spring only. Prerequisites: Art 2610 and Art 3610.

Art 3625 Illustration Techniques (3) The application of wet and dry media with various surfaces to achieve a range of visual effects with an emphasis on exploration and experimentation. Nineteenth and twentieth century illustrators' works are studied as a means of understanding visual possibilities and styles. Prerequisite: Art 2610.

Art 3630 Design for Advertising (3) Advertising concepts, layout, client presentation for print application. Developing, visualizing, and communicating effective advertising for magazines, newspapers, and outdoor posters. Usually offered fall only. Prerequisites: Art 2610 and Art 3610.

Art 3635 Illustration Concepts (3) The interpretation of written and verbal information resulting in appropriate and successful visual solutions. Concept and visual vocabulary are stressed as a means of satisfying client needs. Students will begin to identify and build a personal illustrative style. Prerequisite: Art 3625.

Art 3640 Package Design (3) Packaging and point-of-sale graphics from concept to client presentation. Usually offered spring only. Prerequisite: Art 3620.

Art 3660 Publication Design (3) Publications as design problems. The design of folders, brochures and soft-bound print pieces through the manipulation of type, photos, art, paper and grid systems. Usually offered fall only. Prerequisites: Art 3620 and Grap 2030. (Grap 2030 may be taken concurrently.)

Art 3670 Television Advertising Graphics (3) The development of visual design and artistic problem solving for advertising campaigns, TV concepts, storyboards, scripts, and client presentations. Usually offered fall only. Prerequisites: Art 3620 and Art 3630.

Art 4625 Advanced Illustration I* (3) The application of illustration techniques and concepts to advertising and editorial assignments in a simulated professional setting. Projects will stress the research and generation of visual references, working with art directors and editors, meeting tight deadlines. Prerequisite: Art 3635.

Art 4635 Advanced Illustration II* (3) A continuation of Art 4625 with an emphasis on the business aspects of free-lance illustration. Prerequisite: Art 4625.

*Not available for Graduate credit.

Printmaking

Art 2710 Introduction to Printmaking (3) The four principal printmaking techniques: relief, intaglio, lithography, and serigraphy. The student will become acquainted with all aspects of the printmaking process through projects and a survey of historical prints. Prerequisites: Art 1110 and Art 1315.

Art 3710 Intaglio (3) Intaglio printmaking methods and production. May be repeated for a maximum of 12 semester hours. Prerequisite: Art 2710.

Art 3720 Lithography (3) Printmaking techniques in traditional stone lithography. May be repeated for a maximum of 12 semester hours. Prerequisite: Art 2710.

Art 3730 Serigraphy (3) Application of traditional and photographic silk screen processes of reproduction to

commercial and fine arts problems. May be repeated for a maximum of 12 semester hours. Prerequisite: Art 2710.

Art 3740 Relief Printmaking (3) The development of the print through the raised surface process. The student will engage in the technique through both traditional and contemporary materials. Single color and multicolor printing will be explored. May be repeated for a maximum of 12 semester hours. Prerequisite: Art 2710.

Art 5710 Printmaking Studio (3) Advanced study in the specialized areas of printmaking. May be repeated for a maximum of 9 semester hours. Prerequisites: Art 3710, Art 3720, Art 3730 and Art 3740, or consent.

Art History

Art 1800 Ideas and the Visual Arts (3) Explores the idea and practice of the visual arts in modern society. A study of style, form, content, and aesthetic judgment emphasizing the visual arts as a means of communicating ideas.

Art 1815 Art History Survey I (3) Prehistoric to the fourteenth century.

Art 1825 Art History Survey II (3) Art history from 1400 to the present.

Art 4811 Ancient Art and Architecture (2) A history of art, architecture, and furnishings from the beginning of civilization to the fall of the Roman Empire including the arts of Egypt, Babylonia, Assyria, Persia, Minoan Civilization, Greece, and Rome.

Art 4815 American Art (3) A study of the visual arts of the United States.

Art 4820 Italian Renaissance Art and Architecture (3) A history of the visual arts in Italy from 1400 to 1700.

Art 4830 Northern Renaissance Art and Architecture (2) A history of the visual arts in Northern Europe from 1400 to 1700.

Art 4840 Nineteenth Century Art and Architecture (2) A history of the visual arts of Europe and America in the nineteenth century.

Art 4850 Twentieth Century Art and Architecture (3) A history of the visual arts of the world in the twentieth century.

Art Education

Art 3910 Art for Elementary Schools (2) Elements of art structure and the principles of composition and their application in creative visual art experiences, especially adapted for children ages 4 through 12.

Art 3915 Problems in Elementary Art Education (3) The art teacher's role in teaching art history, art criticism and aesthetics, along with the production of artwork for children ages 4 through 12, will be explored. Prerequisites: Art 1110 and Art 1315.

Art 3920 Problems in Secondary Art Education (3) Topics to be explored include: purposes of art education, art curriculum considerations, safety in the art classroom, and supplies and materials. Prerequisite: Art 3915.

Art 5910 Introduction to Graduate Study and Research in Art (2) A study and application of principles and techniques employed in educational research with emphasis on the collection and organization of data pertinent to the writing of the thesis in art.

Art 5920 Seminar in Teaching and Supervision of Art (3) Advanced study and class discussions over current issues in education and art education. May be repeated for a maximum of 9 semester hours.

Integrative Studies Capstone

ICap 4221 Artists in Contemporary Society* (3) Art majors examine their careers as impacted by regional, national and global issues pertaining particularly to cultural and personal interaction. Prerequisites: 20 semester hours of art.

*Not available for graduate credit.

Integrative Studies General

IGen 4234 Arts: An Integrated Approach* (3) An exploration of the integrative elements and commonalities among music, theatre, and the visual arts.

*Not available for graduate credit.

Biology and Earth Science**Biology**

NOTE: Careers in professional specialties in biology generally require preparation through at least the masters degree. The biology programs at Central provide preparation for students who plan professional work in the following biological specialties:

Environmental Biology	Fisheries and Estuarine Ecology	Marine Biological Sciences
Entomology	Wildlife Conservation	Forest Biology
Oceanography	Plant Science	Systematic Botany

BIOLOGY Major, B.A. Degree

(42 000379)

						Sem. Hours	
MAJOR REQUIREMENTS						37	
Biol	1000	The Discipline of Biology	0.5	Biol	2511	Genetics	3
Biol	4000	Biology Colloquium	0.5	Biol	2512	Cell Biology	3
Biol	1010	Introduction to Ecology	4	ICap	4222	The Biological Perspective	3
Biol	1011	General Botany	4	Upper level electives in biology			15
Biol	1012	General Zoology	4				
MINOR REQUIREMENTS						18-25	
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, Biol 1010 and Biol 1011 are allowed to fulfill 4 s.h. of Div. II A; the Modern Language Requirement fulfills 3 s.h. of Div. II C; ICap 4222 fulfills 3 s.h. of Div. III B)						38	
MODERN LANGUAGE REQUIREMENT						3-9	
(Refer to Bachelor's Degree Requirements section for fulfillment options.)							
FREE ELECTIVES						15-28	
MINIMUM TOTAL						124	

BIOLOGY Major, B.S. Degree

(43 000380)

						Sem. Hours	
MAJOR REQUIREMENTS						44	
Biol	1000	The Discipline of Biology	0.5	Biol	2512	Cell Biology	3
Biol	4000	Biology Colloquium	0.5	ICap	4222	The Biological Perspective	3
Biol	1010	Introduction to Ecology	4	Departmentally approved electives in biology (See Department Chair for assignment to faculty advisor)			22
Biol	1011	General Botany	4				
Biol	1012	General Zoology	4				
Biol	2511	Genetics	3				
MINOR REQUIREMENTS						18-25	
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, Biol 1010 and Biol 1011 are allowed to fulfill 4 s.h. of Div. II A; ICap 4222 fulfills 3 s.h. of Div. III B)						41	
FREE ELECTIVES						15-28	
MINIMUM TOTAL						124	

BIOLOGY Functional Major, B.S. in Ed. Degree

[Unified science certification to teach any of the beginning sciences (i.e., Physics I, Chemistry I, etc.) and all levels of biology, grades 9-12]

(41 000487)

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						68.5-71.5	
Biol	1000	The Discipline of Biology	0.5	EaSc	4010	Special Problems in Geology	1
Biol	1010	Introduction to Ecology	4	Chem	1131	General Chemistry I	5
Biol	1011	General Botany	4	Chem	1132	General Chemistry II	5
Biol	1012	General Zoology	4	*Phys	1101	College Physics I	4
Biol	2511	Genetics	3	*Phys	1102	College Physics II	4
Biol	2512	Cell Biology	3	IA&T	2000	Technology & Change	3
Biol	3611	Microbiology	4	Biol	3431	Animal Physiology, 4 or	
Biol	3712	Field Natural History	4	Biol	4411	Plant Physiology, 4	4
Biol	4810	Curriculum Dev. in Biological Sci.	2	Math	1150	Pre-Calculus Mathematics, 4 or	
Biol	4811	Investigative Laboratory	2	Math	1131	Calculus for Bus. & Econ, 3	3-4
EaSc	1004	Intro. to the Sciences: Geology	4	Upper level electives in biology			2-4
EaSc	3114	Meteorology	3				

*Students who want an endorsement in Physics must take Phys 2121 and Phys 2122.
(continued on next page)

(continued from previous page)

MINOR NOT REQUIRED

UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Math 1150 fulfills or Math 1131 is allowed to fulfill 3 s.h. of Div. I C; EaSc 1004 fulfills 4 s.h. of Div. II A; two courses in biology are allowed to fulfill 3 s.h. of Div. II A; IA&T 2000 fulfills 2 s.h. of Div. II A; in the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. III B) 33

Hist 1350	Div. II B or		PolS 1510	Div. II B (required)	3
Hist 1351	Div. II B (required)	3	Psy 4230	Psy. of Adolescence	3

Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. of Div. II E.

PROFESSIONAL EDUCATION REQUIREMENTS (see page 183) 28

MINIMUM TOTAL 129.5

BIOLOGY Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor.)

(000476)

MINOR REQUIREMENTS				Sem. Hours	25
Biol 1010	Introduction to Ecology	4	Biol 2511	Genetics	3
Biol 1011	General Botany	4	Biol 2512	Cell Biology	3
Biol 1012	General Zoology	4		Electives in biology	7

UNIVERSITY STUDIES REQUIREMENTS (In the minor, Biol 1010 and Biol 1011 are allowed to fulfill 4 s.h. of Div II A)

CONSERVATION ENFORCEMENT Functional Major, B.S. Degree

(43 000383)

FUNCTIONAL MAJOR REQUIREMENTS				Sem. Hours	76
Biol 1000	The Discipline of Biology	0.5	Chem 1131	General Chemistry I	5
Biol 1010	Introduction to Ecology	4	Chem 1132	General Chemistry II	5
Biol 1011	General Botany	4	Chem 2650	Elem. Organic & Biochemistry	5
Biol 1012	General Zoology	4	MCom 2320	Public Relations	3
Biol 3222	Ornithology	4	CJ 1000	Introduction to Criminal Justice	3
Biol 3431	Animal Physiology	4	CJ 2300	Criminal Law	3
Biol 3711	Plant Identification	4	CJ 3303	Criminal Procedure	3
Biol 3721	Wildlife Conservation	3	CJ 4302	Criminal Evidence	3
Biol 4000	Biology Colloquium	0.5	MCom 4115	Writing Dramatic & Documentary Programs, 3 or	
Biol 4210	Ichthyology	4	MCom 1220	Elements of News Reporting, 3	3
Biol 4221	Mammalogy	4	ICap 4222	The Biological Perspective	3
Biol 4711	Animal Ecology	4			

MINOR NOT REQUIRED

UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Biol 1010, Biol 1011, Chem 1131, and Chem 1132 are allowed to fulfill 7 s.h. of Div. II A; ICap 4222 fulfills 3 s.h. of Div. III B) 38

FREE ELECTIVES 10

MINIMUM TOTAL 124

MEDICAL TECHNOLOGY Functional Major, B.S. Degree

(43 000384)

FUNCTIONAL MAJOR REQUIREMENTS				Sem. Hours	58.5
Biol 1000	The Discipline of Biology	0.5	Chem 1132	General Chemistry II	5
Biol 1012	General Zoology	4	Chem 3212	Quantitative Analysis	3
Biol 4311	Parasitology	4	Chem 3341	Organic Chemistry I	4
Biol 2401	Anatomy & Physiology I	4	Chem 3342	Organic Chemistry II	4
Biol 2402	Anatomy & Physiology II	4	Chem 4421	Biochemistry	4
Biol 3413	Immunology	2	Math 1111	College Algebra	3
Biol 2511	Genetics	3	Math 1112	College Trigonometry	2
Biol 3611	Microbiology	4	ET 1020	General Electronics	3
Chem 1131	General Chemistry I	5			

MEDICAL TECHNOLOGY CREDIT 30

Courses in various accredited medical technology programs may vary from hospital to hospital. All courses are recorded as Biol 4012. Courses usually offered are:

Clinical Biochemistry	6-10	Clinical Immunohematology	3-4
Clinical Urinalysis	0-3	Clinical Immunology	2-6
Clinical Hematology	4-7	Clinical Microbiology	6-8
		Special Topics	0-4

These courses are part of the Medical Technology functional major required by affiliation agreement for this program. They are not offered on campus or open to students in other programs. Credit for these courses is allowed for work taken at one of our affiliated hospitals in Kansas City (Menorah Medical Center, North Kansas City Memorial, St. Luke's Hospital, Trinity Lutheran (continued on next page)

(continued from previous page)

Hospital, Research Medical Center) and in Springfield (St. John's Hospital, Lester E. Cox Medical Center) or any fully accredited hospital medical technology training program which must be accredited by the American Medical Association Council on Medical Education. Admission and fees for the hospital portions of this program are the prerogative of the hospital and thus cannot be guaranteed by the University. Licensure to practice is dependent upon state regulations and professional examinations and thus cannot be guaranteed by the University or hospital. For additional information on this program and for entry into clinical programs, students are urged to see the program adviser at their earliest convenience. Because of complexities of affiliation agreements and variations in clinical programs, all pertinent information cannot be presented in this catalog.

MINOR NOT REQUIRED

UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Math 1111 fulfills 3 s.h. of Div. I C;

Biol 1012, Biol 2511, Chem 1131, and Chem 1132 are allowed to fulfill 7 s.h. of Div. II A) 38
MINIMUM TOTAL 126.5

Biol 1000 The Discipline of Biology (0.5) An introduction to biology as an academic endeavor including consideration of the subdisciplines of biology, requirements of students, and professional opportunities. Prerequisite: declaration of major in biology.

Biol 1003 Introduction to the Sciences: Ecology (3) Introduction to biological science with emphasis on scientific methodology, ecological concepts regarding populations, communities and ecosystems and the impact of humans on the natural world. No laboratory included. Not available to those with credit in Biol 1004.

Biol 1004 Introduction to the Sciences: Ecology (4) Introduction to biological science with emphasis on scientific methodology, ecological concepts regarding populations, communities and ecosystems and the impact of humans on the natural world. Laboratory included. Not available to those with credit in Biol 1003.

Biol 1010 Introduction to Ecology (4) An introduction to the major concepts in biology in the context of evolution and the ecology of populations, communities, and ecosystems. An introductory laboratory course designed for biology majors and minors.

Biol 1011 General Botany (4) Morphology, physiology, and taxonomy of plants with a major emphasis on flowering plants. Prerequisites: Biol 1010; or Chem 1104 and Agri 1600.

Biol 1012 General Zoology (4) Classification, evolution of the metazoa, and anatomy and physiology of selected invertebrate and vertebrate animal forms. Prerequisite: Biol 1010.

Biol 2010 Human Biology (3) An overview of human biology, emphasizing physiology, development, health, interpersonal and environmental interactions. Not open to Biology majors or minors.

Biol 2401 Anatomy and Physiology I (4) A functional study of cellular and metabolic processes and cardiovascular, lymphatic, respiratory and digestive systems integrated with a study of pertinent structures. Prerequisite: Chem 1103 or Chem 1104 or Chem 1131.

Biol 2402 Anatomy and Physiology II (4) A functional study of temperature, water and electrolyte balances and skeletal, muscular, neural, endocrine and reproductive systems integrated with a study of pertinent structures. Prerequisite: Biol 2401.

Biol 2511 Genetics (3) Hereditary principles and their application to classical genetics and the genetics of populations. Particular emphasis is placed on the quantitative aspect of the discipline and its relation to evolutionary mechanisms. Prerequisite: Biol 1010.

Biol 2512 Cell Biology (3) A study of cellular macromolecules, DNA replication, transcription, and translation; cellular organelles, cytoskeleton, energetics,

division; and the biology of the cancer cell. Prerequisites: Biol 1011, Biol 1012 and Biol 2511.

Biol 3101 Evolution of Vascular Plants (2) An analysis of the relationship of form to function in the evolution of vascular plants from the first vascular plants of the Silurian period to present day angiosperms. Prerequisites: Biol 1011, Biol 1012 and Biol 2511.

Biol 3211 Comparative Anatomy (4) Comparative morphology of the early development and evolution of the organ systems of vertebrates. Laboratory study of representative vertebrates. Prerequisites: Biol 1010 and Biol 1012.

Biol 3213 Embryology of Vertebrates (3) Germ cells, fertilization, and development of systems, organs, and tissues of vertebrate embryos. Prerequisites: Biol 1012 or Biol 2402; and Chem 1104 or Chem 1131.

Biol 3222 Ornithology (4) An examination of the biology of birds with special emphasis on the field study of locally occurring species. Prerequisites: Biol 1011 and Biol 1012.

Biol 3310 Invertebrate Zoology (4) Classification, comparative morphology, physiology and evolution of invertebrates. Prerequisites: Biol 1011 and Biol 1012.

Biol 3413 Immunology (2) A survey of the field of immunology including the types of immune responses, antibody synthesis, antigen-antibody interactions, hypersensitivity, immunity to infection, and the design of laboratory techniques for immunological screening. Prerequisite: Biol 2401 or Biol 3431.

Biol 3414 Histology and Microtechnique (4) The functional morphology of selected tissues at the light microscopic level. Laboratory will include practice in standard methods of microscopic slide preparation, as well as slide reading. Prerequisite: Biol 3211 or Biol 2402 or Biol 3431.

Biol 3431 Animal Physiology (4) Animal functions in terms of their needs for oxygen, food, energy, temperature, water, movement, information, and integration. Prerequisites: Biol 1012, or Agri 3410; and Chem 1104 or Chem 1131.

Biol 3611 Microbiology (4) An introduction to the major groups of microorganisms including their cell structure, metabolism, genetics, and ecology. Emphasis is placed upon the bacteria and viruses. Prerequisites: Biol 1011 or Biol 2401; and Chem 1103 or Chem 1104 or Chem 1131.

Biol 3711 Plant Identification (4) A basic course in plant identification, using classification, nomenclature, collection and preservation techniques. Involves much field and lab work. Prerequisites: Biol 1011 and Biol 1012.

Biol 3712 Field Natural History (4) Provides basic experience in field and laboratory identification of local plants and animals and an introduction to environmental awareness. This is a background course for all courses in field biology and is especially useful to teachers and

pre-professional students. Prerequisites: Biol 1011 and Biol 1012.

Biol 3721 Wildlife Conservation (3) Wildlife resources of North America and their importance in our economic and cultural life; biological methods of preservation, restoration and management. Prerequisites: Biol 1011 and Biol 1012.

Biol 4000 Biology Colloquium* (0.5) Investigation of professional opportunities in biology. Evaluation of the program by students and assessment of student progress in biology. Prerequisite: 24 semester hours of biology or consent of department chair.

*Not available for graduate credit.

Biol 4011 Special Problems in Biology (1-4) Individual work under supervision of a staff member. Problems may be undertaken in any field of biology. May be repeated for a maximum of 4 semester hours. Prerequisite: consent of instructor.

Biol 4012 Special Projects in Biology (1-8) May be repeated for a maximum of 9 semester hours. With permission of the Department Chair, functional majors in medical technology may repeat for a maximum of 30 semester hours. Prerequisite: consent of instructor.

Biol 4210 Ichthyology (4) A thorough examination of the biology of the fish with special emphasis on the fish of Missouri. Students will be expected to develop a detailed knowledge of the literature on ichthyology. Field trips at additional expense to the student are part of this course. Prerequisites: Chem 1131 and 15 semester hours of biology including Biol 1012.

Biol 4221 Mammalogy (4) A thorough examination of the Class Mammalia. Students will be expected to develop a detailed knowledge of the literature on mammalogy. Prerequisites: Biol 1011 and Biol 1012.

Biol 4232 Herpetology (4) A thorough examination of the classes Amphibia and Reptilia, including systematics, evolution and ecology of these groups with special attention to identification of local forms. Prerequisite: Biol 2512.

Biol 4311 Parasitology (4) Animal parasites, with emphasis on identification, morphology, biology, life histories, and host-parasite relationships. Prerequisite: Biol 2512.

Biol 4312 Entomology (4) An introduction to the systematics, morphology, physiology, evolution, and ecology of insects. Prerequisites: Biol 1011 and Biol 1012.

Biol 4400 Endocrinology (2) Examination of the physiology of endocrine glands and the roles of each hormone in the regulation of growth, metabolism, and reproduction. Examples will be selected from humans and domestic species. Prerequisite: Biol 3431.

Biol 4403 Environmental Physiology (4) Physiological responses and adaptations to alterations in natural and man-generated environmental factors such as temperature, light cycles, pressure, water, ions, radiation, vibration, chemicals, microorganisms, and exercise. Prerequisite: Biol 2402 or Biol 3431.

Biol 4411 Plant Physiology (4) Life processes occurring in plants, the factors affecting these processes, their measurement, and the significance of these processes to the growth of the plant. Prerequisites: Biol 2512; and Chem 1104 or Chem 1131.

Biol 4511 Cytogenetics (4) Examination of cellular and molecular mechanisms in cell division and their role in

evolution and human health. Laboratory exercises include techniques for experimentally manipulating chromosomes and use of computer and video techniques. Prerequisites: Biol 2512; and Chem 1104 or Chem 1131.

Biol 4701 Advanced Plant Identification (3) An analysis of Missouri flora, includes ecological, physiographical, physiognomical, ethnological, and biological aspects. Provides practical experience in surveying plant communities. Students without training in plant identification will not be admitted. Prerequisite: Biol 3711.

Biol 4711 Animal Ecology (4) Ecological principles and concepts pertaining to populations, communities, and ecosystems with special emphasis on animals. Both field work with local examples and laboratory work are part of this course. Prerequisites: Chem 1131 and 20 semester hours of biology including Biol 1012.

Biol 4810 Curriculum Development in Biological Science (2) Classroom techniques for teaching life science to junior and senior high school students. Historical development and changes to current programs of life science discussed. Prerequisites: Biol 2512 and must be taken concurrently with Biol 4811.

Biol 4811 Investigative Laboratory (2) Investigative laboratory activities related to life science teaching in junior and senior high school. Problem in investigative biology to be conducted and a paper written. Prerequisites: Biol 2511 and must be taken concurrently with Biol 4810.

Biol 5000 Seminar in the Biological Sciences (1) Presentations of recent biological information not available in regular offerings of the department. Students are required to make a seminar presentation.

Biol 5011 Special Topics in Biology (2-5) Reading and analysis of the literature in a special area under the direction of a staff member. May be repeated for a maximum of 5 semester hours. Prerequisite: an undergraduate major or minor in biology.

Biol 5013 Biometry (2) Experimental design, modeling, hypotheses formation and testing, systems design and modeling, and analytical procedures applying both parametric and nonparametric statistics to data from biological systems will be considered. Prerequisites: college algebra or approval of instructor and 30 semester hours of biology.

Biol 5031 Biological Literature (2) Introduction to the research literature of biology with emphasis on the organization of information for oral presentation, thesis, and publication. Prerequisite: 20 semester hours of credit in biology. Should be taken during first semester of graduate work.

Biol 5032 History of Biology (2) An examination of the historical development and refinement of concepts in the major subdisciplines of biology, and of the integration of these concepts into the present disciplinary framework.

Biol 5710 Aquatic Ecology (4) Ecology and biology of aquatic species, populations, communities, and ecosystems will be emphasized. Both lentic and lotic habitats will be examined. Field trips at additional expense to the student are part of this course. Prerequisites: Biol 4711 or equivalent and 15 semester hours of chemistry.

Biol 5951 Research in Biology (2-3) Investigation of an original problem under the direction of a staff member. Prerequisite: an undergraduate major in biology or equivalent and consent.

Biol 5952 Research in Biology (2-3) Continuation of Biol 5951.

Biol 5953 Research in Biology (2-3) Continuation of Biol 5952.

Biol 5954 Research in Biology (2-3) Continuation of Biol 5953.

Integrative Studies Capstone

ICap 4222 The Biological Perspective* (3) An examination of current issues from a biological perspective including the impact of biology on history and culture. For biology majors. Prerequisite: 22 semester hours of biology.

*Not available for graduate credit.

Earth Science

EARTH SCIENCE Major, B.A. Degree

(42 000386)

		Sem. Hours
MAJOR REQUIREMENTS		30-35
EaSc 1004	Intro. to the Sciences: Geology	4
EaSc 3110	Structural Geology	4
EaSc 2200	Historical Geology	4
EaSc 3501	Invertebrate Paleontology	4
Electives from the following		4-8
EaSc 4301	Minerals & Rocks	4
or		
EaSc 3320	Mineralogy	4
EaSc 4325	Petrology	4
MINOR REQUIREMENTS		18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, EaSc 1004 fulfills 4 s.h. of Div. II A; the Modern Language Requirement fulfills 3 s.h. of Div. II C)		41
MODERN LANGUAGE REQUIREMENT (Refer to Bachelor's Degree Requirements section for fulfillment options.)		3-9
FREE ELECTIVES		14-32
MINIMUM TOTAL		124

*Course has prerequisite(s) not listed in the program.

EARTH SCIENCE Functional Major, B.S. in Ed. Degree

[Unified science certification to teach any of the beginning sciences (i.e., Biology I, Chemistry I, etc.) and all levels of earth science, grades 9-12]
(41 000488)

		Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS		68-69
EaSc 1004	Intro. to the Sciences: Geology	4
EaSc 2200	Historical Geology	4
EaSc 3010	Environmental Geology	3
EaSc 3111	Geomorphology	3
EaSc 3112	Astronomy	3
EaSc 3114	Meteorology	3
EaSc 3115	Oceanography	3
EaSc 3501	Invertebrate Paleontology	4
EaSc 4010	Special Problems in Geology	1
EaSc 3320	Mineralogy, 4 or	4
EaSc 4301	Minerals & Rocks, 4	4
Biol 1010	Introduction to Ecology	4
Biol 1011	General Botany	4
Biol 1012	General Zoology	4
Chem 1131	General Chemistry I	5
Chem 1132	General Chemistry II	5
*Phys 1101	College Physics I	4
*Phys 1102	College Physics II	4
Math 1150	Pre-Calculus Mathematics, 4 or	3-4
Math 1131	Calculus for Bus. & Econ., 3	3-4
IA&T 2000	Technology & Change	3
*Students who want an endorsement in physics must take Phys 2121 and Phys 2122.		
MINOR NOT REQUIRED		
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Math 1150 fulfills or Math 1131 is allowed to fulfill 3 s.h. of Div. I C; EaSc 1004 fulfills 4 s.h. of Div. II A; two courses in biology are allowed to fulfill 3 s.h. of Div. II A; IA&T 2000 fulfills 2 s.h. of Div. II A; in the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. III B)		33
Hist 1350	Div. II B or	3
Hist 1351	Div. II B (required)	3
PolS 1510	Div. II B (required)	3
Psy 4230	Psy. of Adolescence	3
Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. in Div. II E.		
PROFESSIONAL EDUCATION REQUIREMENTS (see page 183)		28
MINIMUM TOTAL		129

EARTH SCIENCE Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor.)
(000477)

		Sem. Hours	
MINOR REQUIREMENTS			20
EaSc 1004	Intro. to the Science: Geology	4	Electives in earth science
EaSc 2200	Historical Geology	4	12
UNIVERSITY STUDIES REQUIREMENTS (In the minor, EaSc 1004 fulfills 4 s.h. of Div. II A)			

GEOLOGY Functional Major, B.S. Degree

(43 000388)

		Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS			68-74
EaSc 1004	Intro. to the Sciences: Geology	4	Electives (continued)
EaSc 2200	Historical Geology	4	EaSc 3400 Groundwater Geology
EaSc 3110	Structural Geology	4	EaSc 3501 Invertebrate Paleontology
EaSc 3320	Mineralogy	4	EaSc 4325 Petrology
EaSc 4420	Sedimentary Petrology & Stratigraphy	5	Departmentally approved electives
Summer field course at an approved university		6	from the following
Elect three courses from the following		8-12	*Mathematics
EaSc 2100	Engineering Geology	4	Physics
EaSc 3010	Environmental Geology	3	Chemistry
EaSc 3111	Geomorphology	3	Science
EaSc 3213	Quaternary & Glacial Geology	2	

*Two semesters of calculus are recommended for those intending to pursue graduate study.

MINOR NOT REQUIRED

UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Math electives may be allowed to fulfill 3 s.h. of Div. I C; EaSc 1004 fulfills 4 s.h. of Div. II A; two chemistry courses are allowed to fulfill 3 s.h. of Div. II A)		38-41
FREE ELECTIVES		9-18
MINIMUM TOTAL		124

EaSc 1004 Introduction to the Sciences: Geology (4)
Fundamental principles of the natural sciences as applied to the Earth. Topics covered include volcanoes, earthquakes, plate tectonics, landscape formation by streams, glaciers, and underground water. Laboratory included.

EaSc 2100 Engineering Geology (4) The study of physical geology as applied in engineering practice. Emphasis is on surficial geology and soils, employing both field and laboratory investigation methods. Topics include refraction, seismic and electrical resistivity surveys, hydrogeology, waste disposal, slope stability, engineering properties of soil and rock, mapping, site characterization, and report writing. Prerequisite: EaSc 1004 or equivalent or consent of instructor.

EaSc 2200 Historical Geology (4) The history of the earth will be studied in light of shifting continents, advances and retreats of seas, periods of mountain building and the evolution of life through the great expanse of geologic time. Laboratory will include local and regional field trips. Prerequisite: EaSc 1004.

EaSc 3010 Environmental Geology (3) The relationships between humans and their geological surroundings with an emphasis on environmental problems. The main topics are mineral and energy resources, population, earthquake and volcanic hazards, medical problems related to the environment, floods, and coastal processes.

EaSc 3110 Structural Geology (4) Structures of the Earth on maps, cross-sections, and aerial photographs and in field exercises. Folding and faulting are emphasized. Also discussed are plate tectonic mechanisms that are responsible for Earth structures. Prerequisite: EaSc 1004.

EaSc 3111 Geomorphology (3) The processes which shape the Earth's surface and form surficial deposits. The interaction of people with their environment is emphasized. Topics include soil formation, engineering properties of soil and rock, surface water, ground water, and environmental planning. Prerequisite: EaSc 1004 or EaSc 3010.

EaSc 3112 Astronomy (3) The fundamental principles and theories pertaining to planetary astronomy, stellar evolution, and origin of the galaxies. Observational techniques are discussed and night-time viewing sessions are held using departmental telescopes.

EaSc 3114 Meteorology (3) Principles and theories of weather, climate, and other atmospheric phenomena. Included is the study of energy exchanges, winds, cloud types, precipitation forms, severe weather, and the generation and movement of tornadoes and other cyclonic storms.

EaSc 3115 Oceanography (3) Beginning course intended for students with a limited science background. Relationship of continents and ocean basins, sea floor spreading, waves, tides, currents, circulation of the atmosphere and ocean, marine biology and geology, and global environmental implications.

EaSc 3213 Quaternary and Glacial Geology (2) Glacier formation and movement, glacial erosion and deposition, changes in sea level and in river channels, climate change and the causes of the ice ages, and changes in northern hemisphere animal and plant populations during the past two million years. Prerequisite: EaSc 1004.

EaSc 3320 Mineralogy (4) An introduction to crystallography and a systematic study of the mineral groups including the native elements, sulfides, sulfates, oxides, halides, carbonates, and silicates. Laboratory work

stresses identification by physical and chemical properties.

Prerequisite: EaSc 1004.

EaSc 3400 Groundwater Geology (3) Principles of how fluids move within the crust of the Earth. Groundwater concepts are reviewed and applied to modern day resource and conservation problems. Prerequisites: EaSc 1004, Phys 1101 and Math 1111.

EaSc 3501 Invertebrate Paleontology (4) Principles and methods used in collecting, identifying, and utilizing fossils to determine the distribution and environment of ancient lands and seas. Further, fossils will be studied as tools of geologic time determination. Laboratory will include local and regional field trips. Prerequisite: EaSc 2200 or consent of instructor.

EaSc 4010 Special Problems in Geology (1-3) Individual work under supervision of a staff member. Problems may be undertaken in any area of geology. May be repeated for a maximum of 9 semester hours. Prerequisite: adequate preparation in that field and consent.

EaSc 4020 Senior Problem (1-3) Geological research and report writing. May be repeated for a maximum of 4 semester hours. Prerequisite: consent.

EaSc 4301 Minerals and Rocks (4) The origin and classification of minerals and rocks in a course designed primarily for teachers of earth science. Methods and techniques of identification are stressed. Prerequisite: EaSc 1004.

EaSc 4325 Petrology (4) Igneous and metamorphic rocks. Includes consideration of processes of formation and identification of rock types. Prerequisite: EaSc 3320.

EaSc 4420 Sedimentary Petrology and Stratigraphy* (5) The description and classification of sedimentary rocks and the principles of stratigraphy. Laboratory exercises will focus on hand specimen petrology and subsurface stratigraphic analysis. Field work will deal with measured stratigraphic sections. Prerequisite: EaSc 4325.

*Not available for graduate credit.

EaSc 4500 Fossils of Missouri (3) Emphasis on collecting and identifying fossils in order to prepare teachers for teaching the fundamental aspects of common fossils from Missouri. Prerequisite: EaSc 1004.

Chemistry and Physics

Chemistry

In the section of Chemistry, the second digit in the course number stands for the following: 0--Unclassified, 1--Inorganic, 2--Analytical, 3--Organic, 4--Biochemistry, 5--Physical, 6--Organic and Biochemistry, 9--Research and Special Problems.

Chemistry Statement of Policy

All junior and senior chemistry majors are required to attend oral presentations by students who are enrolled in Chem 4900 and Chem 4910.

CHEMISTRY Major, B.A. Degree

(42 000391)

		Sem. Hours
MAJOR REQUIREMENTS		37-38
Chem 1131	General Chemistry I	5
Chem 1132	General Chemistry II	5
Chem 3111	Intermediate Inorganic Chemistry ...	3
Chem 3212	Quantitative Analysis	3
Chem 3341	Organic Chemistry I	4
Chem 3342	Organic Chemistry II	4
Chem 3500	Elements of Physical Chemistry ...	4
Chem 3920	Communication Skills in Chemistry ..	2
MINOR REQUIREMENTS		18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, Chem 1131 and Chem 1132 are allowed to fulfill 4 s.h. of Div. II A; the Modern Language Requirement fulfills 3 s.h. of Div. II C)		41
MODERN LANGUAGE REQUIREMENT		3-9
(Refer to Bachelor's Degree Requirements section for fulfillment options.)		
FREE ELECTIVES		11-25
MINIMUM TOTAL		124

CHEMISTRY Functional Major, B.S. in Ed. Degree

[Unified science certification to teach any of the beginning sciences (i.e., Biology I, Physics I, etc.) and all levels of chemistry, grades 9-12]
(41 000485)

				Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS				61-62	
Chem 1131	General Chemistry I	5	*Phys 1101	College Physics I	4
Chem 1132	General Chemistry II	5	*Phys 1102	College Physics II	4
Chem 3111	Intermediate Inorganic Chemistry ...	3	Biol 1010	Introduction to Ecology	4
Chem 3212	Quantitative Analysis	3	Biol 1011	General Botany	4
Chem 4231	Instrumental Analysis	4	Biol 1012	General Zoology	4
Chem 3500	Elements of Physical Chemistry	4	EaSc 1004	Intro. to the Sciences: Geology .	4
Chem 2650	Elem. Organic & Biochemistry	5	EaSc 3114	Meteorology	3
Chem 4900	Chem. Research for Teachers	1-2	EaSc 4010	Special Problems in Geology ...	1
			IA&T 2000	Technology & Change	3
*Students who want an endorsement in physics must take Phys 2121 and Phys 2122.					
MINOR NOT REQUIRED					
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, EaSc 1004 fulfills 4 s.h. of Div. II A; two courses in biology are allowed to fulfill 3 s.h. of Div. II A; IA&T 2000 fulfills 2 s.h. of Div. II A; in the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. III B)					36
Hist 1350	Div. II B or		PoIS 1510	Div. II B (required)	3
Hist 1351	Div. II B (required)	3	Psy 4230	Psy. of Adolescence	3
Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. of Div. II E.					
PROFESSIONAL EDUCATION REQUIREMENTS (see page 183)				28	
MINIMUM TOTAL				125	

CHEMISTRY Functional Major, B.S. Degree

(43 000393)

				Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS				64-68	
Chem 1131	General Chemistry I	5	Chem 4910	Research in Chemistry	4
Chem 1132	General Chemistry II	5	Phys 1101	College Physics I	4
Chem 3111	Intermediate Inorganic Chemistry ...	3	Phys 1102	College Physics II	4
Chem 3212	Quantitative Analysis	3	Math 1151	Calculus & Analytic Geometry I .	5
Chem 4231	Instrumental Analysis	4	Math 1152	Calculus & Analytic Geometry II .	5
Chem 3341	Organic Chemistry I	4	*Electives from the following		4-8
Chem 3342	Organic Chemistry II	4	Chem 4111	Advanced Inorganic Chemistry	4
Chem 4531	Physical Chemistry I	4	Chem 4313	Modern Organic Analysis	4
Chem 4532	Physical Chemistry II	4	Chem 4421	Biochemistry	4
Chem 3920	Communication Skills in Chemistry .	2			
*Eight semester hours required for ACS-CPT approved degree.					
MINOR NOT REQUIRED					
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Math 1151 fulfills 3 s.h. of Div. I C; Chem 1131, Chem 1132, Phys 1101 and Phys 1102 are allowed to fulfill 7 s.h. of Div. II A)					38
FREE ELECTIVES				18-22	
MINIMUM TOTAL				124	

CHEMISTRY Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor.)
(000478)

				Sem. Hours	
MINOR REQUIREMENTS				21	
Chem 1131	General Chemistry I	5	Chem 3341	Organic Chemistry I	4
Chem 1132	General Chemistry II	5	Chem 3342	Organic Chemistry II	4
Chem 3212	Quantitative Analysis	3			
UNIVERSITY STUDIES REQUIREMENTS (In the minor, Chem 1131 and Chem 1132 are allowed to fulfill 4 s.h. of Div. II A)					

Unclassified

Chem 4010 Special Topics in Chemistry (1-3) Topics of contemporary significance not given in-depth coverage in regularly offered courses. May be repeated as the topic is changed. Prerequisite: Chem 3500 or Chem 4531 or consent of instructor.

Chem 5010 Modern Chemical Theories and Practices (3-5) For secondary and primary teachers. Content varies but typically covers aspects of the main chemistry subdivisions, modern teaching methods in chemistry or current technological procedures. May be repeated for a maximum of 15 semester hours. Prerequisite: Chem 1132 and consent.

Inorganic

Chem 1103 Introduction to the Sciences: Chemistry (3) Beginning course emphasizing properties of inorganic materials, for those needing no chemical training beyond Chem 2650. Laboratory not included. Not available to those with credit in Chem 1104.

Chem 1104 Introduction to the Sciences: Chemistry (4) Beginning course emphasizing properties of inorganic materials, for those needing no chemical training beyond Chem 2650. Laboratory included. Not available to those with credit in Chem 1103.

Chem 1131 General Chemistry I (5) A first course in chemistry for those expecting to major or minor in chemistry, teach chemistry, or take pre-professional curricula. Includes laboratory experience. Prerequisite: a score of 17 on the mathematics section of the ACT, or 550 on the mathematics section of the SAT, or a passing score on a mathematics examination approved by the Department of Chemistry and Physics or a grade of C or better in Math 1101.

Chem 1132 General Chemistry II (5) A continuation of Chem 1131. Includes laboratory experience. Prerequisite: Chem 1131.

Chem 3111 Intermediate Inorganic Chemistry (3) An intermediate level inorganic lecture course with emphasis on main group and organometallic chemistry. Prerequisites: Chem 1132 and Chem 2650, or Chem 3342.

Chem 4111 Advanced Inorganic Chemistry (4) An advanced study of inorganic compounds with a focus on the transition elements, current issues and modern laboratory techniques. Prerequisites: Chem 3111; Chem 4532 or concurrently.

Analytical

Chem 3212 Quantitative Analysis (3) Application of chemical principles to the separation and determination of elements and compounds. Laboratory practice in basic techniques of gravimetric, volumetric, and instrumental analysis. Prerequisite: Chem 1132.

Chem 4231 Instrumental Analysis* (4) A study, including applications, of instrumental methods of chemical analysis. Prerequisites: Phys 1102 or concurrently, Chem 3111 and Chem 3212.

*Not available for graduate credit.

Organic

Chem 3341 Organic Chemistry I (4) A lecture and laboratory course in the chemistry of carbon compounds. Prerequisite: Chem 1132 or concurrently.

Chem 3342 Organic Chemistry II (4) A continuation of Chem 3341. Prerequisite: Chem 3341.

Chem 4313 Modern Organic Analysis* (4) A lecture and laboratory course emphasizing the instrumentation used for physical organic measurements and the identification of organic compounds. Prerequisites: Chem 4532 or concurrently and Chem 3342.

*Not available for graduate credit.

Biochemistry

Chem 4421 Biochemistry* (4) A study, including laboratory experience, of the chemical composition of living matter and the chemistry of life processes. Topics include proteins, carbohydrates, lipids, nucleic acids, and metabolism. Prerequisite: Chem 3342.

*Not available for graduate credit.

Physical

Chem 3500 Elements of Physical Chemistry (4)

Development of principles and conceptual models of physical chemistry with minimal mathematical rigor with emphasis on practical applications and laboratory experience.

Prerequisites: Math 1111 or Math 1150 or Math 1151; Chem 2650 or Chem 3341 or concurrently; and Chem 3212.

Chem 4531 Physical Chemistry I* (4) The kinetic-molecular theory of gases, thermodynamics, thermochemistry, free energy, chemical equilibria, and phase relationships.

Laboratory investigations include the topics of gas thermometry, critical phenomena, enthalpy, reaction energy, free energy, and phase relationships. Prerequisites: Chem 3212, Phys 1102 and Math 1152.

Chem 4532 Physical Chemistry II* (4) Quantum mechanics, atomic and molecular structure, spectroscopy, electrical and magnetic properties of molecules, electromotive force, and chemical kinetics. Laboratory investigations include the topics of atomic and molecular spectroscopy, x-ray diffraction, magnetic susceptibility, electromotive force in chemical cells, and chemical kinetics. Prerequisite: Chem 4531.

*Not available for graduate credit.

Organic and Biochemistry

Chem 2650 Elementary Organic and Biochemistry (5) A brief introductory course in organic chemistry and fundamental concepts of biochemistry with emphasis on physiological, nutritional, and comparative aspects. Includes laboratory experience. May not be used for credit in chemistry major and minor programs on the B.A. and B.S. degrees. Prerequisite: Chem 1104 or Chem 1132. Chem 2651 and Chem 2652 are offered sequentially in the same semester--concurrent enrollment and completion of both courses are required for credit.

Chem 2651 Elementary Organic Chemistry (3) Introductory course in organic chemistry. Includes laboratory experience. May not be used for credit in chemistry major or minor programs on the B.A. or B.S. degrees. Prerequisite: Chem 1104 or Chem 1132. Chem 2651 and Chem 2652 are offered sequentially in the same semester--concurrent enrollment and completion of both courses are required for credit.

Chem 2652 Elementary Biochemistry (2) Fundamental concepts of biochemistry with emphasis on physiological, nutritional and comparative aspects. Includes laboratory experience. May not be used for credit in chemistry major or minor programs on the B.A. or B.S. degrees. Prerequisite: Chem 2651 and Chem 2652 are offered sequentially in the same semester; concurrent enrollment and completion of both courses are required for credit.

Research and Special Problems

Chem 3920 Communication Skills in Chemistry (2)

Techniques for searching the chemical literature, writing scientific reports and papers, and making effective oral presentations using audiovisual aids to effectively convey technical ideas and information. Prerequisite: a minimum of 17 semester hours of chemistry. Students are encouraged to enroll during their junior year.

Chem 4900 Chemical Research for Teachers* (1-2)

Individual work on a chemical research project under the supervision of a staff member. Project will terminate in a written and oral presentation. Prerequisites: Chem 2650, Chem 3212 and consent.

Chem 4910 Research in Chemistry* (1-5) Individual work on a chemical research project under supervision of a staff member. Project will terminate in a written and oral presentation. May be repeated for a maximum of 10 semester hours. Prerequisites: Chem 3212, Chem 3342 and consent.

Chem 4911 Special Problems in Chemistry (1-3) Individual work under supervision of a staff member. May be repeated for a maximum of 3 semester hours. Prerequisite: consent.

*Not available for graduate credit.

Physics

In the section of Physics, the second digit in the course number stands for the following: 0--Laboratory and Unclassified, 1--General, 2--Mechanics, 3--Electricity, 4--Thermodynamics, 5--Modern Physics, 6--Light and Sound, 7--Particle, 8--Electronics, 9--Research and Special Problems.

PHYSICS Functional Major, B.A. Degree

(42 000396)

FUNCTIONAL MAJOR REQUIREMENTS				Sem. Hours
Phys 3012	Elec. Measurements Laboratory	2	Math 2153	Calculus & Analytic Geometry III 3
Phys 2121	University Physics I	5	Math 3151	Differential Equations 3
Phys 2122	University Physics II	5	CS 1100	Intro. to Computing I 3
Phys 3211	Analytical Mechanics I	2	Departmentally approved electives	
Phys 4212	Analytical Mechanics II	3	from the following	
Phys 3311	Electric Circuit Theory	3	Phys 4012	Microelectronics Laboratory 1
Phys 4411	Thermodynamics	3	Phys 4013	Solid State Laboratory 1
Phys 3511	Modern Physics	4	Phys 4312	Electricity & Magnetism 3
Phys 3611	Optics	4	Phys 4512	Intro. to Quantum Mechanics 3
Chem 1131	General Chemistry I	5	Phys 4513	Solid State Physics 3
Chem 1132	General Chemistry II	5	Phys 4711	Atomic & Nuclear Physics 3
Math 1151	Calculus & Analytic Geometry I	5	Phys 4812	Electronics 3
Math 1152	Calculus & Analytic Geometry II	5		

Students whose high school preparation is inadequate should take Phys 1101 during their first year at Central.

MINOR NOT REQUIRED

UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Math 1151 fulfills 3 s.h. of Div. I C; Phys 2121, Phys 2122, Chem 1131, and Chem 1132 are allowed to fulfill 7 s.h. of Div. II A; the Modern Language Requirement fulfills 3 s.h. of Div. II C)	35
MODERN LANGUAGE REQUIREMENT (Refer to Bachelor's Degree Requirements section for fulfillment options.)	3-9
FREE ELECTIVES	10-18
MINIMUM TOTAL	124

PHYSICS Functional Major, B.S. Degree

(43 000397)

FUNCTIONAL MAJOR REQUIREMENTS				Sem. Hours
Phys 3012	Elec. Measurements Laboratory	2	Chem 1132	General Chemistry II 5
Phys 2121	University Physics I	5	Math 1151	Calculus & Analytic Geometry I 5
Phys 2122	University Physics II	5	Math 1152	Calculus & Analytic Geometry II 5
Phys 3211	Analytical Mechanics I	2	Math 2153	Calculus & Analytic Geometry III 3
Phys 4212	Analytical Mechanics II	3	Math 3151	Differential Equations, 3 or
Phys 3311	Electric Circuit Theory	3	Math 4160	Advanced Applied Calc., 3 3
Phys 4312	Electricity & Magnetism	3	Departmentally approved electives	
Phys 4411	Thermodynamics	3	from the following	
Phys 3511	Modern Physics	4	Phys 4012	Microelectronics Laboratory 1
Phys 4512	Intro. to Quantum Mechanics	3	Phys 4013	Solid State Laboratory 1
Phys 3611	Optics	4	Phys 4513	Solid State Physics 3
Phys 4711	Atomic & Nuclear Physics	3	Phys 4812	Electronics 3
Chem 1131	General Chemistry I	5		

Students whose high school preparation is inadequate should take Phys 1101 during their first year at Central.

MINOR NOT REQUIRED

UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Math 1151 fulfills 3 s.h. of Div. I C; Phys 2121, Phys 2122, Chem 1131 and Chem 1132 are allowed to fulfill 7 s.h. of Div. II A)	38
FREE ELECTIVES	16
MINIMUM TOTAL	124

PHYSICS Minor, B.S. Degree

(Central does not confer teacher certification for this minor; available only to mathematics majors)
(000479)

				Sem. Hours	
MINOR REQUIREMENTS				20-21	
Phys	2121	University Physics I	5	Electives (continued)	
Phys	2122	University Physics II	5	Phys 4411	Thermodynamics 3
Phys	3511	Modern Physics	4	Phys 4512	Intro. to Quantum Mechanics 3
Electives from the following			6-7	Phys 3611	Optics 4
Phys	4312	Electricity & Magnetism	3	Phys 4711	Atomic & Nuclear Physics 3
UNIVERSITY STUDIES REQUIREMENTS (In the minor, Phys 2121 and Phys 2122 are allowed to fulfill 4 s.h. of Div. II A)					

PHYSICS Functional Major, B.S. in Ed. Degree

[Unified science certification to teach any of the beginning sciences (i.e., Biology I, Chemistry I, etc.)
and all levels of physics, grades 9-12]
(41 000486)

				Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS				78	
Phys	2121	University Physics I	5	Biol 1010	Introduction to Ecology 4
Phys	2122	University Physics II	5	Biol 1011	General Botany 4
Phys	3211	Analytical Mechanics I	2	Biol 1012	General Zoology 4
Phys	4312	Electricity & Magnetism	3	EaSc 1004	Intro. to the Sciences: Geology 4
Phys	4411	Thermodynamics	3	EaSc 3114	Meteorology 3
Phys	3511	Modern Physics	4	EaSc 4010	Special Problems in Geology 1
Phys	4512	Intro. to Quantum Mechanics	3	Math 1151	Calculus & Analytic Geometry I 5
Phys	3611	Optics	4	Math 1152	Calculus & Analytic Geometry II 5
Phys	4711	Atomic & Nuclear Physics	3	Math 2153	Calculus & Analytic Geometry III 3
Chem	1131	General Chemistry I	5	IA&T 2000	Technology & Change 3
Chem	1132	General Chemistry II	5		

MINOR NOT REQUIRED

UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Math 1151 fulfills 3 s.h. of Div. I C;

EaSc 1004 fulfills 4 s.h. of Div. II A; two courses in biology are allowed to fulfill 3 s.h. of Div. II A; IA&T 2000 fulfills

2 s.h. of Div. II A; in the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. III B) 33

Hist 1350 Div. II B or PolS 1510 Div. II B (required) 3

Hist 1351 Div. II B (required) 3 Psy 4230 Psy. of Adolescence 3

Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. of Div. II E.

PROFESSIONAL EDUCATION REQUIREMENTS (see page 183) 28

MINIMUM TOTAL 139

COOPERATIVE ENGINEERING 3-2 Functional Major, B.A. Degree

(42 000395)

The University of Missouri-Rolla, the University of Missouri-Columbia, the University of Kansas, and Central Missouri State University offer cooperative five-year engineering programs leading to a B.A. degree from Central and a B.S. in Engineering from the cooperating institution. Any student electing to enter upon the five-year program must apply for a degree audit at the close of his/her sophomore year indicating upon the application that he/she plans to complete the cooperative plan at another institution and name the institution. For details, consult the Chair of the Chemistry and Physics Department. For the first three years, students should complete the following program.

				Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS				62	
Phys	3012	Elec. Measurements Laboratory	2	SpCm 1000	Public Speaking 3
Phys	2121	University Physics I	5	Math 1151	Calculus & Analytic Geometry I 5
Phys	2122	University Physics II	5	Math 1152	Calculus & Analytic Geometry II 5
Phys	3211	Analytical Mechanics I	2	Math 2153	Calculus & Analytic Geometry III 3
Phys	4212	Analytical Mechanics II	3	Math 3151	Differential Equations 3
Phys	3311	Electric Circuit Theory	3	CS 1010	FORTRAN Programming 1
Phys	4411	Thermodynamics	3	Grap 1110	Fundamentals of Drafting 3
Chem	1131	General Chemistry I	5	Econ 1010	Principles of Economics 3
Chem	1132	General Chemistry II	5	Econ 1011	Principles of Economics 3

Students whose high school preparation is inadequate should take Phys 1101 during their first year at Central.

Depending upon major engineering area, the student should consider taking Phys 3511, Phys 3611, Phys 4513, Phys 4312

and/or Phys 4711. In particular, electrical engineers should consider taking Phys 3511, Phys 3611, Phys 4513,

and/or Phys 4312. Other engineering students should check major requirements of the transfer university.

MINOR NOT REQUIRED

(continued on next page)

(continued from previous page)

UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, SpCm 1000 fulfills 3 s.h. of Div. I B; Math 1151 fulfills 3 s.h. of Div. I C; Phys 2121, Phys 2122, Chem 1131, and Chem 1132 are allowed to fulfill 7 s.h. of Div. II A; Econ 1010 fulfills 3 s.h. of Div. II B; the Modern Language Requirement fulfills 3 s.h. of Div. II C) 29

MODERN LANGUAGE REQUIREMENT 3-9
(Refer to Bachelor's Degree Requirements section for fulfillment options.)

MINIMUM TOTAL AT CENTRAL 94

Laboratory and Unclassified

Phys 2020 Analytic Methods for Physics and Engineering

(3) Technique development in and application of topics necessary to describe physical problems in the physics and pre-engineering curricula including coordinate systems, vectors and vector operators, series expansions, complex numbers, partial derivatives, special functions, and ordinary differential equations. Prerequisite: Phys 2121.

Phys 3012 Electrical Measurements Laboratory (2) Basic electrical and magnetic measurements from DC to radio frequencies, including electric transients and calibration procedures. Introductory experiments using analog and digital circuits. Prerequisite: Phys 3311 concurrently.

Phys 3020 Special Topics in Physics (1-4) Study, interpretation, and discussion of special topics and problems in physics. May be repeated for a maximum of 6 semester hours. Prerequisite: consent of instructor.

Phys 3040 Practicum in Physics Laboratory Management (1.5) The student will assist with all aspects of an undergraduate physics laboratory at the appropriate level, including answering student questions, preparing equipment, and grading. The student will also be expected to prepare and present two or three introductory lectures for the laboratory, critique materials and methods presently in use, and suggest, design, and produce written materials for a new experiment. May be repeated for a maximum of 3 semester hours. Prerequisite: consent of department.

Phys 4012 Microelectronics Laboratory (1) The application of semiconductor devices such as transistors, operational amplifiers, large and medium scale integrated circuits (LSI and MSI) to the fields of instrumentation and computer interfacing. Prerequisite: Phys 4812 concurrently.

Phys 4013 Solid State Laboratory (1) A laboratory course for Phys 4513. Experiments in solid state physics to include the drift mobility, Hall effect, photoconductivity, photovoltaic effect, crystal growing, ferroelectricity, and magnetic resonance. Prerequisite: Phys 4513 concurrently.

Phys 5010 Current Theories and Practices in Physics (3-5) Designed for teachers. Content varies but typically covers aspects of mechanics, heat, sound, electricity and magnetism, optics, or modern physics. May be repeated for a maximum of 10 semester hours. Prerequisite: consent.

General

Phys 1100 Survey of Physics (4) An introduction to the more important areas of traditional and contemporary physics. Topics include mechanics, heat, sound, electricity and magnetism, light and optics, atomic structure, lasers, structure of matter and the nucleus, nuclear power, and relativity and astrophysics. Laboratory included.

Phys 1101 College Physics I (4) Properties of matter, mechanics, sound, and heat. Laboratory required. Prerequisite: Math 1111 or consent of instructor. Phys

1100 and/or Phys 1110 is recommended for students whose background in science and/or mathematics is limited.

Phys 1102 College Physics II (4) Electricity, magnetism, light, and atomic and nuclear physics. Laboratory required. Prerequisite: Phys 1101.

Phys 1103 Introduction to the Sciences: Physics (3) An introduction to physics. Topics include mechanics, energy, heat, sound, electricity, magnetism, light, atomic and nuclear physics, relativity, and astrophysics. Laboratory not included. Not available to those with credit in Phys 1104.

Phys 1104 Introduction to the Sciences: Physics (4) An introduction to physics. Topics include mechanics, energy, heat, sound, electricity, magnetism, light, atomic and nuclear physics, relativity, and astrophysics. Laboratory included. Not available to those with credit in Phys 1103.

Phys 1110 Problem Solving in the Physical Sciences (2) A basic course in problem solving with an emphasis on creative solutions to word problems based on physical principles. Recommended for students whose background in science and mathematics is limited and are taking or plan to take Phys 1101 or Phys 2121 as well as for students who want to improve their general problem solving skills.

Phys 2121 University Physics I (5) Kinematics, dynamics, statics, rotational motion, elasticity, periodic motion, fluids, and heat. Laboratory required. Prerequisites: Phys 1101 or consent of department, and Math 1151.

Phys 2122 University Physics II (5) Wave motion, sound, electricity and magnetism, electromagnetic waves, and optics. Laboratory required. Prerequisites: Phys 2121 and Math 1152.

Phys 3110 Introduction to Astrophysics (2) Current topics in astrophysics on a descriptive level. Examples of topics are quasars, pulsars, neutron stars, x-ray astronomy, cosmological theories, etc.

Mechanics

Phys 3211 Analytical Mechanics I (2) The principles of mechanics using elements of vector analysis applied to bodies in equilibrium, trusses, friction; centroids, and moments of inertia. Prerequisites: Phys 2121 and Math 1152.

Phys 4212 Analytical Mechanics II (3) Using a vector analysis, a study is made of kinematics; motion of a particle; kinetics of rigid bodies; work and energy, impulse and momentum; impact. Prerequisites: Phys 3211 and Math 2153.

Electricity

Phys 3311 Electric Circuit Theory (3) The basic principles of circuit analysis including Kirchhoff's laws, network theorems, equivalent circuits, transients, and AC circuits. Prerequisite: Phys 2122.

Phys 4312 Electricity and Magnetism (3) Electric and magnetic fields using vector analysis, dielectrics, vector potential, Coulomb's law, Gauss' law, Laplace's equation, and Maxwell's equations. Prerequisites: Phys 2122 and Math 2153.

Thermodynamics

Phys 4411 Thermodynamics (3) Properties of gases, kinetic theory of gases; laws of thermodynamics; entropy and introduction to statistical thermodynamics. Prerequisites: Phys 2122 and Math 2153 or concurrently.

Modern Physics

Phys 3511 Modern Physics (4) The atomic view of matter and radiation. Introduction to special relativity and quantum theory and x-rays. The atomic models of Bohr and Rutherford. Radioactivity. Laboratory required.

Prerequisites: Phys 2122 and Math 2153 or concurrently.
Phys 4512 Introduction to Quantum Mechanics (3) Experimental basis; fundamental postulates; Schrodinger wave equation; superposition of states; calculation of energy, position, momentum; hydrogen atom; identical particles; perturbation theory. Prerequisites: Phys 3511 and Math 2153.

Phys 4513 Solid State Physics (3) Crystal structure and diffraction in solids. Thermal dielectric properties. Free electron model of metals. Band theory of solids. Brillouin zones. Prerequisite: Phys 3511.

Light and Sound

Phys 1611 Physics of Sound (3) The physical nature of sound including its production, transmission and reception, the nature of musical sounds and the recording and reproduction of sound. A laboratory is part of the course.

Phys 3611 Optics (4) Wave optics including the principles of superposition, interference, diffraction, polarization, dispersion, and introduction to quantum optics. Laboratory required. Prerequisites: Phys 2122 and Math 2153.

Particle

Phys 4711 Atomic and Nuclear Physics (3) Designed to use introductory quantum concepts and techniques as applied to the analysis of atoms and nuclei. Prerequisite: Phys 3511.

Electronics

Phys 4812 Electronics (3) An intermediate study of electron tube and transistor characteristics and applications as circuit elements; electronic instruments and systems. Prerequisite: Phys 3311.

Research and Special Problems

Phys 4911 Special Problems in Physics (1-3) Individual work under supervision of a staff member. Problems may be undertaken in any phase of physics. May be repeated for a maximum of 6 semester hours.

Phys 5951 Physics Research for Teachers (1-5) Individual work on a physics research project under the supervision of a physics staff member. Project will terminate in a written and oral presentation. May be repeated for a maximum of 10 semester hours. Prerequisite: consent.

Integrative Studies General

IGen 4236 Science and Religion: From Conflict to Dialogue* (3) A clarification of the historical and philosophical issues that arise in the relationship between science and religion. The course emphasizes a variety of interpretive viewpoints.

*Not available for graduate credit.

Communication

In the Department of Communication, the second digit in the course number stands for the following: 0--General.

General

Comm 4085 Women and Minorities in Media (3) The study of women and minorities, their contributions and images, in a variety of media. Prerequisite: MCom 1000 or SpCm 3000 or consent of instructor.

Comm 5000 Introduction to Graduate Study in Communication (3) Research methods, bibliographical resources, and professional writing in the field of communication.

Comm 5010 Theories of Communication (3) Overview of the major theories used to provide a basis for studying the communication process.

Comm 5090 Thesis (1-6) May be repeated for a maximum of 6 semester hours.

Comm 6000 Readings (1-3) Guided study in the literature of special and related fields of communication. May be repeated for a maximum of 6 semester hours. Prerequisite: 15 semester hours graduate credit.

Comm 6090 Research Problems (1-6) Supervised research in contemporary problems in communication. May be repeated for a maximum of 6 semester hours.

Integrative Studies General

IGen 3224 Critical Thinking (3) Provides insight into and application of the skills needed to think critically about interpersonal and media messages, as well as analyze information.

IGen 3232 Media Literacy (3) Explores the relationships between media, its consumers, and producers. Integrates cultural, technological, and economic perspectives on mass media and visual communication.

IGen 4224 Communication, Science and Technology (3) Students will focus on the interactions among science, technology and society by examining scientific communication and scientific technological controversies. Prerequisite: completion of University Studies Div. II A.

Mass Communication

In the area of Mass Communication, the second digit in the course number stands for the following: 0--General, 1--Broadcasting and Film, 2--Journalism, 3--Public Relations and Advertising.

Mass Communication Statement of Policy

The following statements of philosophy and policy are designed to reflect both the spirit and specific guides of the Accrediting Council on Education in Journalism and Mass Communications.

Philosophy

We believe the best preparation for a successful career in mass communication is based upon a broad liberal arts education with a career emphasis.

Students majoring in the mass communication degree programs at Central Missouri State University must complete, before graduation, a minimum of 90 semester hours beyond the offerings in mass communication, of which 65 semester hours must be in the liberal arts and sciences. Thus, taking mass communication courses beyond the required number in a major, or majoring and minoring between the mass communication programs, can only be done by taking course work beyond the 124 semester hours required for graduation from the University.

Objectives

The first objective is to ensure study of the liberal arts and sciences to prepare students to participate in a variety of societal roles.

The second objective is to provide a balanced academic program for future communication professionals, including appropriate emphasis on theory and necessary skills and techniques.

The third objective is to develop an awareness of the heritage, ethics, and the power of the media, to enable students to make intelligent use of their professional skills, from entry-level to policy-making positions.

Admissions

Students entering Central Missouri State University to pursue a degree in mass communication (Mass Communication, B.A.; Broadcasting and Film, B.S.; Journalism, B.S.; Public Relations, B.S.) should indicate their intentions to become a mass communication major at the time of first enrollment and be assigned a departmental adviser. Departmental advisers can be obtained at the department office, Martin 136.

Admission to all mass communication degree programs is conditional upon the completion of the following prerequisites:

1. Completion of the following University Studies requirements with no grade lower than C: SpCm 1000; Engl 1020 and Engl 1030, or Engl 1080.
2. Proficiency in typing is required for all writing courses. This proficiency may be demonstrated at the department. BE&O 1530 and BE&O 1532 or equivalent should qualify a student for this requirement.

Application into the mass communication programs should be made during the freshman year. Applications made after completion of 75 semester hours of academic credit will normally entail the taking of more than the minimum of 49 additional semester hours. Application forms are available in Martin 136.

Departmental decision on admission will be made after completing the 9 semester hours of course work in the appropriate category. Students must maintain a 2.25 grade-point average with no course credit lower than C in these courses:

1. Broadcasting and Film Major: MCom 1000, MCom 2111, MCom 2115.
2. Journalism Major: MCom 1000, MCom 1220, MCom 2220.
3. Mass Communication Major: MCom 1000, MCom 2111, MCom 1220.
4. Public Relations Major: MCom 1220, MCom 2220, MCom 2320.

Course Work

1. Subsequent to initial enrollment as entering students, students majoring in mass communication programs should obtain pre-enrollment authorization from their departmental adviser before registering for additional classes.
2. Students will not be permitted to withdraw more than one time from each mass communication course without permission of the departmental Student Affairs Committee.
3. A student may not graduate with a degree with a mass communication major in which the grade of record for any required mass communication course work is an F. Excluding MCom 1000, MCom 2111, MCom 2115, MCom 1220, MCom 2220, and MCom 2320, a maximum of six semester hours in which the grade of record for any mass communication coursework is a D may be counted toward a degree with a mass communication major.
4. Course substitutions for the catalog requirements may be made only upon approval by the appropriate departmental Program Coordinator.
5. Some production or writing courses require participation in activities outside the class meeting hours. Students should be prepared to participate in these activities which sometimes include assignments in conjunction with the campus media.
6. Some lecture courses require attendance at departmental colloquia and/or other university presentations. Students should be prepared to participate in these assignments as a part of their degree programs.
7. In order to graduate with a degree with a mass communication major, a student must attain a 2.25 (or above) grade-point average for all credit

- hours (completed at Central or elsewhere) and attain a 2.35 (or above) grade-point average for all course work in the major.
8. To qualify for graduation, students must have completed 90 semester hours outside mass communication, of which 65 must be in the liberal arts and sciences.

9. For the purposes of our programs, liberal arts and sciences include non-mass communication (MCom) courses listed in the College of Arts and Sciences and all courses listed in sociology (Soc), psychology (Psy), and economics (Econ) with the exception of Art 3630, Art 3660, Art 3670, SpCm 2110, SpCm 3127, Thea 1600, and Thea 4610.

BROADCASTING AND FILM Major, B.S. Degree

For admissions and classwork requirements, see Statement of Policy.
(43 000342)

		Sem. Hours
MAJOR REQUIREMENTS		34
MCom 1000	Intro. to Mass Communication 3	
MCom 4050	Mass Communication Law 3	
MCom 2100	Foundations of Broadcasting 3	
MCom 2111	Audio Production & Performance . . . 3	
MCom 2112	Video Production & Performance . . . 3	
MCom 2115	Broadcast Copywriting 3	
Electives from the following 3-6		
MCom 3110	Radio Production 3	
MCom 3111	Television Production 3	
MCom 3112	Film Production 3	
Electives from the following 6-8		
MCom 3070	Media Research Methods 2	
MCom 4045	Media Economics & Sales 3	
Proficiency in typing is required (see Statement of Policy).		
MINOR REQUIREMENTS (see Statement of Policy)		18-25
UNIVERSITY STUDIES REQUIREMENTS		48
SpCm 1000	Div. I B (required) 3	
SpCm 3000	Div. II E (required) 3	
FREE ELECTIVES (see Statement of Policy)		17-24
MINIMUM TOTAL		124

BROADCASTING AND FILM Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)
(000343)

		Sem. Hours
MINOR REQUIREMENTS		21
MCom 1000	Intro. to Mass Communication 3	
MCom 4050	Mass Communication Law 3	
MCom 2100	Foundations of Broadcasting 3	
MCom 2111	Audio Production & Performance . . . 3	
MCom 2112	Video Production & Performance . . . 3	
Electives from the following 6		
MCom 3010	Mass Media Practicum 1-3	
MCom 4040	Media Management 2	
Electives (continued)		
MCom 4080	Criticism of Mass Media 2	
MCom 2115	Broadcast Copywriting 3	
MCom 3110	Radio Production 3	
MCom 3111	Television Production 3	
MCom 3112	Film Production 3	
MCom 3130	Broadcast Prog. & Operations 3	
MCom 4110	Adv. Television Production . . 3	

JOURNALISM Major, B.S. Degree

For admissions and classwork requirements, see Statement of Policy.
(43 000345)

		Sem. Hours
MAJOR REQUIREMENTS		34
MCom 1000	Intro. to Mass Communication 3	
MCom 3010	Mass Media Prac. (Journalism) 2	
MCom 4050	Mass Communication Law 3	
MCom 1220	Elements of News Reporting 3	
MCom 2200	Heritage of American Journalism 2	
MCom 2220	Copyediting & Layout 3	
MCom 3200	Intermediate News Reporting: Reporting of Public Affairs 3	
MCom 3225	Feature Writing 3	
MCom 4235	Advanced News Reporting 3	
Electives from the following 3-6		
MCom 3070	Media Research Methods 2	
MCom 4040	Media Management 2	
MCom 4045	Media Economics & Sales 3	
MCom 4060	Comparative Media Systems 2	
MCom 4080	Criticism of Mass Media 2	
Proficiency in typing is required (see Statement of Policy).		
MINOR REQUIREMENTS (see Statement of Policy)		18-25
UNIVERSITY STUDIES REQUIREMENTS		48
SpCm 1000	Div. I B (required) 3	
SpCm 3000	Div. II E (required) 3	
IGen 4224	Div. III A or	
IGen 3232	Div. III A or	
IGen 3224	Div. III A (required) 3	
FREE ELECTIVES (see Statement of Policy)		17-24
MINIMUM TOTAL		124

JOURNALISM Minor, B.S. in Ed. Degree

(Certification to teach journalism in grades 9-12 requires 30 semester hours)
(000346)

		Sem. Hours
MINOR REQUIREMENTS		21
MCom 1000	Intro. to Mass Communication 3	
MCom 3010	Mass Media Practicum 1	
MCom 4050	Mass Communication Law 3	
MCom 1220	Elements of News Reporting 3	
MCom 2200	Heritage of American Journalism 2	
MCom 3225	Feature Writing 3	
MCom 4271	School Publications 2	
Grap 1210	Elementary Photography 3	

JOURNALISM Minor for a Bachelor's Degree

(Except for a B.S. in Ed. Degree)
(200008)

		Sem. Hours
MINOR REQUIREMENTS		20
MCom 1000	Intro. to Mass Communication 3	
MCom 4050	Mass Communication Law 3	
MCom 1220	Elements of News Reporting 3	
MCom 2200	Heritage of American Journalism 2	
MCom 2220	Copyediting & Layout 3	
MCom 3225	Feature Writing, 3 or	
MCom 3200	Intermediate News Reporting: Reporting of Public Affairs, 3 3	
Elective from the following 3		
MCom 3010	Mass Media Practicum 1-2	
MCom 4080	Criticism of Mass Media 2	
*MCom 3230	Photo Journalism 3	
MCom 3235	Broadcast Journalism 3	
MCom 4220	Editorial & Interpretive Writing 3	
MCom 4235	Advanced News Reporting 3	

*Course has prerequisite(s) not listed in the program.

MASS COMMUNICATION Major, B.A. Degree

For admissions and classwork requirements, see Statement of Policy.
(42 000348)

		Sem. Hours
MAJOR REQUIREMENTS		31
MCom 1000	Intro. to Mass Communication 3	MCom 3100 History & Art of the Film 3
MCom 4050	Mass Communication Law 3	MCom 1220 Elem. of News Reporting 3
MCom 4060	Comparative Media Systems 2	Departmentally approved electives in
MCom 4080	Criticism of Mass Media 2	mass communication 12
MCom 2111	Audio Production & Performance 3	
Proficiency in typing is required (see Statement of Policy).		
MINOR REQUIREMENTS (see Statement of Policy)		18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (The Modern Language Requirement fulfills 3 s.h. of Div. II C)		
SpCm 1000	Div. I B (required) 3	IGen 4224 Div. III A or
SpCm 3000	Div. II E (required) 3	IGen 3232 Div. III A or
		IGen 3224 Div. III A (required) 3
MODERN LANGUAGE REQUIREMENT		3-9
(Refer to Bachelor's Degree Requirements section for fulfillment options.)		
FREE ELECTIVES (see Statement of Policy)		14-27
MINIMUM TOTAL		124

MASS COMMUNICATION Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)
(000349)

		Sem. Hours
MINOR REQUIREMENTS		20
MCom 1000	Intro. to Mass Communication 3	MCom 1220 Elem. of News Reporting 3
MCom 4060	Comparative Media Systems 2	Departmentally approved electives in
MCom 4080	Criticism of Mass Media 2	mass communication 7
MCom 2111	Audio Production & Performance 3	

PUBLIC RELATIONS Major, B.S. Degree

For admissions and classwork requirements, see Statement of Policy.
(43 000351)

		Sem. Hours
MAJOR REQUIREMENTS		34
MCom 1000	Intro. to Mass Communication 3	Electives (continued)
MCom 3070	Media Research Methods 2	MCom 4080 Criticism of Mass Media 2
MCom 4050	Mass Communication Law 3	MCom 4095 Internship 1-3
MCom 1220	Elements of News Reporting 3	MCom 2115 Broadcast Copywriting 3
MCom 2220	Copyediting & Layout 3	MCom 4170 Instr. & Corp. Television 3
MCom 4210	Magazine Design & Production 3	MCom 3225 Feature Writing 3
MCom 2320	Public Relations 3	MCom 3230 Photo Journalism 3
MCom 4380	Publicity 3	MCom 4220 Editorial & Inter. Writing 3
MCom 4385	Case Studies in Public Relations 2	MCom 3340 Mass Media Advertising 3
MCom 4390	Campaigns 3	Grap 1010 Intro. to Desktop
Electives from the following 6		Publishing and Printing 3
MCom 3010	Mass Media Practicum 1-3	Grap 1210 Elementary Photography 3
MCom 4000	Special Topics in Mass Media 1-3	
Proficiency in typing is required (see Statement of Policy).		
MINOR REQUIREMENTS (see Statement of Policy)		18-25
UNIVERSITY STUDIES REQUIREMENTS		
SpCm 1000	Div. I B (required) 3	IGen 4224 Div. III A or
SpCm 3000	Div. II E (required) 3	IGen 3232 Div. III A or
		IGen 3224 Div. III A (required) 3
FREE ELECTIVES (see Statement of Policy)		17-24
MINIMUM TOTAL		124

General

MCom 1000 Introduction to Mass Communication (3)

Theory of mass communication, roles and functions of mass media in a contemporary society.

MCom 3000 Film Appreciation (3) Students will critically examine motion pictures as a communicative art. For mass communication majors or minors, this course is available only as a free elective or University Studies requirement.

MCom 3010 Mass Media Practicum (1) Laboratory experience in the mass media. May be repeated for 1 semester hour per semester for a maximum of 3 semester hours in combination with MCom 4095. Prerequisite: consent of instructor.

MCom 3070 Media Research Methods (2) Use of research techniques applied to the study of communication, with stress upon those factors affecting the mass media.

MCom 4000 Special Topics in Mass Media (1-3)

Departmentally selected topics of contemporary interest in mass media or specialized areas of the media; variable content. May be repeated for a maximum of 3 semester hours.

MCom 4040 Media Management (2) Elements involved in the organization and successful operation of mass media enterprises; special emphasis upon interpersonal problems.

MCom 4045 Media Economics and Sales (3) Business aspects of mass media in a competitive economy, including techniques for selling advertising space and time.

MCom 4050 Mass Communication Law (3) Application of principles of law to the mass communication media, media practice, advertising, and freedom of information, including libel, right of privacy, copyright.

MCom 4060 Comparative Media Systems (2) Role of mass media in major countries and in developing areas; sociopolitical, economic, cultural and historical perspective.

MCom 4080 Criticism of Mass Media (2) Evaluation of the products of the audiovisual and print media, social effects, and the historical bases of public criticism of the individual media.

MCom 4090 Special Projects in Mass Communication (1-3) Individual study/research in mass communication. May be repeated for a maximum of 3 semester hours. Prerequisite: written consent.

MCom 4095 Internship (1-3) A training program in the professional mass media or public relations field. May be repeated for a maximum of 3 semester hours in combination with MCom 3010. Prerequisites: completion of 20 semester hours of preadmission course work in the major, 2.50 overall GPA and 2.75 GPA in major, and approval of the internship committee.

MCom 5030 Seminar in Mass Media (2) Studies in a specialized area of mass media with emphasis on individual research. May be repeated for a maximum of 6 semester hours.

MCom 5060 International Communication (2) The role of mass media as instruments of national policy, stressing physical and psychological factors limiting exchange of information between nations.

MCom 5080 The Effects of Mass Communication (3) Influence of radio, television, and film upon social environment.

Broadcasting and Film

MCom 2100 Foundations of Broadcasting (3) Legal, historical, and economic foundations of broadcasting. Prerequisite: MCom 1000 or consent.

MCom 2111 Audio Production and Performance (3) Techniques of vocal skills and operation of audio equipment used in broadcasting.

MCom 2112 Video Production and Performance (3) Basic techniques and procedures in performance and production of video programs of the type most commonly found in local television stations. Prerequisite: MCom 2111.

MCom 2115 Broadcast Copywriting (3) Script preparation for various nondramatic and nonjournalistic uses in radio, television, and film presentations. Keyboarding ability necessary.

MCom 3100 History and Art of the Film (3) The development of film as an art form and as a social force in the world today.

MCom 3110 Radio Production (3) Techniques of radio production with practical on-the-air application. Prerequisite: MCom 2111.

MCom 3111 Television Production (3) Intermediate course in television production covering all aspects of on-location video taping and post production editing techniques. Prerequisite: MCom 2112.

MCom 3112 Film Production (3) Film production using the 16mm format; principles of dramatic direction, documentary filming, creative editing, and animation. Prerequisite: MCom 2112.

MCom 3130 Broadcast Programming and Operations (3) Operation and programming of radio and television stations with emphasis on analysis of programming principles and practices, schedule development and audience behavior. Prerequisite: MCom 2100.

MCom 4110 Advanced Television Production (3) Creative elements in television production and direction with emphasis on dramatic direction, remotes, music programs, and the creative use of special effects. Prerequisite: MCom 3111.

MCom 4115 Writing Dramatic and Documentary Programs (3) Script preparation for drama and documentary in radio, television and film.

MCom 4170 Instructional and Corporate Television (3) Emphasis on television utilization as an instructional tool. Laboratory experience in the preparation, presentation, and analysis of student productions.

MCom 4175 New Media Technologies (2) Technological developments and their uses (existing and potential) as information distribution systems.

Journalism

MCom 1220 Elements of News Reporting (3) News, news sources, principles and techniques of news writing; duties and responsibilities of the reporter. Keyboarding ability necessary. Prerequisite: completion of University Studies Div. I A.

MCom 2200 Heritage of American Journalism (2) Development of the American press from colonial days to modern times; factors affecting the shape and contents of the press in contemporary society. Prerequisite: MCom 1000.

MCom 2220 Copyediting and Layout (3) Copyediting, rewriting, headline writing, and page make-up. Laboratory work on campus newspaper. Prerequisite: MCom 1220.

MCom 3200 Intermediate News Reporting: Reporting of Public Affairs (3) Techniques of reporting city, county, state, and federal government, as well as boards of education and other governmental entities. Prerequisite: MCom 2220.

MCom 3225 Feature Writing (3) Advanced course in writing special articles for newspapers and magazines. Prerequisites: MCom 2220 and completion of University Studies Div. I A.

MCom 3230 Photo Journalism (3) Effective use of photography in journalism communication. Prerequisites: MCom 1220 and Grap 1210.

MCom 3235 Broadcast Journalism (3) Philosophy and techniques of radio and television journalism. Prerequisite: MCom 1220.

MCom 4210 Magazine Design and Production (3) The magazine process from the collection of raw material through layout and design to the circulation of the finished product. Prerequisite: MCom 1220.

MCom 4220 Editorial and Interpretative Writing (3) Principles and techniques of editorial and interpretative article writing; relationship between the news, the editorial and the business aspects of a newspaper. Prerequisite: MCom 3225.

MCom 4235 Advanced News Reporting (3) Problems and techniques of researching and gathering material for in-depth news reporting concerning the political, economic, and social aspects of contemporary society. Prerequisite: MCom 3225.

MCom 4271 School Publications (2) Editorial and business problems of high school newspapers and yearbooks. Prerequisite: MCom 3225.

Public Relations and Advertising

MCom 2320 Public Relations (3) Public relations communications, principles, and techniques in historical perspective, including research and report writing. Prerequisite: completion of University Studies Div. I A.

MCom 3340 Mass Media Advertising (3) The techniques and roles of advertising in the mass media.

MCom 4380 Publicity (3) Overview of the publicity process including written, spoken, and/or videotaped messages using the mass media as a public relations tool. Prerequisites: MCom 2220 and MCom 2320.

MCom 4385 Case Studies in Public Relations (2) Public relations problems of individual business and civic organizations; analysis of actual and proposed solutions. Prerequisite: MCom 2320.

MCom 4390 Campaigns (3) Overview of the public relations campaign process with actual "hands on" application. Students will plan, organize and conduct an actual campaign for an organization. Prerequisite: MCom 4380.

MCom 5300 Seminar in Public Relations (2) Guided research in specialized areas of public relations emphasizing historical, descriptive, or experimental studies. May be repeated for a maximum of 6 semester hours.

Speech Communication

In the area of Speech Communication, the second digit in the course number stands for the following: 0--University Studies, 1--General Speech Communication, 2--Professional.

ORGANIZATIONAL COMMUNICATION Major, B.S. Degree

(43 000356)

Statement of Policy

Admission

Students entering Central Missouri State University to pursue the Organizational Communication Major, B.S. Degree should indicate their intentions at the time of first enrollment and be assigned a departmental advisor. Departmental advisors can be requested through the department office, Martin 136.

Admission to this degree program is contingent upon the completion of the following prerequisites:

1. Successful completion of the Organizational Communication Foundations courses.
2. A cumulative grade-point average of at least 2.50.

Application to the program should be made as soon as all 14 hours of the Foundations courses have been completed and before the student has completed 17 hours of the major requirements. The student must complete 25

hours of the major requirements after admission to the program.

Permission to proceed with the Internship requirement is contingent upon the student presenting a 2.60 grade-point average for the Pre-Internship course sequence.

Statement of Electives

Students with the aid of their departmental advisor will select electives to complete the degree requirements designed to prepare students for communication positions in business, industry, or governmental areas. Normally, electives will be selected from within the department, but courses from areas outside the department may be requested. Any elective offered for the degree program must have written departmental consent.

(program listed on next page)

(continued from previous page)

		Sem. Hours
MAJOR REQUIREMENTS		42
Foundations Courses		
SpCm 1000	Public Speaking	3
SpCm 3000	Interpersonal Communication	3
SpCm 2110	Foundations of Comm. Theory	3
SpCm 2120	Foundations of Rhetorical Theory	3
SpCm 2125	Improving Listening Abilities	2
Pre-Internship Requirements		
SpCm 2130	Small Group Communication	3
SpCm 3127	Improving Interviewing Skills	2
SpCm 4280	Communication in Organizations	3
Internship		
SpCm 4285	Internship in Speech Comm.	3-6
MINOR REQUIREMENTS		18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, SpCm 1000 fulfills 3 s.h. of Div. I B;		
SpCm 3000 fulfills 3 s.h. of Div. II E)		42
Anth 1820	Div. II D or	I Gen 4224 Div. III A or
Geog 3201	Div. II D or	I Gen 3232 Div. III A or
WS 2000	Div. II D (required)	3 I Gen 3224 Div. III A (required)
FREE ELECTIVES		15-22
MINIMUM TOTAL		124

SPEECH COMMUNICATION Major, B.A. Degree

(42 000358)

		Sem. Hours
MAJOR REQUIREMENTS		35
SpCm 1000	Public Speaking	3
SpCm 3000	Interpersonal Communication	3
SpCm 2110	Foundations of Comm. Theory	3
SpCm 2120	Foundations of Rhetorical Theory	3
SpCm 2125	Improving Listening Abilities	2
SpCm 2130	Small Group Communication	3
SpCm 3140	Intercultural Communication	3
SpCm 4130	Theories of Interpersonal Communication	3
SpCm 4135	Gender Communication	3
SpCm 4140	Classical Rhetorical Theory	3
SpCm 3220	Communication Conflict Mgt.	3
SpCm 3120	Audience Adaptation, 3 or	
SpCm 4145	Modern Rhetorical Theory, 3	3
MINOR REQUIREMENTS		18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, SpCm 1000 fulfills 3 s.h. of Div. I B; the Modern		
Language Requirement fulfills 3 s.h. of Div. II C; in the major, SpCm 3000 fulfills 3 s.h. of Div. II E)		39
Anth 1820	Div. II D or	I Gen 4224 Div. III A or
Geog 3201	Div. II D or	I Gen 3232 Div. III A or
WS 2000	Div. II D (required)	3 I Gen 3224 Div. III A (required)
MODERN LANGUAGE REQUIREMENT		3-9
(Refer to Bachelor's Degree Requirements section for fulfillment options.)		
FREE ELECTIVES		16-29
MINIMUM TOTAL		124

SPEECH COMMUNICATION Major, B.S. Degree

(43 000359)

		Sem. Hours
MAJOR REQUIREMENTS		40
SpCm 1000	Public Speaking	3
SpCm 3000	Interpersonal Communication	3
SpCm 2125	Improving Listening Abilities	2
SpCm 2130	Small Group Communication	3
SpCm 2140	Argumentation & Debate	3
SpCm 3120	Audience Adaptation	3
SpCm 3125	Nonverbal Communication	2
SpCm 4120	Persuasion	2
SpCm 4130	Theories of Interpersonal Communication	3
SpCm 4145	Modern Rhetorical Theory	3
SpCm 4150	Cont. Public Address, 2 or	
SpCm 3155	Spch. Writing & Criticism, 3	2-3
Departmentally approved electives		10-11
MINOR REQUIREMENTS		18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, SpCm 1000 fulfills 3 s.h. of Div. I B;		
SpCm 3000 fulfills 3 s.h. of Div. II E)		42
Anth 1820	Div. II D or,	I Gen 4224 Div. III A or
Geog 3201	Div. II D or,	I Gen 3232 Div. III A or
WS 2000	Div. II D (required)	3 I Gen 3224 Div. III A (required)
FREE ELECTIVES		17-24
MINIMUM TOTAL		124

SPEECH COMMUNICATION Minor for a Bachelor's Degree(Except for a B.S. in Ed. Degree)
(000360)

		Sem. Hours
MINOR REQUIREMENTS		21
SpCm 1000	Public Speaking	3
SpCm 2130	Small Group Communication ...	3
SpCm 3000	Interpersonal Communication	3
Electives in speech communication		12
UNIVERSITY STUDIES REQUIREMENTS (In the minor, SpCm 1000 fulfills 3 s.h. of Div. I B; SpCm 3000 fulfills 3 s.h. of Div. II E)		

SPEECH COMMUNICATION AND THEATRE Major, B.S. in Ed. Degree(Certification to teach speech and theatre in grades 9-12)
(41 000362)

		Sem. Hours
CORE REQUIREMENTS		21
Thea 1500	Acting	3
SpCm 2130	Small Group Communication ...	3
Thea 1600	Stagecraft & Lighting	3
SpCm 2140	Argumentation & Debate	3
Thea 3700	Directing	3
SpCm 3125	Nonverbal Communication	2
SpCm 2110	Foundations of Comm. Theory	3
SpCm 3190	Forensics	1

Speech Communication Major Option, B.S. in Ed. Degree

		Sem. Hours
MAJOR REQUIREMENTS		36
Core Requirements		21
SpCm 3150	Prin. of Presentational Speaking .	3
SpCm 3000	Interpersonal Communication	3
Thea 4400	Lit. & History of the Theatre I, 3 or	3
SpCm 3120	Audience Adaptation	3
Thea 4420	Lit. & History of the Theatre II, 3	3
Electives in SpCm, Thea, or MCom		3
MINOR REQUIREMENTS		18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, SpCm 3000 fulfills 3 s.h. of Div. II E; in the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. III B)		
Students must have one course in a physical or earth science and one in a biological science in Div. II A.		
SpCm 1000	Div. I B (required)	3
Thea 2400	Div. II C (required)	3
Hist 1350	Div. II B or	3
Anth 1820	Div. II D or	3
Hist 1351	Div. II B (required)	3
Geog 3201	Div. II D or	3
PoIS 1510	Div. II B (required)	3
WS 2000	Div. II D (required)	3
MCom 3000	Div. II C (required)	3
Psy 4230	Psy. of Adolescence	3
Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. in Div. II B.		
PROFESSIONAL EDUCATION REQUIREMENTS (see pages 181-183)		28
MINIMUM TOTAL		124

Theatre Major Option, B.S. in Ed. Degree - See requirements as outlined in the Department of Theatre.**SPEECH COMMUNICATION AND THEATRE Minor, B.S. in Ed. Degree**

See requirements as outlined in the Department of Theatre.

University Studies**SpCm 1000 Public Speaking (3)** A study and practice of basic principles involved in discovering, arranging, delivering, and evaluating ideas in speech situations.**SpCm 3000 Interpersonal Communication (3)** Principles of symbolic interaction and their implications for social, personal, and physiological adaptation across the human life span. Includes the patterns involved in establishing and maintaining effective relationships, managing conflict, and promoting tolerance for human diversity.**General Speech Communication****SpCm 2110 Foundations of Communication Theory (3)** The process by which communication principles are formulated and the principles themselves, with emphasis on both their theoretical and pragmatic dimensions.**SpCm 2120 Foundations of Rhetorical Theory (3)** Nature and functions of rhetoric across various communication situations.**SpCm 2125 Improving Listening Abilities (2)** Theories and principles for improving listening in a variety of communication situations.**SpCm 2130 Small Group Communication (3)** Communication process as it relates to small group behavior, including the study of principles, methods, and forms of discussion used in small groups.**SpCm 2135 Voice and Body in Performance (3)** The study and practice of communication functions and performance components of non-dramatic texts; e.g., conversations, radio broadcasts, oral and personal narratives, television and video presentations.**SpCm 2140 Argumentation and Debate (3)** Principles of analysis, evidence, reasoning, briefing, refutation, case construction, preparing and evaluating arguments. Practical experience with different types of debate.**SpCm 3120 Audience Adaptation (3)** Audience dimensions and their relationship to communicative acts. Prerequisite: SpCm 1000.**SpCm 3125 Nonverbal Communication (2)** An examination of selected areas of nonverbal communication; e.g., space and territory relationships, physical behavior, appearance and dress; paralinguistics; and artifacts.

SpCm 3127 Improving Interviewing Skills (2) Theory and purposes of interviewing, emphasizing the principles and practice of interviewing skills.

SpCm 3140 Intercultural Communication (3)

Communication between and among cultures, including enculturation and relational implications of cross-cultural communication across a variety of contexts. Prerequisite: SpCm 2120 or Geog 2212.

SpCm 3150 Principles of Presentational Speaking (3)

Designed to increase awareness and understanding of speech theory and, by means of speaking exercises, to increase proficiency as a speaker in a variety of professional settings. Prerequisite: SpCm 1000.

SpCm 3155 Speech Writing and Criticism (3) A study of critical practices and methodology including the composition of speech manuscripts and the application of standards for evaluation.

SpCm 3170 Special Topics in Speech Communication

(1-3) The study of subjects not included in department's regular offering such as parliamentary procedure, intercultural and/or therapeutic communication. May be repeated for a maximum of 6 semester hours. Prerequisite: written approval of department chair.

SpCm 3190 Forensics (1) Participation in intercollegiate forensics--debate, oratory, extemporaneous speaking, discussion, and oral interpretation. May be repeated for a maximum of 3 semester hours.

SpCm 4120 Persuasion (2) Emotive, cognitive, and behavioral sources of persuasive appeal.

SpCm 4130 Theories of Interpersonal Communication (3)

An in-depth study of selected theories and supporting research findings of the communication process as it occurs in informal face-to-face situations.

SpCm 4135 Gender Communication (3) Gender as it influences communication processes in intrapersonal, interpersonal, group, public and mediated contexts. Prerequisite: SpCm 3000 or consent of instructor.

SpCm 4140 Classical Rhetorical Theory (3) Foundations and development of rhetorical theory during the Classical Period with special emphasis given to Plato, Aristotle, Cicero, and Quintilian.

SpCm 4145 Modern Rhetorical Theory (3) An examination of significant movements in the development of twentieth century rhetorical theory including the contributions of Kenneth Burke, Richard Weaver, and Marshall McLuhan.

SpCm 4150 Contemporary Public Address (2) Public address as it functions in contemporary society in a variety of traditional and mass media settings.

SpCm 5100 Seminar in Speech Communication (2-3) A presentation of topics not included in the regular offering of the department. May be repeated for a maximum of 6 semester hours.

SpCm 5130 Group Communication (3) Principles of communication within small and large groups emphasizing educational, business, social, and therapeutic group functions with readings, discussions, and research.

SpCm 5160 General Semantics (3) An introduction to the field of general semantics considering the extensional devices, the processes of abstracting, inter- and intra-organic communication, and nonverbal communication.

Professional

SpCm 3210 Issues in Teaching Speech Communication (2) Curricular and co-curricular activities involved in the

teaching of speech with emphasis directed toward secondary school teaching.

SpCm 3220 Communication Conflict Management (3) An examination of communication factors which contribute to conflicts and an analysis of their resolution.

SpCm 4200 Special Projects in Speech Communication

(1-3) May be repeated for a maximum of 6 semester hours. Prerequisite: written approval of department chair.

SpCm 4280 Communication in Organizations (3) A consideration of theories and principles of communication structures and systems within organizations.

SpCm 4283 Communication Training (3) Communication as the coupling that holds organizations together and the agent of change which ensures health and growth. Students will assess needs and determine communication links; design, develop, and implement learning modules for human resource development; and design and interpret evaluation means to determine the effectiveness of the communicated training. Prerequisites: SpCm 3127, SpCm 3150, and SpCm 3120 or SpCm 2140 or consent of instructor.

SpCm 4285 Internship in Speech Communication (1-6)

The application of speech communication principles and theories in business, industry, and government settings. May be repeated for a maximum of 6 semester hours.

Prerequisites: written approval of department chair.

SpCm 5210 Advanced Problems of Teaching Speech

Communication (3) A study of the current theory, research, and practice of teaching speech communication courses and concepts at the secondary and college levels with special emphasis upon beginning courses. Prerequisite: 15 semester hours or 5 courses in speech communication at the undergraduate and/or graduate levels.

SpCm 5220 Speech Education Studies (2-3) Variable topics to be offered such as Communication Anxiety, Research in Special Communication, Teaching Interpersonal Communication, and Communication Games and Simulation. May be repeated for a maximum of 6 semester hours. Prerequisite: undergraduate speech communication major or consent.

SpCm 5227 Professional Interviewing (2) Interviewing focusing upon the role of the interviewer in business, government, industrial, academic, and other professional settings. Prerequisite: SpCm 3127 or consent.

SpCm 5250 Presentational Speaking in Professional Settings (2) Prepares students who are seeking careers in business and the professions to understand the theory and practice of making effective presentations in small group, conference, or meeting situations.

SpCm 5270 Communication Assessment (2) The assessment and measurement of human interaction within professional settings. Prerequisite: Comm 5000.

SpCm 5280 Studies in Organization Communication (2)

Directed individual research and group discussion of selected topics in organizational communication research, communication audit techniques, and communication training and programming in organizational settings. May be repeated for a maximum of 6 semester hours. Prerequisite: SpCm 4280 or consent.

SpCm 6271 Graduate Internship in Organizational Communication (1-6) The application of communication principles in business, industrial and governmental settings through a supervised experience. May be repeated for a maximum of 6 semester hours. Prerequisites: SpCm 4280 and approval of department chair.

English and Philosophy

English

In the section of English, the second digit in the course number stands for the following: 0--Rhetoric and Composition, 1--Language Study and Grammar, 2--Literary Study and Criticism, 3--English Literature Before 1500 and English Literature From 1500 to 1640, 4--English Literature From 1640 to 1800, 5--English Literature From 1800 to 1900, 6--American Literature From Its Beginnings to 1914, 7--Modern Literature, 8--Teaching Methods in English, 9--Research and Readings.

ENGLISH Major, B.A. Degree

(42 000303)

	Sem. Hours
MAJOR REQUIREMENTS	35
Engl 2000 Orientation for the Major	1
Engl 3000 Critical Studies	1
Engl 4000 Senior Seminar	1
Engl 3120 History of English Language	2
Engl 4360 Shakespeare	3
3000-4000 level electives in English	9
<u>British Literature</u>	
Select British Literature Area A or B	9
British Literature Area A	
Engl 2210 British Literature to 1798	3
Electives from the following	6
Engl 4500 19th Century English Novel . . .	3
Engl 4510 Romantic Poets & Essayists . . .	3
Engl 4540 Victorian Poets & Essayists . . .	3
Engl 4560 British Women Writers	3
Engl 4700 British Fiction 1890 to Present	3
Engl 4720 Modern British Poetry	3
British Literature Area B	
Engl 2215 British Lit. 1798 to Present	3
Electives from the following	6
Engl 4310 Chaucer	3
Engl 4330 Renaissance English Writers . . .	3
Engl 4340 Old & Middle English Lit.	3
(Electives continued)	
Engl 4450 The Age of Milton	3
Engl 4460 The Age of Pope & Johnson . . .	3
<u>American Literature</u>	
Select American Literature Area A or B	9
American Literature Area A	
Engl 2200 American Literature to 1865 . . .	3
Electives from the following	6
Engl 4640 American Realists & Naturalists	3
Engl 4660 Women Writers of the United States	3
Engl 4670 Ethnic American Lit.	3
Engl 4680 African American Lit.	3
Engl 4710 Modern American Fiction . . .	3
Engl 4730 Modern American Poetry . . .	3
American Literature Area B	
Engl 2205 American Lit. 1865 to Present . . .	3
Electives from the following	6
Engl 4610 American Renaissance	3
Engl 4620 Early American Literature . . .	3
Engl 4670 Ethnic American Lit.	3
Engl 4680 African American Lit.	3
MINOR REQUIREMENTS	18-25
UNIVERSITY STUDIES REQUIREMENT--48 s.h. (The Modern Language Requirement fulfills 3 s.h. of Div. II C)	45
Engl 2220 Div. II C (required)	3
MODERN LANGUAGE REQUIREMENT	3-9
(Refer to Bachelor's Degree Requirements section for fulfillment options.)	
FREE ELECTIVES	10-23
MINIMUM TOTAL	124

ENGLISH Major, B.S. in Ed. Degree

(Certification to teach English in grades 9-12)
(41 000311)

		Sem. Hours
MAJOR REQUIREMENTS		39-40
Engl 2000	Orientation for the Major	1
Engl 3000	Critical Studies	1
Engl 4000	Senior Seminar	1
Engl 3030	Composition & Evaluation	3
Engl 4040	Advanced Rhetoric	3
Engl 3110	English Grammar	3
Engl 3120	History of English Language	2
Engl 2830	Literature for Adolescents	2
Electives in English		5-6
British Literature		
Select British Literature Area A or B		9
British Literature Area A		
Engl 2210	British Literature to 1798	3
Electives from the following		6
Engl 4500	19th Century English Novel .	3
Engl 4510	Romantic Poets & Essayists	3
Engl 4540	Victorian Poets & Essayists .	3
Engl 4560	British Women Writers	3
Engl 4700	British Fiction	3
	1890 to Present	3
Engl 4720	Modern British Poetry	3
British Literature Area B		
Engl 2215	British Lit. 1798 to Present	3
Electives from the following		6
Engl 4310	Chaucer	3
Engl 4330	Renaissance Engl. Writers	3
Engl 4340	Old & Middle English Lit. .	3
Engl 4360	Shakespeare	3
Engl 4450	The Age of Milton	3
Engl 4460	Age of Pope & Johnson .	3
American Literature		
Select American Literature Area A or B		9
American Literature Area A		
Engl 2200	American Literature to 1865 .	3
Electives from the following		6
Engl 4640	American Realists	3
	& Naturalists	3
Engl 4660	Women Writers of the U. S.	3
Engl 4670	Ethnic American Literature	3
Engl 4680	African American Literature	3
Engl 4710	Modern American Fiction .	3
Engl 4730	Modern American Poetry .	3
American Literature Area B		
Engl 2205	American Lit. 1865 to Present	3
Electives from the following		6
Engl 4610	American Renaissance .	3
Engl 4620	Early American Literature .	3
Engl 4670	Ethnic American Literature	3
Engl 4680	African American Literature	3
MINOR REQUIREMENTS		18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the professional education requirements, ICap 4468 fulfills		
3 s.h. of Div. III B)		45
Secondary Education students must have one course in a physical or earth science and one in a biological science in Div. II A.		
Hist 1350	Div. II B or	3
Engl 2220	Div. II C (required)	3
Hist 1351	Div. II B (required)	3
Psy 4230	Psychology of Adolescence .	3
PoIS 1510	Div. II B (required)	3
Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. in Div. II E.		
PROFESSIONAL EDUCATION REQUIREMENTS (see page 183)		28
MINIMUM TOTAL		130

ENGLISH Functional Major, B.S. in Ed. Degree

(Certification to teach English in grades 9-12)

(41 000313)

		Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS		52-55
Engl 2000	Orientation for the Major	1
Engl 3000	Critical Studies	1
Engl 4000	Senior Seminar	1
Engl 3030	Composition & Evaluation	3
Engl 4040	Advanced Rhetoric	3
Engl 3110	English Grammar	3
Engl 3120	History of English Language	2
Engl 2830	Literature for Adolescents	2
Electives in English		9
<u>British Literature</u>		
Engl 4360	Shakespeare	3
Select British Literature Area A or B		9
British Literature Area A		
Engl 2210	British Literature to 1798	3
Electives from the following		6
Engl 4500	19th Century English Novel .	3
Engl 4510	Romantic Poets & Essayists	3
Engl 4540	Victorian Poets & Essayists .	3
Engl 4560	British Women Writers	3
Engl 4700	British Fiction	
	1890 to Present	3
Engl 4720	Modern British Poetry	3
British Literature Area B		
Engl 2215	British Lit. 1798 to Present	3
Electives from the following		6
Engl 4310	Chaucer	3
Engl 4330	Renaissance Engl. Writers .	3
Engl 4340	Old & Middle English Lit. .	3
Engl 4450	The Age of Milton	3
Engl 4460	The Age of Pope & Johnson	3
<u>American Literature</u>		
Select American Literature Area A or B		9
American Literature Area A		
Engl 2200	American Literature to 1865 .	3
Electives from the following		6
Engl 4640	American Realists	
	& Naturalists	3
Engl 4660	Women Writers of the U. S.	3
Engl 4670	Ethnic American Literature	3
Engl 4680	African American Literature	3
Engl 4710	Modern American Fiction .	3
Engl 4730	Modern American Poetry .	3
American Literature Area B		
Engl 2205	American Lit. 1865 to Present	3
Electives from the following		6
Engl 4610	American Renaissance .	3
Engl 4620	Early American Literature .	3
Engl 4670	Ethnic American Literature	3
Engl 4680	African American Literature	3
<u>Cognates</u>		
Select one of the Cognate Areas A, B, C, or D		6-9
Cognate Area A		
Phil 1000	Introduction to Philosophy .	3
Electives in Philosophy		6
Cognate Area B		
Rel 1510	Exploring Religion	3
Electives in Religious Studies		6
Cognate Area C		
Electives in History		6
Cognate Area D		
Electives from one modern language		9
MINOR NOT REQUIRED		
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, if elected, Phil 1000, Rel 1510, or modern language fulfills 3 s.h. of Div. II C; in the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. III B)		
		42-45
Secondary Education students must have one course in a physical or earth science and one in a biological science in Div. II A.		
Hist 1350	Div. II B or	3
Engl 2220	Div. II C (required)	3
Hist 1351	Div. II B (required)	3
Psy 4230	Psychology of Adolescence	3
PoIS 1510	Div. II B (required)	3
Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. in Div. II E.		
PROFESSIONAL EDUCATION REQUIREMENTS (see page 183)		28
MINIMUM TOTAL		125

ENGLISH Minor, B.S. in Ed. Degree

(Certification to teach English in grades 5-9 with a middle school-junior high school major.
Elementary education functional majors may use this as an area of concentration.
(000305)

		Sem. Hours
MINOR REQUIREMENTS		24
Engl 3030	Composition & Evaluation 3	
Engl 3110	English Grammar 3	
Engl 3120	History of English Language 2	
	Electives in English 7	
	American Literature	
	Select American Literature Area A or B 6	
	American Literature Area A	
Engl 2200	American Literature to 1865 3	
	Elective from the following 3	
Engl 4640	American Realists & Naturalists 3	
Engl 4660	Women Writers of the U. S. 3	
Engl 4670	Ethnic American Literature 3	
Engl 4680	African American Literature 3	
Engl 4710	Modern American Fiction 3	
Engl 4730	Modern American Poetry 3	
	American Literature Area B	
Engl 2205	American Lit. 1865 to Present 3	
	Elective from the following 3	
Engl 4610	American Renaissance 3	
Engl 4620	Early American Literature 3	
Engl 4670	Ethnic American Literature 3	
Engl 4680	African American Literature 3	
	British Literature	
Engl 2210	British Literature to 1798, 3 or	
Engl 2215	British Lit. 1798 to Present, 3 3	
UNIVERSITY STUDIES REQUIREMENTS (Engl 2220, Div. II C required)		

ENGLISH Minor for a Bachelor's Degree

(Except for a B.S. in Ed. Degree)
(200009)

		Sem. Hours
MINOR REQUIREMENTS		23
Engl 3120	History of English Language 2	
Engl 4360	Shakespeare 3	
	3000-4000 level electives in English 6	
	British Literature	
	Select British Literature Area A or B 6	
	British Literature Area A	
Engl 2210	British Literature to 1798 3	
	Elective from the following 3	
Engl 4500	19th Century English Novel 3	
Engl 4510	Romantic Poets & Essayists 3	
Engl 4540	Victorian Poets & Essayists 3	
Engl 4560	British Women Writers 3	
Engl 4700	British Fiction 1890 to Present 3	
Engl 4720	Modern British Poetry 3	
	British Literature Area B	
Engl 2215	Brit. Lit. 1798 to Present 3	
	Elective from the following 3	
Engl 4310	Chaucer 3	
Engl 4330	Renaissance English Writers 3	
Engl 4340	Old & Middle English Lit. 3	
Engl 4450	The Age of Milton 3	
Engl 4460	The Age of Pope & Johnson 3	
	American Literature	
	Select American Literature Area A or B 6	
	American Literature Area A	
Engl 2200	American Literature to 1865 3	
	Elective from the following 3	
Engl 4640	American Realists & Naturalists 3	
Engl 4660	Women Writers of the U.S. 3	
Engl 4670	Ethnic American Literature 3	
Engl 4680	African American Literature 3	
Engl 4710	Modern American Fiction 3	
Engl 4730	Modern American Poetry 3	
	American Literature Area B	
Engl 2205	American Lit. 1865 to Present 3	
	Elective from the following 3	
Engl 4610	American Renaissance 3	
Engl 4620	Early American Literature 3	
Engl 4670	Ethnic American Literature 3	
Engl 4680	African American Literature 3	
UNIVERSITY STUDIES REQUIREMENTS (Engl 2220, Div. II C required)		

CREATIVE WRITING Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)
(000241)

		Sem. Hours
MINOR REQUIREMENTS		21
Engl 2050	Creative Writing 3	
Engl 3050	Advanced Creative Writing 3	
Engl 4050	Creative Writing for Publication 3-6	
	Electives in English 3-9	
	Electives from the following 3-9	
Engl 4040	Advanced Rhetoric 3	
Engl 3990	Special Topics in English 1-3	
Engl 4990	Special Projects in English 1-6	
MCom 4115	Writing Dramatic & Documentary Programs 3	
Thea 4800	Playwriting 1-3	

Rhetoric and Composition

NOTE: Students desiring preparatory courses to Engl 1020 should see "Educational Development Center--Personal Skills Development" in this catalog.

Engl 1020 Composition I (3) The logic and rhetoric of expository writing. Prerequisite: placement according to University policy applies.

Engl 1030 Composition II (3) Advanced writing involving research and a generic study of literature. Prerequisite: grade of C or better in Engl 1020.

Engl 1080 Advanced Composition (3) The logic and rhetoric of expository writing taught at an advanced level, involving research. Prerequisite: placement according to University policy applies.

Engl 2000 Orientation for the Major (1) Provides a sense of community for English majors as they commence their major study. It will suggest a logical sequencing of courses and will expand the majors' terminology, perspective, and responsibilities in the field of English.

Engl 2050 Creative Writing (3) Introduces students to terminology and techniques in writing and analyzing poetry and fiction; lecture and workshop format.

Engl 3000 Critical Studies (1) Introduction to critical theory and application of various approaches and analyses to works of literature. Continuation of Engl 2000 work on research and assessment techniques; review of majors portfolios and cocurricular transcripts. Prerequisite: Engl 2000.

Engl 3030 Composition and Evaluation (3) Techniques of writing and evaluating composition for those planning to teach. Prerequisite: admission to Teacher Education Program for English majors and functional majors, B.S. in Ed. degree.

Engl 3050 Advanced Creative Writing (3) Poetry and fiction writing at advanced level; directed individual research into one area of poetry or fiction; written and oral analysis of students' creative work; workshop format. Prerequisite: Engl 2050 or concurrently or consent of instructor.

Engl 3090 Improvement of Writing (3) Not credited on English major or minor.

Engl 4000 Senior Seminar* (1) Provides an opportunity for students to reflect on their program and to identify the coherence of their experience, through assessment and self-assessment of majors portfolio and cocurricular transcript. It will culminate in a senior paper and a formal presentation. Prerequisite: Engl 3000.

Engl 4040 Advanced Rhetoric (3) Practice in the devices of effective writing. Prerequisite: admission to Teacher Education Program for English majors and functional majors, B.S. in Ed. degree.

Engl 4050 Creative Writing for Publication (3) Poetry and fiction writing at advanced level; research into publishing (markets, agents, contests); oral and written analysis of students' creative work; lecture/workshop format. May be repeated for a maximum of 6 semester hours. Prerequisite: Engl 2050 or concurrently or consent of instructor.

Engl 5000 Introduction to Graduate Study in Language and Literature (2) Research techniques, writing the critical essay, bibliography, research paper format. Required on Masters and Education Specialist degrees.

Engl 5010 Introduction to Graduate Study--TESL (2) An introduction to understanding research in the fields of linguistics, applied linguistics, and teaching English to speakers of other languages. Focuses on identifying major research trends, finding articles, and writing essays on research in these fields.

Language Study and Grammar

Engl 1180 Communication Skills in English as a Second Language (3) For international students who need additional reinforcement in listening and reading comprehension, study skills, grammar, and composition. May be repeated for a maximum of 6 semester hours.

Engl 1190 Expository Composition in English as a Second Language (3) For international students who demonstrate through the initial evaluation procedure a need for additional study in English expository writing. May be repeated for a maximum of 6 semester hours. Prerequisite: Engl 1180 or consent of the English as a Second Language Committee.

Engl 3110 English Grammar (3) A comparative study of English grammars with strong emphasis on traditional grammar and including structural and transformational approaches. Prerequisite: admission to Teacher Education Program for English majors and functional majors, B.S. in Ed. degree.

Engl 3120 History of English Language (2) Growth and nature of the English language. Prerequisite: admission to Teacher Education Program for English majors and functional majors, B.S. in Ed. degree.

Engl 4110 Linguistics (3) Approaches to the nature and structure of language.

Engl 4120 Language and Culture (3) A survey of the ways in which languages and varieties of a language differ in content and structure from culture to culture.

Engl 5110 Advanced Grammar for Teaching English as a Second Language (3) Advanced study of English grammar for instruction in English as a second language. Prerequisite: Engl 4110 or consent of instructor.

Engl 5140 Advanced Applied Linguistics: Materials and Design (3) An examination of materials available and instruction in developing new materials for teaching English as a second/foreign language. Prerequisite: Engl 5870 or consent of the instructor.

Engl 5150 Topics in Linguistics (3) Modern approaches to linguistics, including syntactic and semantic models of analysis. May be repeated as areas change for maximum of 9 semester hours.

Literary Study and Criticism

Engl 2200 American Literature to 1865 (3) An introduction to major American authors and works from the colonial period to the Civil War.

Engl 2205 American Literature 1865 to Present (3) An introduction to major American authors and works from the Civil War to the present.

Engl 2210 British Literature to 1798 (3) An introduction to major British authors and works from 700 to 1798.

Engl 2215 British Literature 1798 to Present (3) An introduction to major British authors and works from 1798 to the present.

Engl 2220 World Masterpieces (3) Major works of world literature, excluding British and American.

Engl 2230 Literature and Film (3) Reading and discussion of selected novels and film scripts combined with laboratory viewing sessions. This course is not available for credit toward English major or minor requirements, except as a free elective.

Engl 2240 Literature and the Arts (3) A course relating literature to the arts of painting, sculpture, architecture, music, and the dance. Not available for credit toward the English major or minor requirements, except as a free elective.

Engl 2270 Fiction by Women Around the World (3) Novels and short stories by women around the globe. Not available for credit toward English major or minor requirements, except as a free elective.

Engl 2290 Science Fiction and Fantasy (2) An introduction to science fiction and fantasy. Not available for credit toward English major or minor, except as a free elective.

Engl 3220 Survey of Asian Literature (3) A survey of selected literature from India, China, and Japan in translation. This course is not available for credit toward English major or minor requirements, except as a free elective.

Engl 5210 Studies in English Literature (2-3) Advanced study and class discussions in a selected area of English literature. Special area of emphasis to be announced each semester. May be repeated as topic areas change for a maximum of 15 semester hours.

Engl 5220 Studies in American Literature (2-3) Advanced study and class discussions in a selected area of American literature. Special area of emphasis to be announced each semester. May be repeated as topic areas change for a maximum of 15 semester hours.

Engl 5230 Studies in Theory and Criticism (3) Advanced study in selected areas of theory and criticism. Special area to be announced each semester. May be repeated as topic areas change for a maximum of 9 semester hours.

English Literature Before 1500

Engl 4310 Chaucer (3) Life and times of Chaucer with extensive reading in his major works. Prerequisite: Engl 2215.

Engl 4340 Old and Middle English Literature (3) Literary genres and contributions from Beowulf to 1500 (excluding Chaucer). Prerequisite: Engl 2215.

English Literature From 1500 to 1640

Engl 4330 Renaissance English Writers (3) Literary figures of the Elizabethan and Jacobean periods, excluding Shakespeare. Prerequisite: Engl 2215.

Engl 4360 Shakespeare (3) Study seven or more Shakespearean plays, including comedies, histories, tragedies and romances, with attention to Renaissance backgrounds, literary analysis, and theatrical traditions. Prerequisite: Engl 2210 or Engl 2215 for English majors only.

English Literature From 1640 to 1800

Engl 4450 The Age of Milton (3) English poetry, prose, and drama of the Puritan and Restoration times. Prerequisite: Engl 2215.

Engl 4460 The Age of Pope and Johnson (3) Fiction, poetry, essays and drama during the times of Pope and Johnson. Prerequisite: Engl 2210 or Engl 2215 for English majors only.

English Literature From 1800 to 1900

Engl 4500 Nineteenth Century English Novel (3) Representative novels from Austen through Gaskell. Prerequisite: Engl 2210.

Engl 4510 Romantic Poets and Essayists (3) Major poets and essayists of the English Romantic period. Prerequisite: Engl 2210.

Engl 4540 The Victorian Poets and Essayists (3) Major poets and essayists of the English Victorian period. Prerequisite: Engl 2210.

Engl 4560 British Women Writers (3) Study of major works by British women writers, with an introduction to feminist criticism. Prerequisite: Engl 2210 or Engl 2215 for English majors only.

American Literature From Its Beginnings to 1914

Engl 4610 American Renaissance (3) The works of Emerson, Hawthorne, Thoreau and Melville. Prerequisite: Engl 2205.

Engl 4620 Early American Literature (3) Major figures of colonial, federal, and early 19th century literature. Prerequisite: Engl 2205.

Engl 4640 American Realists and Naturalists (3) Works of Twain, Howells, James, Dreiser, Chopin, and Crane. Prerequisite: Engl 2200.

Engl 4660 Women Writers of the United States (3) Prerequisite: Engl 2200.

Engl 4670 Ethnic American Literature (3) A survey of America's old and new ethnic writing, with particular emphasis on Native, Asian, Hispanic, and African American writers and a general emphasis on other groups. Prerequisite: Engl 2200 or Engl 2205.

Engl 4680 African American Literature (3) A survey of African American writers from the Colonial period to the present with emphasis on twentieth century writers. Prerequisite: Engl 2200 or Engl 2205 for English majors only.

Modern Literature

Engl 4700 British Fiction 1890 to Present (3) Representative fiction by major British authors from 1890 to the present. Prerequisite: Engl 2210.

Engl 4710 Modern American Fiction (3) Prerequisite: Engl 2200.

Engl 4720 Modern British Poetry (3) British poetry of the twentieth century. Prerequisite: Engl 2210.

Engl 4730 Modern American Poetry (3) American poetry of the twentieth century. Prerequisite: Engl 2200.

Engl 4740 Modern Drama (2) Readings in the significant drama of the Western World from Ibsen and Chekov to the present.

Teaching Methods in English

Engl 2830 Literature for Adolescents (2) Reading course intended for those who will teach high school English.

Engl 4810 Seminar in Teaching English (2-3) May be repeated with different offerings, such as Individualizing

Instruction, Teaching Traditional Grammar, How to Teach the Novel, Techniques of Theme Grading, Teaching Creative Writing, or Teaching Prosody. May be repeated for a maximum of 6 semester hours of undergraduate credit and 6 semester hours of graduate credit.

Engl 4850 Introduction to Second Language Teaching (3)

An examination of the theories and procedures underlying the application of linguistic concepts to the teaching of languages including English as a second or foreign language.

Engl 5810 Computers and Second Language Learning (3)

Explores a variety of topics related to using computers to teach second languages. Program design, the evaluation of currently available Computer Assisted Language Learning (CALL) software, strategies for using the software in teaching second languages, and computerized language lab design are explored.

Engl 5860 Teaching English as a Second Language I: The Spoken Language (3)

A systematic examination of the phonetic, phonological, morphological, and syntactic structure of spoken English with reference to instructional methodology in applied linguistics. Prerequisite: Engl 4850 or consent of the instructor.

Engl 5870 Teaching English as a Second Language II: The Written Language (3)

A systematic examination of the written forms of English emphasizing sentence-, paragraph-, and discourse-level grammar and a study of instructional methods. Prerequisite: Engl 5860 or consent of the instructor.

Engl 5890 Practicum in English as a Second Language (3)

Supervised practical experience in English as a second language instruction under the direction of a TESL/linguistics faculty member. Prerequisites: Engl 4850, Engl 5860, Engl 5110 and Engl 5870.

Research and Readings

Engl 3990 Special Topics in English (1-3) Individual or group work by qualified students in areas such as creative writing, literature, or language. May be repeated for a maximum of 6 semester hours. Prerequisite: approval of department chair.

Engl 4990 Special Projects in English (1-3) May be repeated for a maximum of 6 semester hours.

Engl 5920 Research Problems (3) Special investigation of a problem in language or literature culminating in a paper of at least 30 pages.

Engl 6930 Readings (1-3) Extensive special reading programs. May be repeated for a maximum of 3 semester hours at the masters level, 6 semester hours at the education specialist level.

Engl 6940 Thesis (3-6) May be repeated for a maximum of 6 semester hours.

Philosophy

In the section of Philosophy, the second digit in the course number stands for the following: 0--General, 1--History, 2--Special Projects, 3--Ethics, 4--Logic, 5--Aesthetics, 6--Special Topics, 7--Religion, 8--Theory of Knowledge.

PHILOSOPHY Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)
(000317)

				Sem. Hours
MINOR REQUIREMENTS				21
Phil 1000	Introduction to Philosophy	3	Phil 2300 Ethics	3
Phil 2100	History of Philosophy I	3	Phil 1400 Deductive Logic	3
Phil 3100	History of Philosophy II	3	Electives in philosophy	6
UNIVERSITY STUDIES REQUIREMENTS (In the minor, Phil 1000 fulfills 3 s.h. of Div. II C; Phil 2300 fulfills 3 s.h. of Div. II E)				

General

Phil 1000 Introduction to Philosophy (3) A first course in philosophy, surveying selected problems and perspectives in metaphysics, ethics, the theory of knowledge and/or philosophy of mind.

History

Phil 2100 History of Philosophy I (3) Problems, positions, and arguments in ancient philosophy from the pre-Socratics to the beginning of the Middle Ages, with particular emphasis on Plato and Aristotle.

Phil 3100 History of Philosophy II (3) A consideration of and criticism of the views of the major Western philosophers from the end of the Middle Ages through Kant.

Special Projects

Phil 2250 Special Projects in Philosophy (3) An introduction to an analysis of philosophical problems and theories in the student's major area of study. May be repeated for a maximum of 6 semester hours.

Ethics

Phil 2300 Ethics (3) An examination of systematic moral philosophies, challenges to the possibility of an objectively correct morality, and application of morality to a variety of specific problems.

Logic

Phil 1400 Deductive Logic (3) An introduction to the principles, forms, and methods of valid reasoning by a

survey of syllogistic logic, propositional logic, and elementary quantificational logic.

Phil 1410 Critical Thinking (3) An introduction to the basic principles and patterns of good reasoning, emphasizing informal argument analysis and practical applications of logic.

Aesthetics

Phil 3500 Aesthetics (3) A survey of philosophy of art from Plato to the present, covering the nature of art, its function in human experience, the basis for standards of evaluation, problems of interpretation, comparisons of different arts, and related topics.

Special Topics

Phil 3600 Special Topics in Philosophy (1-3) Individual or group work by qualified and specially selected students in carefully chosen fields, for more intensive study. May be repeated for a maximum of 6 semester hours.

Religion

Phil 3710 Philosophy of Religion (3) The concept of religion, analysis and evaluation of arguments for God's existence, the problem of evil, the nature of religious language, the concept of immortality, and related topics.

Theory of Knowledge

Phil 3800 Philosophy of Science and Technology (3) Philosophical examination of the nature of scientific theorizing; the relation between scientific methodology, rationality, and progress; the nature of technology and its relation to science.

Integrative Studies General

IGen 4235 Cognitive Science* (3) Studies the nature and structure of the human mind from the interdisciplinary perspective derived of philosophy, psychology, computer science, linguistics, and neurobiology.

*Not available for graduate credit.

History and Anthropology

Department of History and Anthropology Statement of Policy

A course with a grade lower than a "C" will not be allowed to fulfill a major or minor requirement in any program offered by the Department of History and Anthropology.

History

HISTORY Major, B.A. Degree

(42 000420)

		Sem. Hours
MAJOR REQUIREMENTS		39
Hist 1350	History of the U. S. to 1877	3
Hist 1351	History of the U. S. from 1877	3
Hist 2400	History of the Early World	3
Hist 2401	Hist. of the Early Modern World	3
Hist 2402	Hist. of the Modern World	3
SoSc 3010	Writing in Social Sciences	3
IGen 4231	Myth, Memory & American Realities	3
Upper level electives in American history		6
Upper level electives in world history		6
Upper level elective in history		3
MINOR REQUIREMENTS		18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, Hist 1350 fulfills 3 s.h. of Div. II B; the Modern Language Requirement fulfills 3 s.h. of Div. II C; Hist 2402 fulfills 3 s.h. of Div. II D; IGen 4231 fulfills 3 s.h. of Div. III A)		36
MODERN LANGUAGE REQUIREMENT (Refer to Bachelor's Degree Requirements section for fulfillment options)		3-9
FREE ELECTIVES		15-28
MINIMUM TOTAL		124

HISTORY Major, B.S. Degree

(43 000421)

		Sem. Hours
MAJOR REQUIREMENTS		39
Hist 1350	History of the U. S. to 1877	3
Hist 1351	History of the U. S. from 1877	3
Hist 2400	History of the Early World	3
Hist 2401	History of the Early Modern World	3
Hist 2402	History of the Modern World	3
SoSc 3010	Writing in Social Sciences	3
IGen 4231	Myth, Memory & American Realities	3
Upper level electives in American history		6
Upper level electives in world history		6
Upper level elective in history		3

(continued on the next page)

(continued from the previous page)

Elective from the following	3		
Hist 4309 The African-American in American History	3	Hist 4426 Rise of Chinese Civilization	3
Hist 4326 Native American History of the United States	3	Hist 4427 Rise of Japanese Civilization	3
		Hist 4428 Communist China	3
MINOR REQUIREMENTS			18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, Hist 1350 fulfills 3 s.h. of Div. II B; Hist 2402 fulfills 3 s.h. of Div. II D; IGen 4231 fulfills 3 s.h. of Div. III A)			39
FREE ELECTIVES			21-28
MINIMUM TOTAL			124

HISTORY Minor for a Bachelor's Degree
(Central does not confer teacher certification for this minor)
(000422)

			Sem. Hours
MINOR REQUIREMENTS			20
Hist 1350 History of the U. S. to 1877	3	Hist 2401 History of the Early Modern World	3
Hist 1351 History of the U. S. from 1877	3	Hist 2402 History of the Modern World	3
Hist 2400 History of the Early World	3	Upper level electives in history	5
UNIVERSITY STUDIES REQUIREMENTS (In the minor, Hist 1350 fulfills 3 s.h. of Div. II B; Hist 2402 fulfills 3 s.h. of Div. II D)			

American History

Hist 1350 History of the United States to 1877 (3) Survey of U.S. history from the age of exploration to 1877. Fulfills state requirements of Section 170.011 RSMo.

Hist 1351 History of the United States from 1877 (3) Survey of U.S. history from 1877 to present. Fulfills state requirements of Section 170.011 RSMo.

Hist 4300 Missouri History (3) Missouri history from earliest times to the present.

Hist 4301 American Historical Biography (3) Biographies of selected American political leaders and molders of opinion and institutions showing the interaction of men/women and their times and the resulting influences on American development.

Hist 4307 American Colonial History 1607-1763 (3) American political, economic, and cultural institutions in the colonial period.

Hist 4309 The African-American in American History (3) Economic, political, and social development of the African-American in the United States.

Hist 4310 Women in America (3) Women in America from colonial times to the present with emphasis upon the nineteenth century feminist movement and the recent twentieth century women's rights movement.

Hist 4311 Revolution and Republic (3) American political, economic, and cultural institutions from 1763 to the War of 1812.

Hist 4314 Jacksonian America (3) Cultural, social, political and economic development of the United States from the War of 1812 to 1848.

Hist 4315 The Civil War and Reconstruction (3) The causes of the war, the social, political, economic and military impact of the war; and the post-war reconstruction process.

Hist 4316 The American Military Experience (3) A military history of the American people from colonial times to the present, specifically designed to satisfy the Professional Military Education component of the Military Qualifications Standards required of all candidates for commissioning in the United States Army.

Hist 4317 The Jazz Age and the Great Depression (3) The social, cultural and political trends of the Jazz Age, the social and economic impact of the Great Depression, and the advent of the New Deal.

Hist 4320 History of the Westward Movement (3)

Economic, social, cultural, and political contributions to American development by the Westward Movement.

Hist 4321 History of the South (3) Social, economic, and political development of the South from colonial times to the present.

Hist 4322 The United States Since 1945 (3) Emphasizes political, social, economic and foreign policy developments.

Hist 4324 Problems in American History (2) Interpretive reading and discussion of selected problems. Conflicting interpretations in American historical writing will be analyzed and evaluated.

Hist 4325 History of American Diplomacy (3) Foreign relations of the United States with emphasis on the period since 1900.

Hist 4326 Native American History of the United States (3) A survey of relations between Native Americans and Euro-Americans from colonial times to the present.

Hist 4330 The United States and World War II (3) The rise of totalitarianism in the 1930's, America's reaction to totalitarianism, the war in Europe 1939-41 and America's reaction, America in World War II, the impact of World War II upon American society, and the post-war settlement and the Cold War.

Hist 4331 The Vietnam Era (3) Vietnam in the pre-French (1880's) era, France in Vietnam until 1954, the gradual U.S. involvement in Vietnam 1954-64, the Vietnam war 1964-73, Vietnam of the post-American involvement era to the present and finally an analysis of the impact of the Vietnam war on American society.

Hist 4351 Special Projects in History (1-6) Study, interpretation, and discussion of special topics and problems in American and world history. May be repeated for a maximum of 6 semester hours.

Hist 5310 Readings in History (1-6) Independent readings in selected fields of history. Offered only on a limited basis. May be repeated for a maximum of 6 semester hours. Prerequisites: 9 semester hours of history and graduate adviser's consent.

Hist 5350 Colloquium (3) Advanced study and class discussions in selected area of history. Special area of emphasis to be announced each semester by assigned instructor. May be repeated as areas change for a maximum of 12 semester hours. Prerequisite: 9 semester hours of history.

Hist 6305 Studies in History (3) Directed specialized study leading to the completion of a research paper. Periodic arranged class sessions devoted to discussion of historical writing techniques and analysis of individual research projects. May be repeated as areas change for a maximum of 12 semester hours. Prerequisite: 9 semester hours of history.

Hist 6350 Thesis (4-6) Special investigation of problems in historical research and interpretation culminating in the completion of a thesis.

World History

Hist 2400 History of the Early World (3) A survey of ancient and medieval civilizations from earliest times to 1300. Particular emphasis will be placed upon political, economic, social, and religious developments and achievements.

Hist 2401 History of the Early Modern World (3) World civilization from 1300 to 1800. Special emphasis will be given to economic contact and cultural clashes among European, Asian, American, and African civilizations.

Hist 2402 History of the Modern World (3) A survey of modern world civilization since the Enlightenment. Special attention will be given to industrialization, democratization, imperialism, global wars, and modernization of the non-western world.

Hist 3410 War and Modern Society (3) Military affairs in the Western World since the dawn of the twentieth century.

Hist 3430 Western Cultural History (3) Religious, philosophical, scientific, and artistic development of the West from the fall of the Roman Empire to World War I. Special emphasis on the relationships among scientific, artistic, and speculative endeavors and achievements. Prerequisites: Hist 2400 and Hist 2402.

Hist 4402 Ancient Greece (3) A survey of Greek history from the pre-classical Minoan and Mycenaean civilizations, through the classical period, to the Roman conquest.

Hist 4403 Ancient Rome (3) A survey of Roman history from its origins to the decline of the imperial system. Particular emphasis will be placed upon the political, social, and economic developments in the Republic and the factors that led to the fall of the empire.

Hist 4408 Imperial Spain 1469-1714 (3) The rise of the Spanish Empire in the Old World and the New from the fifteenth through the seventeenth centuries.

Hist 4409 History of Latin America Since 1700 (3) Latin American history from the independence movement of the eighteenth century to the present.

Hist 4412 Era of Renaissance and Reformation (3) The intellectual and cultural institutions of Europe during the Age of the Renaissance and the Protestant Revolt and Catholic Reformation.

Hist 4413 Europe in the Seventeenth Century (3) Political, social, economic, and cultural history of Europe in the seventeenth century.

Hist 4414 The Age of the French Revolution and Napoleon (3) The origins, development, and consequences of the French Revolution and the Napoleonic Empire in France and in the larger European world, with special reference to the broad transformation of the entire continent during the eighteenth century.

Hist 4415 Revolutionary Europe (3) A survey of the political, social, economic, and cultural transformation of Europe in a century of revolution, from the ancient regime to World War I.

Hist 4416 Europe in Crisis: 1914 to Present (3) A political, social, economic and cultural history of Europe,

1914 to the present; including especially the effect of two world wars, the origins and legacies of Fascism and Nazism, the Depression, Cold War, and Europe's regeneration after 1945.

Hist 4422 England to 1689 (2) The history and institutions of England from Anglo-Saxon times to the Glorious Revolution.

Hist 4423 England and the Commonwealth (3) Political, economic, and social development of modern England and the empire.

Hist 4424 History of Russia (3) Russia and its place in world affairs since the eighteenth century.

Hist 4425 Modern Germany and the Nazi Experience (3) A political, social, economic and cultural history of Germany from World War I through the post-World War II era with emphasis on the Third Reich.

Hist 4426 The Rise of Chinese Civilization (3) The origins, development, and transformation of Chinese civilization from ancient to modern times, including China's impact on peripheral nations and the modifications of traditional culture by Western influences until 1949.

Hist 4427 The Rise of Japanese Civilization (3) The origins, development, and transformation of Japanese civilization from ancient to modern times, emphasizing the unique qualities of Japanese history and culture and the role of Japanese leadership in modern East Asia.

Hist 4428 Communist China (3) Communist China since World War II, including the expulsion of the Nationalist government from the mainland, the consolidation of communist power and authority, internal upheavals such as the "Hundred Flowers," the Great Leap Forward, and the Cultural Revolution and Communist China's foreign policies and role in international affairs.

Hist 4431 Intellectual History of Modern Europe (3) Political, social, and religious ideas shaping the culture, society, and institutions of Europe.

Hist 4432 Economic History of Europe (3) Rise of medieval commerce, growth of towns, commercial and industrial revolutions and the more important economic philosophies.

Hist 5400 Historiography (3) Philosophical systems and the contributions of each to the interpretation of history. Famous historians who represent each of the schools of thought will be analyzed. Open only to history and social science majors.

Integrative Studies General

IGen 4231 Myth, Memory and American Realities* (3)

Examines a selected topic in American history and literature to understand how Americans have constructed interpretations of the past to explain the present.

*Not available for graduate credit.

Interdisciplinary Studies Involving History

A full description of Interdisciplinary Studies courses is listed in the section on Interdisciplinary Studies.

IndS 3340 Modern East Asia (3)

Anthropology

ANTHROPOLOGY Minor for a Bachelor's Degree(Central does not confer teacher certification for this minor)
(000424)

		Sem. Hours
MINOR REQUIREMENTS		20
Anth 1810	Human Prehistory	3
Anth 1820	Cultural Anthropology	3
	Electives from the following	14
Engl 4110	Linguistics	3
	Electives (continued)	3
	Elective in sociology	3
	Electives in Anthropology	8-14

UNIVERSITY STUDIES REQUIREMENTS (In the minor, Anth 1810 fulfills 3 s.h. of Div. II D; Anth 1820 fulfills 3 s.h. of Div. II B)

Anth 1810 Human Prehistory (3) Surveys the empirical evidence of fossils and artifacts for human biological and cultural origins from circa five million to five thousand years ago.

Anth 1820 Cultural Anthropology (3) Surveys the origin, development, and varieties of contemporary cultures, including non-Western; comparisons of technology, customs, groups, and institutions between and among these cultures; implications of earlier cultures for modern society.

Anth 2820 Archaeology (3) An examination of societies that are now extinct and an introduction to the field and laboratory methods used to reconstruct their cultures.

Anth 2845 Physical Anthropology (3) The biology of the human organism; primatology, primate paleontology, and fossil hominids; the role of genetics in evolutionary theory; basic ideas in population genetics, and racial variation.

Anth 3801 Applied Anthropology (3) Applications of the four major subfields of anthropology: cultural anthropology, physical anthropology, archaeology, and linguistics. Prerequisite: Anth 1810 or Anth 1820 or consent of instructor.

Anth 3850 Peoples of the World (3) An examination of more than twenty cultures throughout the world.

Anth 4815 Special Projects in Anthropology (1-6) Study, interpretation, and discussion of special topics and problems in anthropology. May be repeated for a maximum of 6 semester hours. Prerequisite: consent of instructor.

Anth 4820 Sexual Dynamics and Culture (3) Explores cultural factors influencing roles of women and men in a variety of cultures, from small foraging bands to large industrialized states. Topics include cultural influences on sexual equality, sexual hierarchy, heterosexuality, and homosexuality.

Anth 4850 The North American Indian (3) The anthropological study of the native peoples of America north of Mexico; the physical types of American Indian populations; the comparative study of native American languages, North American prehistory, and North American ethnology.

Anth 4870 Comparative Cultures (3) Compares various aspects of cultures in selected societies and helps students to collect and analyze data on cultural patterns in their own and other societies.

Anth 4894 Cross-Cultural Aspects of Aging (3) A wide variety of societies, from small hunting and gathering to large industrialized societies, is examined in an attempt to explore probable causes and effects of different patterns of aging.

Social Science

In the area of Social Sciences, the second digit in the course number stands for the following: 0--Social Science Education, 2--Geography, 3--American History, 4--World History, 5--Political Science, 8--Anthropology.

Department of History and Anthropology Statement of Policy

A course with a grade lower than a "C" will not be allowed to fulfill a major or minor requirement in any program offered by the Department of History and Anthropology.

SOCIAL STUDIES Functional Major, B.S. in Ed. Degree

(Certification to teach social studies in grades 9-12)

(41 000416)

				Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS				57
SoSc	3010	Writing in the Social Sciences	3	6
SoSc	4050	The Social Studies	3	3
Hist	1350	History of the U. S. to 1877	3	3
Hist	1351	History of the U. S. from 1877	3	3
PolS	1510	American Government	3	3
PolS	2511	State Government	3	3
Geog	2212	World Geography	3	3
Econ	1010	Principles of Economics	3	3
Soc	1800	General Sociology	3	3
Electives from the following				6
	Hist	2400	History of the Early World	3
	Hist	2401	History of the Early Modern World	3
	or			
	Hist	2401	History of the Early Modern World	3
	Hist	2402	History of the Modern World	3
	Upper level elective in Soc or Anth			3
	Upper level electives in American history			6
	Upper level elective in world history			3
	Upper level elective in geography			3
	Upper level electives in at least two of the following:			
	Geog, Hist, PolS, Soc, Anth, or Econ			9

The program must include at least one course that focuses on a non-western society, nation or region or on the non-western world. A list of the courses which fulfill this requirement is available from the History and Anthropology Department and on file with the Academic Advisors.

MINOR NOT REQUIRED

UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Hist 1350, Econ 1010, Soc 1800 fulfill 9 s.h. of Div. II B; in the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. III B)				36
Hist	1350	Div. II B or	3	3
Hist	1351	Div. II B (required)	3	

Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. in Div. II E and must have one course in a physical or earth science and one in a biological science in Div. II A. If elected, Hist 2402 fulfills 3 s.h. of Div. II D.

PROFESSIONAL EDUCATION REQUIREMENTS (see page 183)				28
Psy	4200	Psy. of Except. Children (required)	2	

FREE ELECTIVES				3
To be recommended for student teaching by the Department of History and Anthropology, a student with a major or minor in social studies must achieve at least a 2.50 GPA in all social science courses taken at Central.				
MINIMUM TOTAL				124

SOCIAL STUDIES Minor, B.S. in Ed. Degree

(Certification to teach social studies in grades 5-9 is available only with a major in middle school-junior high school. May fulfill an area of concentration requirement for elementary education functional majors.)

(000418)

				Sem. Hours
MINOR REQUIREMENTS				24-27
Hist	1350	History of the U. S. to 1877	3	3
Hist	1351	History of the U. S. from 1877	3	3
Hist	2402	History of the Modern World	3	2-3
PolS	1510	American Government	3	2-3
Geog	2212	World Geography, 3 or	3	2000-4000 level elective in Geog,
Geog	3201	The Cultural Landscape, 3	3	PolS, Soc, or Anth
				2-3

UNIVERSITY STUDIES REQUIREMENTS (In the minor, Hist 1350, PolS 1510 fulfill 6 s.h. of Div. II B; if elected, Econ 1010 or Geog 2212 fulfills 3 s.h. of Div. II B; Hist 2402 fulfills 3 s.h. of Div. II D)

To be recommended for student teaching by the Department of History and Anthropology, a student with a major or minor in social studies must achieve at least a 2.50 GPA in all social science courses taken at Central.

Social Science Education

SoSc 3010 Writing in the Social Sciences (3) Practicum in writing in the social sciences. Prerequisite: completion of University Studies Div. I A.

SoSc 4050 The Social Studies* (3) The "structures" of the disciplines and practice in redesigning university course work for high school lessons.

*Not available for graduate credit.

SoSc 5040 Social Studies in the Elementary School (2)

The content of the social studies, their place in the elementary school curriculum, and the approaches and methods teachers might employ in developing concepts and shaping values.

SoSc 5050 Teaching About the World and Its People (2)

Global perspectives and interdependence as they relate to topics such as energy, food and population. Resources and activities will be emphasized.

Mathematics and Computer Science

Department of Mathematics and Computer Science Statement of Policy

A course with a grade lower than a "C" will not be allowed to fulfill a major or minor requirement in any program offered by the Department of Mathematics and Computer Science.

A student may enroll in a course offered by the Department of Mathematics and Computer Science only if a grade of at least "C" is earned in each of the course's prerequisites taken.

MATHEMATICS

In the Department of Mathematics and Computer Science, the second digit in a course number with a **Math** prefix stands for the following: 0-Unclassified, 1-Analysis, 2-Geometry, 3-Statistics, 5-Actuarial Science, 6-History or University Studies, 7-Modern Algebra, 8-Mathematics Education, 9-Research and Special Problems.

ACTUARIAL SCIENCE AND MATHEMATICS Functional Major, B.S. Degree

(43 000475)

NOTE: Candidates for this degree must: (1) pass examination #1 of the Actuarial Examination Series and (2) possess a 3.00 grade-point average overall and in mathematics.

		Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS		62-63
Math 1151	Calculus & Analytic Geometry I 5	CS 1110 Intro. to Computing II 3
Math 1152	Calculus & Analytic Geometry II 5	CS 4400 Numerical Analysis I 3
Math 2153	Calculus & Analytic Geometry III 3	CS 4410 Operations Research 3
Math 3311	Statistics I 3	Fin 2801 Business Statistics I 3
Math 4312	Statistics II 3	Fin 3801 Business Statistics II 3
Math 3500	Elem. Actuarial Math.--Problem Set I 1	Fin 4801 Social Insurance 3
Math 4500	Actuarial Appl. of Probability & Statistics -- Problem Set II 1	Fin 4803 Risk Mgt.--Property & Liability Ins. 3
Math 4510	Mathematics of Finance 3	Electives from the following 6-7
Math 4520	Life Contingencies 3	Math 3151 Differential Equations 3
Math 2710	Foundations of Mathematics 2	Math 4160 Advanced Applied Calculus 3
Math 3710	Linear Algebra 3	Math 3720 Algebraic Structures 2
CS 1100	Intro. to Computing I 3	CS 2300 Data Structures 3
		CIS 2610 COBOL Programming 4
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Math 1151 is allowed to fulfill 3 s.h. of Div. I C)		45
FREE ELECTIVES		16-17
MINIMUM TOTAL		124

MATHEMATICS Major, B.A. Degree

(42 000453)

		Sem. Hours
MAJOR REQUIREMENTS		33
Math 1151	Calculus & Analytic Geometry I 5	Math 2710 Foundations of Mathematics 2
Math 1152	Calculus & Analytic Geometry II 5	Math 3710 Linear Algebra 3
Math 2153	Calculus & Analytic Geometry III 3	Math 3720 Algebraic Structures 2
Math 3221	College Geometry 3	CS 1100 Intro. to Computing I 3
Math 4211	Introduction to Topology 3	Upper level electives in Math or CS 4
MINOR REQUIREMENTS		18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, Math 1151 is allowed to fulfill 3 s.h. of Div. I C; the Modern Language Requirement fulfills 3 s.h. of Div. II C)		42
MODERN LANGUAGE REQUIREMENT		3-9
(Refer to Bachelor's Degree Requirements section for fulfillment options)		
FREE ELECTIVES		15-28
MINIMUM TOTAL		124

MATHEMATICS Major, B.S. Degree
(43 000454)

		Sem. Hours
MAJOR REQUIREMENTS		40
Math 1151	Calculus & Analytic Geometry I 5	Math 3710 Linear Algebra 3
Math 1152	Calculus & Analytic Geometry II 5	Math 3720 Algebraic Structures 2
Math 2153	Calculus & Analytic Geometry III 3	CS 1100 Intro. to Computing I 3
Math 2221	Foundations of Geometry 3	CS 1110 Intro. to Computing II 3
Math 2710	Foundations of Mathematics 2	Upper level electives in Math or CS 11
MINOR REQUIREMENTS		18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, Math 1151 is allowed to fulfill 3 s.h. of Div. I C)		45
FREE ELECTIVES		14-21
MINIMUM TOTAL		124

MATHEMATICS Major, B.S. in Ed. Degree
(Certification to teach mathematics in grades 9-12)
(41 000459)

		Sem. Hours
MAJOR REQUIREMENTS		35.5-36.5
Math 1151	Calculus & Analytic Geometry I 5	Electives from the following or as approved
Math 1152	Calculus & Analytic Geometry II 5	by department 5-6
Math 2221	Foundations of Geometry 3	Math 2153 Calc. & Analytic Geom. III 3
Math 3311	Statistics I 3	Math 3151 Differential Equations 3
Math 3611	History of Mathematics 2	Math 3221 College Geometry 3
Math 2710	Foundations of Mathematics 2	Math 4211 Introduction to Topology 3
Math 3720	Algebraic Structures 2	Math 4312 Statistics II 3
Math 4710	Real Number System 2	Math 4510 Mathematics of Finance 3
Math 1850	Orientation Seminar 0.5	Math 3710 Linear Algebra 3
Math 3850	Strategies in Teaching	Math 4711 Modern Algebra I 3
	Secondary Mathematics 3	Math 4730 Set Theory & Math. Logic 3
CS 1100	Intro. to Computing I 3	Math 4741 Intro. to Theory of Numbers 3
		CS 1110 Intro. to Computing II 3
		CS 3310 Discrete Mathematics 2
MINOR REQUIREMENTS		18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, Math 1151 is allowed to fulfill 3 s.h. of Div. I C; in the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. III B)		42
Secondary Education students must have one course in a physical or earth science and one in a biological science in Div. II A.		
Hist 1350	Div. II B or	PolS 1510 Div. II B (required) 3
Hist 1351	Div. II B (required) 3	Psy 4230 Psy. of Adolescence 3
Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. in Div. II E.		
PROFESSIONAL EDUCATION REQUIREMENTS (see page 183)		28
FREE ELECTIVES		0-0.5
MINIMUM TOTAL		124

MATHEMATICS Functional Major, B.S. in Ed. Degree
(Certification to teach mathematics in grades 9-12)
(41 000461)

		Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS		51.5
Math 1151	Calculus & Analytic Geometry I 5	Math 3850 Strategies in Teaching
Math 1152	Calculus & Analytic Geometry II 5	Secondary Mathematics 3
Math 2153	Calculus & Analytic Geometry III 3	CS 1100 Intro. to Computing I 3
Math 2221	Foundations of Geometry 3	Electives from the following 8-10
Math 3221	College Geometry 3	Phys 1101 College Physics I 4
Math 3311	Statistics I 3	Phys 1102 College Physics II 4
Math 3611	History of Mathematics 2	or
Math 2710	Foundations of Mathematics 2	Phys 2121 University Physics I 5
Math 3720	Algebraic Structures 2	Phys 2122 University Physics II 5
Math 4710	Real Number System 2	Upper level electives in Math or CS 5-7
Math 1850	Orientation Seminar 0.5	
MINOR NOT REQUIRED		
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Math 1151 is allowed to fulfill 3 s.h. of Div. I C; Phys 1101 and Phys 1102 or Phys 2121 and Phys 2122 are allowed to fulfill 3-4 s.h. of Div. II A; in the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. III B)		38-39
Biol 1003	Div. II A or	Hist 1350 Div. II B or
Biol 1004	Div. II A (required) 3-4	Hist 1351 Div. II B (required) 3
PolS 1510	Div. II B (required) 3	Psy 4230 Psy. of Adolescence 3
Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. in Div. II E.		
PROFESSIONAL EDUCATION REQUIREMENTS (see page 183)		28
FREE ELECTIVES		5.5-6.5
MINIMUM TOTAL		124

MATHEMATICS Minor, B.S. in Ed. Degree

(Certification to teach mathematics in grades 5-9 with a middle school-junior high major.
Elementary education functional majors 1-6 may use this as an area of concentration.
(000480)

				Sem. Hours
MINOR REQUIREMENTS				24-25
Math	2812	Concepts & Methods in Middle School Mathematics	5	Electives from the following or as approved by department
Math	3840	Strategies in Teaching Middle School Mathematics	3	Math 3611 History of Mathematics
Math	4821	Elements of Algebra	3	Math 4813 Elements of Math.
Math	4822	Elements of Geometry	3	Math 4841 Ed. Computing in Math.
Math	4823	Introduction to Infinite Processes	5	Math 4861 Prob. Solving in Math.
Math	4871	Algebraic Concepts for Teachers	3	*Math 4890 Math. for Special Ed.

*Course has prerequisite(s) not listed in the program.

MATHEMATICS Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)
(Recommended for majors in business, economics, physical science, social sciences and related fields)
(000482)

				Sem. Hours
MINOR REQUIREMENTS				23
Math	1151	Calculus & Analytic Geometry I	5	Electives from the following or as approved by department
Math	1152	Calculus & Analytic Geometry II	5	Math 2153 Calc. & Analytic Geometry III
Math	2710	Foundations of Mathematics	2	Math 3311 Statistics I
Math	3710	Linear Algebra	3	CS 1100 Intro. to Computing I
Math	3720	Algebraic Structures	2	

UNIVERSITY STUDIES REQUIREMENTS (In the minor, Math 1151 is allowed to fulfill 3 s.h. of Div. I C)

Analysis

Math 1101 Intermediate Algebra (3) The properties of real numbers, polynomials, rational exponents, radicals, functions, and systems of equations. Prerequisite: high school program including advanced algebra or Math 1101. Placement according to University policy applies.

Math 1111 College Algebra (3) Continuation of basic algebra including such topics as linear and quadratic equalities, linear and quadratic inequalities, second degree relations and functions, systems of equations, and exponential and logarithmic functions. Prerequisite: high school credit in basic algebra or Pers 1030.

Math 1112 College Trigonometry (2) Elementary trigonometric functions, identities, trigonometric equations, multiple angle formulas, and general triangle solutions. Prerequisite: a high school program including advanced algebra and one unit of geometry; or Math 1111 or concurrently.

Math 1131 Calculus for Business and Economics (3) The fundamental skills and concepts of calculus with an emphasis on applications in business and economics. Prerequisite: a high school program including one unit of advanced algebra and one unit of geometry, or Math 1111.

Math 1150 Pre-Calculus Mathematics (4) Pre-calculus concepts in algebra and trigonometry for the student with an above average preparation in high school mathematics. Prerequisite: a high school program including advanced algebra, one unit of geometry, and one-half unit of trigonometry. Placement according to University policy applies.

Math 1151 Calculus and Analytic Geometry I (5) A combined course in calculus and analytic geometry. Prerequisite: a high school program including advanced

algebra, one unit of geometry, and one-half unit of trigonometry; or Math 1112 or Math 1150.

Math 1152 Calculus and Analytic Geometry II (5) A continuation of Math 1151. Prerequisite: Math 1151.

Math 2153 Calculus and Analytic Geometry III (3) A continuation of Math 1152. Prerequisite: Math 1152.

Math 3151 Differential Equations (3) Presents techniques of solving ordinary differential equations with applications to physics and engineering. Prerequisite: Math 2153.

Math 4160 Advanced Applied Calculus (3) Differential and integral calculus of functions of several variables, vector differential and integral calculus, and Fourier series. Prerequisite: Math 3710 or consent of Chairperson and Math 2153.

Math 5161 Advanced Calculus (3) A rigorous approach to the fundamental concepts of differential calculus, integral calculus, and infinite series. Prerequisites: Math 2153 and Math 3710.

Math 5171 Functions of a Complex Variable (3) General properties of analytic functions of a complex variable with applications. Prerequisite: Math 4160.

Geometry

Math 1201 Introduction to Euclidean Geometry (3) An emphasis on the techniques of proof and construction in Euclidean geometry.

Math 2221 Foundations of Geometry (3) An emphasis on the techniques of proof and constructions in geometry, the properties of a set of postulates, a brief review of Euclidean geometry, and the study of other geometries. Prerequisite: Math 1201 or one unit of high school geometry.

Math 3221 College Geometry (3) Modern Euclidean geometry, geometric transformations, advanced Euclidean constructions, constructible numbers, extension fields and

the three impossible problems of antiquity. Prerequisite: Math 1201 or one unit of high school geometry.

Math 4211 Introduction to Topology (3) Introduces the concept of point set topology. Includes the study of the real line, the real plane, metric spaces, topological spaces, continuity, connectedness, compactness, product spaces, and separation properties. Prerequisite: Math 3720.

Math 5212 Differential Geometry (3) Study of geometry of curves and surfaces by means of calculus and linear algebra. Prerequisites: Math 2153 and Math 3710.

Math 5221 Projective Geometry (3) Nonmetric properties of geometric figures, together with an analysis of the assumptions and definitions basic to all geometry. Prerequisites: Math 1152 and Math 3221.

Statistics

Math 3311 Statistics I (3) Basic concepts of probability and statistics. Prerequisite: Math 1152.

Math 4312 Statistics II (3) Theoretical point-set probability applied to selected problems and statistical procedures. Prerequisites: Math 2153 and Math 3311.

Actuarial Science

Math 3500 Elementary Actuarial Mathematics--Problem Set I (1) Problems from algebra, trigonometry, calculus, and linear algebra that apply to the actuarial sciences will be considered. Prerequisites: Math 2153 and Math 3710.

Math 4500 Actuarial Applications of Probability and Statistics--Problem Set II (1) A study of problems from probability and statistics that apply to actuarial science. May be repeated for a maximum of 2 semester hours. Prerequisite: Math 4312.

Math 4510 Mathematics of Finance (3) The basic measures of interest, annuities and life contingencies will be presented. Prerequisite: Math 1152.

Math 4520 Life Contingencies (3) Theory and applications of contingency mathematics in the areas of life and health insurance, annuities and pensions. Prerequisites: Math 4312 and Math 4510.

History or University Studies

Math 1620 Contemporary Mathematics (3) Mathematical concepts, with historical perspectives, from various branches of mathematics including an introduction to statistics, logic, combinatorics, linear programming, number theory, geometry and probability. Prerequisite: a high school program including advanced algebra or Math 1101. Placement according to University policy applies.

Math 3611 History of Mathematics (2) A survey of the growth of mathematical thought and methods. Prerequisite: 15 semester hours of college mathematics.

Modern Algebra

Math 2710 Foundations of Mathematics (2) A foundations course for several branches of mathematics.

Techniques that serve other areas of mathematics will be developed. Prerequisite: Math 1151 or Math 4823.

Math 3710 Linear Algebra (3) An introduction to matrices, determinants, vector spaces and linear transformations. Prerequisite: Math 2710.

Math 3720 Algebraic Structures (2) Basic mathematical systems: groups, rings and fields. Prerequisite: Math 2710.

Math 4710 Real Number System (2) The real number system beginning with the natural numbers using Peano's postulates. Prerequisite: Math 3720.

Math 4711 Modern Algebra I (3) Some of the theories of modern algebra with emphasis on algebraic systems with one operation. Prerequisite: Math 3720.

Math 4730 Set Theory and Mathematical Logic (3) A formal axiomatic approach to set theory, logic, and inference. Prerequisite: Math 3720.

Math 4741 Introduction to the Theory of Numbers (3) Congruences, quadratic residues, the reciprocity theorem, and Diophantine equations. Prerequisite: Math 3720.

Math 5711 Modern Algebra II (3) A continuation of the study of algebraic systems with emphasis on ring theory. Prerequisite: Math 4711.

Math 5722 Matrix Algebra (3) Treats the algebra of matrices, vector spaces, linear transformations, and characteristic equations of matrices. Prerequisite: a basic knowledge of vectors and vector operations is assumed and Math 4711.

Mathematics Education

Math 1850 Orientation Seminar (0.5) Five 90-minute seminars will acquaint students majoring in secondary mathematics education with courses, portfolio assessment, interview process, standardized tests and professional organizations.

Math 2810 Concepts and Methods in Elementary School Mathematics (5) An emphasis on the concepts and methods of teaching mathematics to grades K-5. Topics include sets and relations, number, numeration, mathematical systems, whole number system, algorithms, fractions, integers, decimals, geometry, measurement, and problem solving. Prerequisite: Math 1620.

Math 2812 Concepts and Methods in Middle School Mathematics (5) An emphasis on the concepts and methods of teaching mathematics to grades 5-9. Topics include system of integers, system of rationals, system of real numbers, decimal numeration, geometry, measurement, logic, statistics, probability, problem solving, and review of the K-5 mathematics curriculum. Prerequisite: Math 1620.

Math 3812 Mathematics in the Integrated Middle School Curriculum (3) An emphasis on integrating mathematics with other subject areas at the middle school level. A focus on relationships between mathematics and other subject areas together with investigation of relevant applications of mathematics outside the classroom. Prerequisites: Math 1620 and completion of 9 semester hours in minor teaching field.

Math 3840 Strategies in Teaching Middle School Mathematics (3) An investigation of techniques, problems, and issues involved in the teaching of middle school mathematics. Involves both lecture and field experience. Not applicable to major requirements for secondary majors. Prerequisite: Math 2812.

Math 3850 Strategies in Teaching Secondary Mathematics (3) An investigation of instructional strategies, problems and issues relevant to the teaching of secondary school mathematics. Prerequisites: Math 1152, Math 2221 and Math 2710.

Math 3890 Concepts and Methods of Teaching for Special Education (3) A survey of concepts and methods for teaching mathematics grades K-12 with particular attention to needs of special education inclusion students. Prerequisite: Math 1620.

Math 4813 Elements of Mathematics (3) Mathematics concepts and practices to update the middle grade/junior high teaching of selected elements of mathematical investigation prominent in current school curricula. Prerequisite: Math 1111 or Math 4821.

Math 4821 Elements of Algebra (3) Basic concepts of algebra adapted to the needs of elementary teachers. May be taken for graduate credit by elementary teachers only. Prerequisite: Math 2812.

Math 4822 Elements of Geometry (3) Concepts and relationships of geometry adapted to the needs of elementary teachers. Available for graduate credit to elementary teachers only. Prerequisite: Math 2812.

Math 4823 Introduction to Infinite Processes (5) Transition from the concepts of elementary analysis to the infinite processes which form the foundation for the calculus. Open only to elementary education majors on the B.S. in Ed. and Master of Science in Education degrees. Prerequisites: Math 4821 and Math 4822.

Math 4841 Educational Computing in Mathematics (3) An introduction to the microcomputer, the development and evaluation of software, and the techniques and procedures of using the computer for teaching mathematics K-9. Prerequisite: Math 4821 or equivalent.

Math 4861 Problem Solving in Mathematics (2) Emphasis on the teaching and learning of mathematical problem solving skills in grades 5-9 including locating resources, studying current theories and national standards, and developing materials. Prerequisites: Math 4821 and Math 4822.

Math 4871 Algebraic Concepts for Teachers (3) The properties and language of sets, functions, groups, rings, integral domains, and fields. Recommended for middle school/junior high school teachers. Will not satisfy requirements on undergraduate programs where Math 3720 is a requisite. Prerequisite: Math 4821 or equivalent course in college algebra.

Math 4890 Mathematics for Special Education (2) Individual and small group investigation of concepts and procedures appropriate for instruction of mathematics to all special needs children. Prerequisite: EdSp 2100; and Math 2810 or Math 2812 or Math 3890.

Math 5812 Problems in Teaching Elementary Mathematics (3) An investigation of problem areas, general and student initiated, concerning teaching elementary school mathematics.

Math 5852 Problems of Teaching Secondary Mathematics (3) A survey of current issues in the teaching of secondary mathematics.

Research and Special Problems

Math 4910 Special Problems in Mathematics (1-3) Individual reading and research leading to an acceptable paper on some topic not included in the regular offering of the department. May be repeated for a maximum of 3 semester hours. Prerequisite: mathematics major or Math 3720 or consent.

Math 4912 Internship in Mathematical Sciences (6-8) Opportunity for students to gain knowledge in areas of mathematical science, both theoretical and applied, that would not normally be included as a part of the department's curriculum. Internship contract must be completed prior to beginning work/learning experience. May be repeated for a maximum of 16 semester hours. A maximum of 8 semester hours may be applied to any one degree. Prerequisite: consent of department Internship Committee and if taken for graduate credit, approval of graduate adviser.

Math 5900 Special Projects in Mathematics (1-3) May be repeated for a maximum of 3 semester hours.

Math 5911 Special Topics in Mathematics (1-3) Individual reading and research leading to an acceptable paper on some topic not included in the regular offerings of the department. May be repeated for a maximum of 3 semester hours. Prerequisites: Math 2153, Math 3720 and consent.

Math 5920 Seminar in Mathematics (1-3) For presentation of those topics in mathematics not included in the regular offerings of the department. May be repeated for a maximum of 3 semester hours. Prerequisite: consent.

Math 6912 Readings in Mathematics (1-5) Selected readings in mathematics designed to deepen and expand the student's understanding of an area of interest. May be repeated for a maximum of 5 semester hours. Prerequisite: consent.

Math 6950 Research (2-8) May be repeated for a maximum of 8 semester hours.

COMPUTER SCIENCE

In the Department of Mathematics and Computer Science, the second digit in a course number with a **CS** prefix stands for the following: 0-Service Courses, 1-Programming Languages, 2-Architecture, 3-Algorithms and Data Structures, 4-Numerical and Symbolic Computation, 5-Operating Systems, 6-Database and Information Retrieval, 7-Artificial Intelligence and Robotics, 8-Human-Computer Communication, 9-Software Engineering and Professional Issues.

COMPUTER SCIENCE AND MATHEMATICS Functional Major, B.S. Degree

(43 000448)

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						63-64	
CS	1100	Intro. to Computing I	3	Math	2153	Calculus & Analytic Geometry III	3
CS	1110	Intro. to Computing II	3	Math	3311	Statistics I	3
CS	3100	Programming Languages	3	Math	2710	Foundations of Mathematics	2
CS	2200	Intro. to Computer Systems & Organization	2	Math	3710	Linear Algebra	3
CS	2300	Data Structures	3	Electives from the following or as approved by department			8-9
CS	3310	Discrete Mathematics	2	CS	3110	Object-Oriented Prog.	2
CS	4400	Numerical Analysis I	3	CS	4300	Analysis of Algorithms	3
CS	4410	Operations Research	3	CS	4310	Theory of Computation	3
CS	4500	Operating Systems	3	CS	4700	Artificial Intelligence	3
CS	4600	Database Theory & Applications	3	CS	3800	Math. Computer Graphics	3
CS	4900	Compiler Construction	3	Math	3151	Differential Equations	3
CS	4910	Seminar in Computer Science	3	Math	4160	Advanced Applied Calculus	3
Math	1151	Calculus & Analytic Geometry I	5	Math	4312	Statistics II	3
Math	1152	Calculus & Analytic Geometry II	5	Math	3720	Algebraic Structures	2
MINOR NOT REQUIRED							
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Math 1151 is allowed to fulfill 3 s.h. of Div. I C)						45	
FREE ELECTIVES						15-16	
MINIMUM TOTAL						124	

COMPUTER SCIENCE AND MATHEMATICS Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)

(000449)

						Sem. Hours	
MINOR REQUIREMENTS						20-22	
CS	1100	Intro. to Computing I	3	Electives (continued)			
CS	1110	Intro. to Computing II	3	CS	2200	Intro. to Computer Systems & Organization	2
Math	1151	Calculus & Analytic Geometry I	5	CS	2300	Data Structures	3
Math	1152	Calculus & Analytic Geometry II	5	CS	4410	Operations Research	3
Electives from the following or as approved by department				CS	3800	Math. Computer Graphics	3
CS	3100	Programming Languages	3	Math	3311	Statistics I	3
CS	3110	Object-Oriented Programming	2				
UNIVERSITY STUDIES REQUIREMENTS (In the minor, Math 1151 is allowed to fulfill 3 s.h. of Div. I C)							

CS 1000 BASIC Programming (1) Introduction to interactive programming and coding of defined algorithms into the computer using BASIC language. Prerequisite: one unit of high school algebra or Math 1101.

CS 1010 FORTRAN Programming (1) Coding a defined algorithm into computer FORTRAN language. Prerequisite: three units of high school mathematics or Math 1101.

CS 1100 Introduction to Computing I (3) Emphasis is on techniques of problem analysis, structured algorithm and program development, and program testing. The principal programming language for the course is PASCAL. Prerequisite: three units of high school mathematics or Math 1101.

CS 1110 Introduction to Computing II (3) Implementing the concepts of computer science using PASCAL and C. Prerequisite: CS 1100.

CS 3100 Programming Languages (3) An overview of the main feature of the major programming languages. Programming languages such as BASIC, FORTRAN, PL/I,

PASCAL, ADA, APL, LISP, PROLOG, SNOBOL, MODULA-2, and C will be compared in their handling of variables, types, control structures, and input-output. Prerequisite: CS 2300.

CS 3110 Object-Oriented Programming (2) An introduction to object-oriented programming using the C++ language. Topics include objects, classes, inheritance, polymorphism, dynamic binding, and system design from an object-oriented viewpoint. Programming assignments will emphasize the implementation of these concepts. Prerequisite: CS 1110 or CIS 2610.

CS 2200 Introduction to Computer Systems and Organization (2) Logical structure of digital computers: representation of information, addressing mechanisms, storage and peripheral hardware, microprocessing and microprocessors, virtual machines and virtual memory. Prerequisite: CS 1110.

CS 2300 Data Structures (3) An introduction to data representations and information structures including a variety of non-numerical algorithms and their applications. Linear lists, arrays, trees, multilinked structures and dynamic storage allocation are investigated. Prerequisites: CS 1110, or CIS 2610 and CS 1010.

CS 3310 Discrete Mathematics (2) Mathematical foundations of programming and computing. Induction, logical proofs and discrete structures used in programs. Introduction to recursive functions, relations, homomorphisms, partially ordered sets, the predicate calculus and concepts from automata and computability theory. Prerequisites: CS 1110 and Math 2710.

CS 4300 Analysis of Algorithms (3) Techniques needed to analyze algorithms. The application of these techniques to topics such as sorting, graph algorithms, fast Fourier transforms, dynamic programming, and NP-completeness. Prerequisite: Math 2153.

CS 4310 Theory of Computation (3) Includes finite-state automata, pushdown automata, and Turing machines. The topics of regular expressions, context-free languages, the halting problem, Post's correspondence problem, P, NP, NP-completeness, and some NP-complete problems will be discussed. Prerequisite: CS 3310.

CS 4400 Numerical Analysis I (3) Finite difference interpolation, numerical differentiation and integration, numerical solution of nonlinear equations, numerical solution of ordinary differential equations. Computational techniques stressed and extensive quantity of problems to be solved on a digital computer. Prerequisites: CS 1110 and Math 2153.

CS 4410 Operations Research (3) Systems and models, including Random Number Process, (Monte Carlo Process) and Queuing Concepts. Combining these concepts into model building techniques. Prerequisites: CS 1110 and Math 3311, or CIS 2610 and Fin 2801.

CS 5400 Numerical Analysis II (3) Extension of topics in Numerical Analysis I to include numerical treatment of empirical data, numerical solution of simultaneous linear equations and calculation of eigenvalues and eigenvectors of matrices, numerical solution of partial differential equations. Extensive quantity of problems to be solved on digital computer. Prerequisite: CS 4400.

CS 5410 Linear Programming (3) Methods used in linear programming such as the simplex method and the ratio-analysis method with application to typical problems. Prerequisite: Math 3710.

CS 5420 Methods of Optimization (3) An introduction to optimization techniques for both nonlinear programming and nonlinear optimization problems. Specific topics include N-dimensional geometry, convex sets, hyperplanes, convex polyhedra, Fibonacci search, steepest-descent method, conjugate gradient method, and the Davidon-Fletcher-Powell method. Current papers in the area will be surveyed.

CS 4500 Operating Systems (3) Operating systems including process management, storage management, processor management, and performance. The topics of asynchronous concurrent processes, concurrent programming, deadlock, real and virtual storage, processor scheduling, multiprocessing, queuing theory, Markov processes, and case studies will be discussed. Prerequisites: CS 2200 and CS 2300.

CS 4600 Database Theory and Applications (3) An introduction to database theory and design, including relational algebra/calculus, normalization of data, and query optimization. Security, integrity, and concurrent operation issues will be presented. Distributed database systems will also be introduced. Significant application-oriented projects using SQL will be required. Prerequisites: CS 2300 and CS 3310.

CS 4700 Artificial Intelligence (3) An introduction to Artificial Intelligence (AI) and AI languages such as LISP and PROLOG. Specific topics will include knowledge representation, predicate calculus, resolution, pruning, heuristic search techniques, probabilistic reasoning, and expert systems. Prerequisites: CS 2300 and CS 3310.

CS 3800 Mathematical Computer Graphics (3) An introductory course to integrate mathematics, numerical methods, and computers to provide computer generated graphics. Prerequisites: CS 2300 and Math 1152.

CS 4900 Compiler Construction (3) Includes finite-state machines, top-down and bottom-up parsing, and syntax-directed translation. The topics of regular grammars, lexical analysis, LL(k) grammars, LR(k) grammars, syntax-directed translation schemes, and simple transducers will be discussed. Prerequisite: CS 2300.

CS 4910 Seminar in Computer Science* (3) Integrates the various areas of computer science via classroom discussion and laboratory assignments. Prerequisite: CS 2300.

*Not available for graduate credit.

Modern Languages

In the Department of Modern Languages, the second digit in the course number stands for the following: 0--General, 2--French, 3--German, 6--Spanish, 7--Chinese.

Department of Modern Languages Statement of Policy

If a student enrolls in Fren 1202 or Ger 1302 or Span 1602 and completes the class with a grade of "C" or higher, the student may be eligible for validated credit for Fren 1201 or Ger 1301 or Span 1601. If a student enrolls in Fren 1203 or Ger 1303 or Span 1603 or a higher level class and completes the class with a grade of "C" or higher, the student may be eligible for validated credit for Fren 1201 and Fren 1202 or Ger 1301 and Ger 1302 or Span 1601 and Span 1602. Other restrictions may apply. For further information contact the Chair of the Department of Modern Languages.

Requirements for Certification in Modern Languages

For certification as a modern language teacher in Missouri, grades K-12, 30 semester hours are required in the language taught, or 27 hours in the language taught plus two or more high school units in that language.

Certification for grades K-9 only requires 21 semester hours in the language taught, or 18 semester hours in the language taught plus two or more high school units in that language.

FRENCH Major, B.A. Degree

(42 000318)

	Sem. Hours
MAJOR REQUIREMENTS	30
Fren 1203 Intermediate French I	3
Fren 1204 Intermediate French II	3
Fren 2223 French Composition	3
Fren 2243 French Conversation	3
Fren 2262 French Civilization II	3
Fren 3223 Advanced French Composition	3
Fren 3243 Advanced French Conversation ..	3
Fren 3282 Survey of French Literature II ...	3
Fren 2261 French Civilization I, 3 or	
Fren 3281 Survey of French Literature I, 3 ..	3
Electives in French at 2000 or 3000 level (Students must take 12 hours at 3000 level in their major)	3
MINOR REQUIREMENTS	18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (The major fulfills 3 s.h. of Div. II C)	45
MODERN LANGUAGE REQUIREMENT (fulfilled by major)	
FREE ELECTIVES	24-31
MINIMUM TOTAL	124

FRENCH Major, B.S. Degree

(43 000319)

	Sem. Hours
MAJOR REQUIREMENTS	30
Fren 1203 Intermediate French I	3
Fren 1204 Intermediate French II	3
Fren 2223 French Composition	3
Fren 2243 French Conversation	3
Fren 2262 French Civilization II	3
Fren 3223 Advanced French Composition	3
Fren 3243 Advanced French Conversation ..	3
Fren 3282 Survey of French Literature II ...	3
Fren 2261 French Civilization I, 3 or	
Fren 3281 Survey of French Literature I, 3 ..	3
Electives in French at 2000 or 3000 level (Students must take 12 hours at 3000 level in their major) ..	3
MINOR REQUIREMENTS	18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (The major fulfills 3 s.h. of Div. II C)	45
FREE ELECTIVES	24-31
MINIMUM TOTAL	124

FRENCH Major, B.S. in Ed. Degree

(Certification to teach French in grades K-12)

(41 000334)

	Sem. Hours
MAJOR REQUIREMENTS	30
Fren 1203 Intermediate French I	3
Fren 1204 Intermediate French II	3
Fren 2223 French Composition	3
Fren 2243 French Conversation	3
Fren 2262 French Civilization II	3
Fren 3223 Advanced French Composition	3
Fren 3243 Advanced French Conversation ..	3
Fren 3282 Survey of French Literature II ...	3
Fren 2261 French Civilization I, 3 or	
Fren 3281 Survey of French Literature I, 3 ..	3
Electives in French at 2000 or 3000 level (Students must take 12 hours at 3000 level in their major)	3
MINOR REQUIREMENTS	18-25

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UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (The major fulfills 3 s.h. of Div. II C; in the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. III B)	42
Secondary Education students must have one course in a physical or earth science and one in a biological science in Div. II A.	
Hist 1350 Div. II B or	PolS 1510 Div. II B (required) 3
Hist 1351 Div. II B (required) 3	Psy 4230 Psy. of Adolescence 3
Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. in Div. II B.	
PROFESSIONAL EDUCATION REQUIREMENTS (see pages 181-183)	28
FREE ELECTIVES	0-6
MINIMUM TOTAL	124

FRENCH Minor for a Bachelor's Degree

(Certification to teach French in grades K-9 is available only on a B.S. in Ed. Degree with an elementary education functional major 1-6 or middle school-junior high major.)
(200013)

MINOR REQUIREMENTS	Sem. Hours
Fren 1203 Intermediate French I 3	Fren 2261 French Civilization I, 3 or
Fren 1204 Intermediate French II 3	Fren 2262 French Civilization II, 3 3
Fren 2223 French Composition 3	Elective in French literature 3
Fren 2243 French Conversation 3	Elective in French at 2000 or 3000 level 3
UNIVERSITY STUDIES REQUIREMENTS (In the minor, 3 s.h. of Div. II C are fulfilled)	

GERMAN Major, B.A. Degree

(42 000321)

MAJOR REQUIREMENTS	Sem. Hours
Ger 1303 Intermediate German 3	Ger 3371 Survey of German Literature I 3
Ger 1304 German Readings 3	Ger 3372 Survey of German Literature II 3
Ger 2301 Advanced German Readings 3	Ger 3381 The Classic Movement 3
Ger 2323 German Conversation & Comp. 3	Ger 3383 The Romantic Period 3
Ger 2362 German Civilization 3	Ger 3385 Modern German Literature 3
MINOR REQUIREMENTS	18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (The major fulfills 3 s.h. of Div. II C)	45
MODERN LANGUAGE REQUIREMENT (fulfilled by major)	
FREE ELECTIVES	24-31
MINIMUM TOTAL	124

GERMAN Major, B.S. Degree

(43 000322)

MAJOR REQUIREMENTS	Sem. Hours
Ger 1303 Intermediate German 3	Ger 2323 German Conversation & Comp. 3
Ger 1304 German Readings 3	Ger 2362 German Civilization 3
Ger 2301 Advanced German Readings 3	Electives in 2000 level or higher German courses 18
MINOR REQUIREMENTS	18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (The major fulfills 3 s.h. of Div. II C)	45
FREE ELECTIVES	21-28
MINIMUM TOTAL	124

GERMAN Major, B.S. in Ed. Degree

(Certification to teach German in grades K-12)
(41 000335)

MAJOR REQUIREMENTS	Sem. Hours
Ger 1303 Intermediate German 3	Ger 3371 Survey of German Lit. I 3
Ger 1304 German Readings 3	Ger 3372 Survey of German Lit. II 3
Ger 2301 Advanced German Readings 3	Electives in 2000 level or
Ger 2323 German Conversation & Comp. 3	higher German courses 9
Ger 2362 German Civilization 3	
MINOR REQUIREMENTS	18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (The major fulfills 3 s.h. of Div. II C; in the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. III B)	42
Secondary Education students must have one course in a physical or earth science and one in a biological science in Div. II A.	
Hist 1350 Div. II B or	PolS 1510 Div. II B (required) 3
Hist 1351 Div. II B (required) 3	Psy 4230 Psy. of Adolescence 3
Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. in Div. II B.	
PROFESSIONAL EDUCATION REQUIREMENTS (see pages 181-183)	28
FREE ELECTIVES	0-6
MINIMUM TOTAL	124

GERMAN Minor, B.S. in Ed. Degree

(Certification to teach German in grades K-9 is available only on a B.S. in Ed. Degree with an elementary education functional major 1-6 or middle school-junior high major.)
(000333)

				Sem. Hours	
MINOR REQUIREMENTS				21	
Ger	1303	Intermediate German	3	Ger 2362 German Civilization	3
Ger	1304	German Readings	3	Electives in 2000 level or	
Ger	2301	Advanced German Readings	3	higher German courses	6
Ger	2323	German Conversation & Comp.	3		
UNIVERSITY STUDIES REQUIREMENTS (In the minor, 3 s.h. of Div. II C are fulfilled)					

GERMAN Minor for a Bachelor's Degree

(Except for a B.S. in Ed. Degree)
(200014)

				Sem. Hours	
MINOR REQUIREMENTS				21	
Ger	1303	Intermediate German	3	Ger 2362 German Civilization	3
Ger	1304	German Readings	3	Ger 3371 Survey of German Lit. I	3
Ger	2301	Advanced German Readings	3	Ger 3372 Survey of German Lit. II	3
Ger	2323	German Conversation & Comp.	3		
UNIVERSITY STUDIES REQUIREMENTS (In the minor, 3 s.h. of Div. II C are fulfilled)					

SPANISH Major, B.A. Degree

(42 000338)

				Sem. Hours	
MAJOR REQUIREMENTS				30	
Span	1603	Intermediate Spanish	3	Electives from the following	6-12
Span	1604	Spanish Readings	3	Span 3681 Spanish Literature I	3
Span	2623	Spanish Composition	3	Span 3682 Spanish Literature II	3
Span	2661	Spanish Civilization & Culture	3	and/or	
Span	2662	Spanish American Civ. & Culture ...	3	Span 3691 Spanish American Lit. I	3
				Span 3692 Spanish American Lit. II	3
				Electives in 2000 level or higher Spanish courses	3-9
MINOR REQUIREMENTS				18-25	
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (The major fulfills 3 s.h. of Div. II C)				45	
MODERN LANGUAGE REQUIREMENT (fulfilled by major)					
FREE ELECTIVES				24-31	
MINIMUM TOTAL				124	

SPANISH Major, B.S. Degree

(43 000339)

				Sem. Hours	
MAJOR REQUIREMENTS				33	
Span	1603	Intermediate Spanish	3	Span 2662 Spanish American Civ. & Culture	3
Span	1604	Spanish Readings	3	Span 3623 Adv. Spanish Composition	3
Span	2623	Spanish Composition	3	Span 3643 Adv. Spanish Conversation	3
Span	2643	Spanish Conversation	3	Electives in 2000 level or higher Spanish courses	9
Span	2661	Spanish Civilization & Culture	3		
MINOR REQUIREMENTS				18-25	
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (The major fulfills 3 s.h. of Div. II C)				45	
FREE ELECTIVES				21-28	
MINIMUM TOTAL				124	

SPANISH Major, B.S. in Ed. Degree

(Certification to teach Spanish in grades K-12)

(41 000337)

		Sem. Hours
MAJOR REQUIREMENTS		30
Span 1603	Intermediate Spanish	3
Span 1604	Spanish Readings	3
Span 2623	Spanish Composition	3
Span 2643	Spanish Conversation	3
Span 2661	Spanish Civilization & Culture	3
Span 2662	Spanish American Civ. & Culture	3
Span 3623	Adv. Spanish Composition	3
Span 3643	Adv. Spanish Conversation	3
Electives from the following		6
Span 3681	Spanish Literature I	3
Span 3682	Spanish Literature II	3
or		
Span 3691	Spanish American Lit. I	3
Span 3692	Spanish American Lit. II	3
MINOR REQUIREMENTS		18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (The major fulfills 3 s.h. of Div. II C; in the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. III B)		42
Secondary Education students must have one course in a physical or earth science and one in a biological science in Div. II A.		
Hist 1350	Div. II B or	PolS 1510 Div. II B (required)
Hist 1351	Div. II B (required)	3
		Psy 4230 Psy. of Adolescence
		3
Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. in Div. II B.		
PROFESSIONAL EDUCATION REQUIREMENTS (see pages 181-183)		28
FREE ELECTIVES		0-6
MINIMUM TOTAL		124

SPANISH Minor, B.S. in Ed. Degree

(Certification to teach Spanish in grades K-9 is available only on a B.S. in Ed. Degree with an elementary education functional major 1-6 or middle school-junior high major.)

(000340)

		Sem. Hours
MINOR REQUIREMENTS		21
Span 1603	Intermediate Spanish	3
Span 1604	Spanish Readings	3
Span 2623	Spanish Composition	3
Span 2643	Spanish Conversation	3
Span 2661	Span. Civilization & Culture	3
Span 2662	Spanish American Civ. & Culture	3
Electives in 2000 level or higher Spanish courses		3
UNIVERSITY STUDIES REQUIREMENTS (In the minor, 3 s.h. of Div. II C are fulfilled)		

SPANISH Minor for a Bachelor's Degree

(Except for a B.S. in Ed. Degree)

(200015)

		Sem. Hours
MINOR REQUIREMENTS		21
Span 1603	Intermediate Spanish	3
Span 1604	Spanish Readings	3
Span 2623	Spanish Composition	3
Span 2643	Spanish Conversation	3
Span 2661	Span. Civilization & Culture	3
Span 2662	Spanish American Civ. & Culture	3
Elective from the following		3
Span 3681	Spanish Literature I	3
Span 3682	Spanish Literature II	3
Span 3691	Spanish American Lit. I	3
Span 3692	Spanish American Lit. II	3
UNIVERSITY STUDIES REQUIREMENTS (In the minor, 3 s.h. of Div. II C are fulfilled)		

General

ML 4010 Foreign Studies in Language (French) (German) (Spanish) (1-6) Credit granted for study in a Central approved program in a foreign country. Freshmen and sophomores permitted to enroll with consent of the Chair of the Department of Modern Languages. Available for graduate credit upon approval of student's graduate program adviser. May be repeated for a maximum of 12 semester hours.

ML 4040 Special Projects in Foreign Language* (1-3) Individualized and group instruction in foreign and modern languages. May be repeated for a maximum of 6 semester hours. Prerequisite: consent of department chair.

*Not available for graduate credit.

French

Fren 1201 Elementary French I (3) Fundamental principles of French pronunciation, the building of basic vocabulary of words and expressions, studies in structure, oral work, and reading selections. Not open to native speakers or students who have had three years of high school French without the permission of the department chair.

Fren 1202 Elementary French II (3) A continuation of French I. Increased attention to grammar. Not open to native speakers or students who have had four years of high school French without the permission of the department chair. Prerequisite: Fren 1201 or equivalent.

Fren 1203 Intermediate French I (3) Reading, conversation, vocabulary, and idiom drill. Prerequisite: Fren 1202 or equivalent.

Fren 1204 Intermediate French II (3) Continuing development of the ability to use the language on the intermediate level. Prerequisite: Fren 1203 or equivalent.

Fren 2223 French Composition (3) Review of grammar. Intensive practice in composition with increased attention to stylistics. Prerequisite: Fren 1204 or equivalent.

Fren 2243 French Conversation (3) Provides intensive drill in conversational language using culture-based materials. Prerequisite: Fren 1204 or equivalent.

Fren 2261 French Civilization I (3) From the origins to the end of the eighteenth century. Prerequisite: Fren 1204 or equivalent.

Fren 2262 French Civilization II (3) From the nineteenth century to the present. Prerequisite: Fren 1204 or equivalent.

Fren 3223 Advanced French Composition (3) Oral and written composition, review of more difficult grammatical construction and idioms. Prerequisite: Fren 2223 or equivalent.

Fren 3243 Advanced French Conversation (3) Conversational drill in everyday idiomatic French. Reading and discussion of topics chosen from current newspapers and magazines. Prerequisite: Fren 2243 or equivalent.

Fren 3263 French Phonetics (3) The sound system of the French language: analysis of problems encountered by a native English speaker in learning spoken French. Prerequisite: Fren 2243 or equivalent.

Fren 3264 Commercial French (3) French commercial terminology, stressing the difference between French and American forms and practices. Prerequisite: Fren 2223 or equivalent.

Fren 3281 Survey of French Literature I (3) Major French writers of the Middle Ages up to and including the eighteenth century. Prerequisite: two 2000 level courses in French.

Fren 3282 Survey of French Literature II (3) Major French writers from the nineteenth century to the present. Prerequisite: two 2000 level courses in French.

Fren 3286 French Literature of the Nineteenth Century (3) Romanticism, realism, and naturalism. Analysis of texts and literary theories. Prerequisites: Fren 3281 and Fren 3282, or equivalent.

Fren 3287 French Literature of the Twentieth Century (3) Symbolism, surrealism, and existentialism in prose, poetry and theatre. Prerequisite: Fren 3281 and Fren 3282, or equivalent.

Fren 3288 French Translation (3) Commercial and technical translation from French into English and English into French. Prerequisite: Fren 3223.

Fren 3289 French Cinema (3) A historical survey of French film, with particular emphasis on the period between 1931 and 1958. Prerequisite: 6 semester hours of 2000 level French courses for those planning for a program in French.

Fren 4290 Special Topics in French* (1-3) Individual or group work by selected students in carefully chosen fields for **advanced study**. May be repeated for a maximum of 6 semester hours. Prerequisite: 18 semester hours of French and consent of department chair.

*Not available for graduate credit.

German

Ger 1301 Elementary German I (3) Fundamental principles of German pronunciation, building a basic vocabulary of German words and idiomatic expressions, oral work, and reading simple selections. Not open to native speakers or students who have had three years of high school German without the permission of the department chair.

Ger 1302 Elementary German II (3) A continuation of German I. Increased attention to grammar. Not open to native speakers or students who have had four years of high school German without the permission of the department chair. Prerequisite: Ger 1301 or equivalent.

Ger 1303 Intermediate German (3) Reading, conversation, vocabulary, and idiom drill. Prerequisite: acceptable proficiency as demonstrated by adequate high school course work in German or by departmental approval.

Ger 1304 German Readings (3) Continuing development of the ability to use the language on the intermediate level. Prerequisite: Ger 1303 or equivalent.

Ger 2301 Advanced German Readings (3) Selected novels, poems, and plays are read and discussed. Prerequisite: Ger 1304 or equivalent.

Ger 2323 German Conversation and Composition (3) Oral and written composition, dictation, idioms, and reviews of difficult construction and grammatical forms. Prerequisite: 9 semester hours of German.

Ger 2362 German Civilization (3) Germany's social, cultural, and political history from its Germanic beginnings through World War II to the present. Prerequisite: Ger 1304.

Ger 3371 Survey of German Literature I (3) German literature and literary history from the Old High German literature to Schiller's *Don Carlos* (1787). Prerequisite: Ger 2301.

Ger 3372 Survey of German Literature II (3) German literature and literary history from Goethe and Schiller's classical period (1790) to modern writers, including modern East German literature. Prerequisite: Ger 2301.

Ger 3381 The Classic Movement (3) Poems of Goethe, Schiller and other selected authors. Readings and discussion. Prerequisites: Ger 3371 and Ger 3372.

Ger 3383 The Romantic Period (3) Philosophers, the novel and the drama. Reading of selected works. Prerequisites: Ger 3371 and Ger 3372.

Ger 3385 Modern German Literature (3) Readings and discussions of selected works of Mann, Hauptmann, Hesse, Kafka, Remarque, Zweig. Prerequisites: Ger 3371 and Ger 3372.

Ger 4390 Special Topics in German* (1-3) Individual or group work by selected students in carefully chosen fields for **advanced study**. May be repeated for a maximum of 6 semester hours. Prerequisite: 18 semester hours of German and consent of department chair.

*Not available for graduate credit.

Spanish

Span 1601 Elementary Spanish I (3) Fundamentals of Spanish pronunciation, the building of basic vocabulary and patterns, oral work, studies in structure, and reading selections. Not open to native speakers or students who have had three years of high school Spanish without the permission of the department chair.

Span 1602 Elementary Spanish II (3) A continuation of Spanish I, with increased attention to grammar. Not open to native speakers or students who have had four years of high school Spanish without the permission of the department chair. Prerequisite: Span 1601 or equivalent.

Span 1603 Intermediate Spanish (3) Development of the ability to use the language by oral-aural laboratory drills and readings. Prerequisite: acceptable proficiency as demonstrated by adequate high school course work in Spanish or by departmental approval.

Span 1604 Spanish Readings (3) Continuing development of the ability to use the language on the intermediate level, with more advanced grammar, laboratory work and readings. Prerequisite: Span 1603 or equivalent.

Span 2623 Spanish Composition (3) Review of grammar, oral-aural training, and special study of the subjunctive mood. Prerequisite: Span 1603 or equivalent.

Span 2643 Spanish Conversation (3) Oral practice in everyday Spanish, discussion, idiomatic usage, listening comprehension, speaking. Prerequisite: Span 2623.

Span 2661 Spanish Civilization and Culture (3) The social, cultural, and political history of Spain. Prerequisite: Span 1604 or equivalent.

Span 2662 Spanish American Civilization and Culture (3) The social, cultural, and political history of Spanish America. Prerequisite: Span 1604 or equivalent.

Span 3623 Advanced Spanish Composition (3) Oral and written composition; review of more difficult grammatical constructions and idioms. Prerequisite: Span 2623 or equivalent.

Span 3643 Advanced Spanish Conversation (3) Emphasis on oral-aural practice in Spanish. Prerequisite: 12 semester hours in Spanish or equivalent.

Span 3681 Spanish Literature I (3) A survey of Spanish literature from El Cid to post-Romanticism. Prerequisite: two 2000 level courses in Spanish.

Span 3682 Spanish Literature II (3) A survey of Spanish literature from post-Romanticism through the twentieth century. Prerequisite: two 2000 level courses in Spanish.

Span 3691 Spanish American Literature I (3) A survey of Spanish American literature from 1492 to the Mexican Revolution. Prerequisite: two 2000 level courses in Spanish.

Span 3692 Spanish American Literature II (3) A survey of Spanish American literature from the Mexican Revolution through the twentieth century. Prerequisite: two 2000 level courses in Spanish.

Span 4690 Special Topics in Spanish* (1-3) Individual or group work by selected students in carefully chosen fields for advanced study. May be repeated for a maximum of 6 semester hours. Prerequisite: 18 semester hours of Spanish and consent of department chair.

*Not available for graduate credit.

Chinese

Chin 1701 Elementary Chinese I (3) A self-instruction course in Mandarin Chinese with pronunciation drill/master/tutor. Additional independent language laboratory work required. Students should consult the Program Coordinator before enrolling.

Chin 1702 Elementary Chinese II (3) Continuation of Chin 1701. Prerequisite: Chin 1701 or equivalent.

Music

In the Department of Music, the second digit in the course number stands for the following: 0--General, 1--Music Theory, 2--Music History and Literature, 3--Music Education, 4--Conducting, 5--Piano and Organ, 6--Voice, 7--String Instruments, 8--Woodwind Instruments, 9--Brass and Percussion Instruments.

Department of Music Statement of Policy

All music majors, except for the B.A. degree, must pass a proficiency test in piano. (See list of requirements available at the department office.) Beginning piano students should elect Mus 1501, Piano Class I, then continue piano until the proficiency test is passed. Keyboard majors and students with several years of pre-college piano should attempt the piano proficiency at the end of the freshman year. All students must meet the proficiency requirement before being admitted to special methods classes.

Credit for private lessons is based on one lesson per week for each 1-1.5 hours of credit. Upper level credit is given only after the sophomore examination is passed. Minimum practice requirement is one hour per day for each 1-1.5 hours of credit.

All students majoring or minoring in music are required to attend a designated number of recitals and concerts given on the campus. Music majors and minors are required to enroll for pass-fail in and to complete satisfactorily the following number of semesters of Mus 1000, Recital Attendance: music majors on the B.A. degree, six semesters; on the B.M. degree, eight semesters; on the B.M.E. degree, seven semesters; and music minors, four semesters. Deficiencies in Mus 1000 must be removed before a student may graduate.

Students are urged to participate in ensembles to broaden their general musical background. All wind and percussion majors must be in band. However, in the Fall semester the Bachelor of Music and Bachelor of Arts degree candidates majoring in winds or percussion may elect either Marching Band or Orchestra, subject to faculty

approval. Bachelor of Music Education degree candidates majoring in winds or percussion may substitute up to two semesters of Orchestra for the major ensemble credit, subject to faculty approval. Students approved for this substitution may elect a maximum of one Fall semester and

one Spring semester of Orchestra or two Spring semesters. String bass majors may substitute up to two semesters of Concert Band or University Band for major ensemble credit, subject to faculty approval.

MUSIC Major, B.A. Degree

(42 000436)

						Sem. Hours	
MAJOR REQUIREMENTS						37	
Mus	1000	Recital Attendance	0	Mus	2221	Intro. to Music Literature I	2
Mus	1111	Theory I	3	Mus	2222	Intro. to Music Literature II	2
Mus	1112	Theory II	3	Mus	3211	Music History to 1800	3
Mus	1121	Aural Training I	1	Mus	3212	Music History 1800-Present	3
Mus	1122	Aural Training II	1	Major instrument or voice, 1000 level			4
Mus	2111	Theory III	3	Major instrument or voice, 3000 level			6
Mus	2121	Aural Training III	1	Large vocal or instrumental ensemble			3
						Elective in Music	2
MINOR REQUIREMENTS						18-25	
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, Mus 3211 and Mus 3212 are allowed to fulfill 3 s.h. of Div. II C; the Modern Language Requirement fulfills 3 s.h. of Div. II C)							42
Mus	1225	Div. II D (required)	3	I Gen	4234	Div. III A (required)	3
MODERN LANGUAGE REQUIREMENT						3-9	
(Refer to Bachelor's Degree Requirements section for fulfillment options.)							
FREE ELECTIVES						11-24	
MINIMUM TOTAL						124	

MUSIC Functional Major, B.M. Degree

(44 000472)

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						79-84.5	
Mus	1000	Recital Attendance	0	Mus	2400	Conducting	2
Mus	3060	Junior Recital	1	Major instrument or voice, 1000 level			8
Mus	1111	Theory I	3	Major instrument or voice, 3000 level			10.5
Mus	1112	Theory II	3	Major large instrumental or vocal ensemble			6
Mus	1121	Aural Training I	1	Departmentally approved electives			
Mus	1122	Aural Training II	1	to complete an emphasis in one of			
Mus	2111	Theory III	3	the following areas			26.5-32
Mus	2112	Theory IV	3	Area 1 Instrumental Music			
Mus	2121	Aural Training III	1	Area 2 Jazz-Commercial Music			
Mus	2122	Aural Training IV	1	Area 3 Piano			
Mus	4125	Form & Analysis	3	Area 4 Piano Pedagogy			
Mus	3211	Music History to 1800	3	Area 5 Voice			
Mus	3212	Music History 1800-Present	3				

A listing of specific courses required for each emphasis is available from the Department of Music office. Selection of major large instrumental or vocal ensemble will be determined by the student's chosen emphasis. Piano proficiency examination required.

MINOR NOT REQUIRED

UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Mus 3211 and Mus 3212 are allowed to fulfill 3 s.h. of Div. II C)							45
Mus	1225	Div. II D (required)	3	I Gen	4234	Div. III A (required)	3
For piano pedagogy emphasis, Psy 1100 Div. II B is required.							
For voice emphasis, Fren 1201 or Ger 1301 Div. II C is required.							
MINIMUM TOTAL						124	

MUSIC Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor.)

(000483)

						Sem. Hours	
MINOR REQUIREMENTS						23	
Mus	1000	Recital Attendance	0	Mus	3212	Music History 1800-Present	3
Mus	1111	Theory I	3	Mus	2221	Intro. to Music Literature I, 2 or	
Mus	1112	Theory II	3	Mus	2222	Intro. to Music Literature II, 2	2
Mus	1121	Aural Training I	1	Major instrument or voice			4
Mus	1122	Aural Training II	1	Major large ensemble			6

MUSIC EDUCATION Functional Major, B.M.E. Degree**INSTRUMENTAL Functional Major Option, B.M.E. Degree (45 000440)**

(Certification to teach instrumental music in grades K-12)

FUNCTIONAL MAJOR REQUIREMENTS				Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS				60-64	
Mus	1000	Recital Attendance	0	Mus 3308 Marching Band Techniques	1
Mus	1111	Theory I	3	Mus 2400 Conducting	2
Mus	1112	Theory II	3	Mus 3420 Instrumental Conducting	3
Mus	1121	Aural Training I	1	Mus 1701 String Class	2
Mus	1122	Aural Training II	1	Mus 2801 Woodwind Class I	1
Mus	2111	Theory III	3	Mus 2802 Woodwind Class II	1
Mus	2112	Theory IV	3	Mus 2901 Brass Class I	1
Mus	2121	Aural Training III	1	Mus 2902 Brass Class II	1
Mus	2122	Aural Training IV	1	Mus 2950 Percussion Class	1
Mus	4115	Instrumentation	3	Major instrument, 1000 level	4
Mus	3211	Music History to 1800	3	Major instrument, 3000 level	4.5
Mus	3212	Music History 1800-Present	3	Major large instrumental ensemble	10.5
Mus	3306	Music Education II	3	Piano	0-4

Keyboard majors choose band or orchestra for major ensemble.

Piano proficiency examination required.

MINOR NOT REQUIRED

UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Mus 3211 and Mus 3212 are allowed to fulfill 3 s.h. of Div. II C; in the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. III B) 42

Secondary Education students must have one course in a physical or earth science and one in a biological science in Div. II A.

Hist 1350 Div. II B or Mus 1225 Div. II D (required) 3

Hist 1351 Div. II B (required) 3 Psy 4230 Psy. of Adolescence 3

PoIS 1510 Div. II B (required) 3

Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. of Div. II B.

PROFESSIONAL EDUCATION REQUIREMENTS (see pages 181-183) 28

MINIMUM TOTAL 130

For additional certification to teach vocal music with the INSTRUMENTAL Functional Major Option, B.M.E. Degree, see the department chair.

VOCAL Functional Major Option, B.M.E. Degree (45 000441)

(Certification to teach vocal music in grades K-12)

FUNCTIONAL MAJOR REQUIREMENTS				Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS				61-65	
Mus	1000	Recital Attendance	0	Mus 3212 Music History 1800-Present	3
Mus	1111	Theory I	3	Mus 4230 Choral Literature	2
Mus	1112	Theory II	3	Mus 3305 Music Education I	3
Mus	1121	Aural Training I	1	Mus 4320 Music in Junior High	2
Mus	1122	Aural Training II	1	Mus 2400 Conducting	2
Mus	2111	Theory III	3	Mus 3410 Choral Conducting	2
Mus	2112	Theory IV	3	Mus 3415 Choral Techniques	2
Mus	2121	Aural Training III	1	Mus 1610 Voice I	4
Mus	2122	Aural Training IV	1	Mus 1615 Opera Theatre	1
Mus	4130	Choral Arranging	2	Mus 3610 Voice II	4.5
Mus	2221	Introduction to Music Literature I	2	Large vocal ensemble	10.5
Mus	2222	Introduction to Music Literature II	2	Piano	0-4
Mus	3211	Music History to 1800	3		

A student who wishes this degree and elects a keyboard performing emphasis must have 4 hours of keyboard (1000 level),

4.5 hours of keyboard (3000 level), and 5 hours of voice or voice class in lieu of the required 8.5 hours of voice.

Piano proficiency examination required.

MINOR NOT REQUIRED

UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Mus 3211 and Mus 3212 are allowed to fulfill 3 s.h. of Div. II C; in the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. III B) 42

Secondary Education students must have one course in a physical or earth science and one in a biological science in Div. II A.

Hist 1350 Div. II B or Mus 1225 Div. II D (required) 3

Hist 1351 Div. II B (required) 3 Psy 4230 Psy. of Adolescence 3

PoIS 1510 Div. II B (required) 3

Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. in Div. II B.

PROFESSIONAL EDUCATION REQUIREMENTS (see pages 181-183) 28

MINIMUM TOTAL 131

For additional certification to teach instrumental music with the VOCAL Functional Major Option, B.M.E. Degree, see the department chair.

General

- Mus 1000 Recital Attendance (0)** Laboratory in music listening and musical performance. Attendance at a designated number of department sponsored or approved concerts. Enrollment for pass-fail only.
- Mus 1005 Marching Band (1.5)** Appears at all home games, one away game, and frequently at professional football games. Membership selected by audition. May be repeated.
- Mus 1008 Campus Band (1)** A concert band open to any university student who wishes to continue band performance as an avocation. Music majors may gain experience on a secondary instrument. May be repeated.
- Mus 1010 Collegiate Band (1.5)** Open without audition to any University student interested in band. Instrumental music majors may gain experience on a secondary instrument in the University Band. May be repeated.
- Mus 1040 Introduction to Music Technology (2)** The effects of changing technology on music and an introduction to basic elements of computer-related music technology. Prerequisite: Mus 1210 or Mus 1100 or equivalent.
- Mus 1055 Collegiate Choir (1.5)** A large mixed chorus which sings music representative of the finest in sacred and secular choral literature. Membership selected by audition. May be repeated.
- Mus 1081 Collegiate Jazz Ensemble (1.5)** Study and performance of traditional and progressive jazz ensemble music. Membership selected by audition. May be repeated.
- Mus 1085 Jazz-Rock Combo (1)** Study and performance of traditional and progressive jazz-rock music in a small group format. Membership selected by audition. May be repeated.

Participation in small ensembles such as string trio, brass quartet, woodwind quintet, madrigal singers, two-pianos, percussion ensembles, etc., is strongly recommended. Credit in small ensembles cannot be used to meet participation requirements for large ensembles. Enrollment in specific ensembles is only by music faculty permission. May be repeated.

- Mus 1094 Percussion Ensemble (1)**
- Mus 1095 Keyboard Ensemble (1)**
- Mus 1097 String Ensemble (1)**
- Mus 1098 Woodwind Ensemble (1)**
- Mus 3000 University Concert Band (1.5)** A select band which performs original band literature and transcriptions of many famous works at frequent appearances. Membership selected by audition. May be repeated.
- Mus 3025 University Symphony Orchestra (1.5)** Performs concerts of standard and contemporary literature. Members selected by audition. May be repeated.
- Mus 3050 University Concert Choir (1.5)** A select choir which performs the best of choral literature in concert. Membership selected by audition. May be repeated.
- Mus 3060 Junior Recital (1)** One-half of a public recital. Prerequisite: consent of instructor.
- Mus 3070 Chamber Singers (1)** A small chamber choir of mixed voices which performs literature by contemporary composers and music from the Broadway stage. Membership selected by audition. May be repeated.
- Mus 3075 Madrigal Singers (1)** A select performing group specializing in Renaissance and twentieth century madrigal

- singing. Membership selected by audition. May be repeated.
- Mus 3081 University Jazz Ensemble (1.5)** A select ensemble which performs original jazz ensemble literature representing traditional as well as the most current forms of jazz. Membership selected by audition. May be repeated.
- Mus 3095 Piano Accompanying Practicum (1)** Instruction and supervised practical experience in piano accompanying on an individual basis. May be repeated. Prerequisite: Mus 2515.
- Mus 3099 Brass Ensemble (1)** May be repeated.
- Mus 4000 Special Projects in Music (1-3)** May be repeated for a maximum of 6 semester hours.
- Mus 4060 Senior Recital* (2)** Full length public recital. Prerequisite: consent of instructor.

*Not available for graduate credit.

- Mus 5000 Introduction to Graduate Study (3)** Books and periodicals about music and various collections and editions of printed music. Techniques of suitable style in presentation of formal documented papers.
- Mus 5020 Advanced Special Projects in Music (1-3)** Intensive directed study in music designed to improve the graduate student's understanding of specific areas of interest. May be repeated for a maximum of 6 semester hours.
- Mus 5050 Research Problems (3)** Special investigation in the major field leading to the writing of the research document or thesis. Prerequisite: 10 semester hours of graduate credit.
- Mus 5051 Thesis (3)** Prerequisite: 15 semester hours of graduate credit.

Music Theory

- Mus 1100 Fundamentals of Music (3)** Basic theory: notation, scales, chords, terminology. Application to simple rhythm, chording, and melody instruments and piano.
- Mus 1111 Theory I (3)** Basic materials: notation, rhythm and meter, scales, intervals, triads, primary and secondary harmony, V7, phrase, period, cadence, the concept of tonality, and related analysis. Prerequisite: Mus 1121 concurrently for music majors and minors. Admission by examination or completion of Mus 1100 with grade of C or better.
- Mus 1112 Theory II (3)** Melodic and harmonic structure and embellishment, nonharmonic tones, consonance and dissonance principles, simple two-part counterpoint, part writing, harmonic progression, secondary dominants, regions, and modulation. Prerequisites: Mus 1122 concurrently and Mus 1111.
- Mus 1121 Aural Training I (1)** Basic listening and aural awareness skills: rhythm and pitch patterning, scales, intervals, triads, V7, primary triads, harmonic dictation, melodic memory, melodic dictation, and sight singing. Prerequisite: Mus 1111 concurrently. Admission by examination or completion of Mus 1100 with grade of C or better.
- Mus 1122 Aural Training II (1)** Continuation of development of aural skills introduced in Mus 1121 plus two-part dictation, nonharmonic tones, secondary triads, secondary dominants, and modulation. Prerequisites: Mus 1112 concurrently and Mus 1121.
- Mus 2111 Theory III (3)** Continuation of the materials and organization of music: modality, modulation, seventh chords, chromatic harmony, contrapuntal procedures, and

form. Prerequisites: Mus 2121 concurrently and Mus 1112.

Mus 2112 Theory IV (3) Continuation of Mus 2111 including impressionism and twentieth century music. Prerequisites: Mus 2122 concurrently and Mus 2111.

Mus 2121 Aural Training III (1) Continuation of the development of aural skills in Mus 1122 applied to sight singing and aural perception of rhythm, melody, and chromatic harmony. Prerequisites: Mus 2111 concurrently and Mus 1122.

Mus 2122 Aural Training IV (1) Continuation of the development of aural skills in Mus 2121 including rhythmic, melodic, and harmonic techniques from the twentieth century. Prerequisites: Mus 2112 concurrently and Mus 2121.

Mus 2141 Composition I (3) Techniques of twentieth century composition through projects in smaller forms. Electronic music studio techniques. Aural and visual analysis of twentieth century music. May be repeated for a maximum of 6 semester hours. Prerequisites: Mus 1112 and Mus 1122.

Mus 2180 Jazz Improvisation I (2) The techniques and materials of jazz improvisation at the introductory level. Scales, chords, phrasing, articulation, and guided listening. Performance mandatory. Prerequisite: Mus 1112 and Mus 1122.

Mus 2181 Jazz Improvisation II (2) A continuation of Mus 2180. Advanced concepts in style and form. Transcription of recorded solos using altered scales and chords and the development of style. Performance mandatory. Prerequisite: Mus 2180.

Mus 3141 Composition II (3) Continuation of Mus 2141 through projects of small and medium dimensions adapted to needs and interests of the student. May be repeated for a maximum of 12 semester hours. Prerequisite: Mus 2141.

Mus 4101 Counterpoint I (3) Eighteenth century style in two parts: melodic structure, resolution of melodic and harmonic contrapuntal dissonances, canon, and the writing of original two-part inventions. Prerequisites: Mus 2112 and Mus 2122.

Mus 4102 Counterpoint II (3) Continuation of Mus 4101. Analysis and creative projects in three voices, rounds, canons, chorale preludes, and fugues for various media and various styles from the sixteenth to the twentieth century. Prerequisite: Mus 4101.

Mus 4115 Instrumentation (3) Characteristics of instruments normally found in band and orchestra. Short writing projects for instrumental choirs, full band and orchestra. Score study. Prerequisites: Mus 2112 and Mus 2122.

Mus 4125 Form and Analysis (3) Small song forms, rondos, variations and sonata forms, with emphasis on aural analysis and score readings. Prerequisites: Mus 2112 and Mus 2122 or concurrently.

Mus 4130 Choral Arranging (2) Practical arrangements for various choral ensembles for school organizations and church choirs. Prerequisites: Mus 2112 and Mus 2122 or concurrently.

Mus 4181 Advanced Jazz Improvisation (2) Advanced study of jazz improvisation techniques in applied, private lessons. May be repeated for a maximum of 8 semester hours undergraduate credit and 4 semester hours graduate credit. Prerequisite: Mus 2181 or consent of instructor.

Mus 4185 Jazz-Commercial Arranging (3) Characteristics of instruments normally found in jazz ensemble and commercial performing groups. Emphasis on style and voicing problems in these idioms. Writing projects for combo and jazz ensemble. Score study. Prerequisites: Mus 2112 and Mus 2122.

Mus 4186 Advanced Jazz-Commercial Arranging (2) Private lessons in composition, arranging, score study, and analysis for various jazz or commercial ensembles based on individual student needs and interests. May be repeated for a maximum of 12 semester hours. Prerequisite: Mus 4185.

Mus 5105 Analytical Studies (3) In-depth analysis of selected masterworks from the Renaissance to the twentieth century to develop musical understanding and its application to performance. Prerequisite: Mus 2112.

Mus 5120 Orchestration (2) Setting complete works for small instrumental ensembles and full orchestra. Orchestration problems of school orchestras. Score study. Prerequisite: Mus 4115.

Mus 5125 Band Arranging (2) Practical arranging and transcribing for various groups including school band and wind ensembles. Prerequisite: Mus 4115.

Mus 5140 Advanced Composition (2) Creative musical composition in applied, private lessons based on the individual student's interest, need, and capacity to develop an individual style. May be repeated for a maximum of 12 semester hours. Prerequisites: Mus 4125, Mus 4101 and Mus 4115.

Mus 5150 Teaching of Theory (2) Materials and procedures used in teaching music fundamentals and music theory in high school and college.

Music History and Literature

Mus 1210 Experiencing Music (3) An introduction to important musical masterpieces with emphasis on the knowledge and skills involved in perceptive listening. Prerequisite: no previous musical experience is necessary.

Mus 1225 Music of the World's Cultures (3) The fusion of western and non-western musical cultures through their folk, popular, and classical musics.

Mus 1281 History and Development of Jazz (3) A survey of the evolution in jazz music in the United States. Includes discussion of the styles and characteristics of each period of jazz history and the contributions of influential groups and individuals.

Mus 2221 Introduction to Music Literature I (2) An introduction to the principal forms of instrumental music with emphasis on representative works from the standard repertoire. A basic knowledge of instrumental music is assumed. Prerequisite: Mus 1112 or consent.

Mus 2222 Introduction to Music Literature II (2) An introduction to the principal forms of vocal music including oratorio, church music, opera, and art songs. A basic knowledge of vocal music is assumed. Prerequisite: Mus 1112 or consent.

Mus 3211 Music History to 1800 (3) Early history of music including the Medieval, Renaissance, Baroque, and Classic eras. For music majors and minors only. Prerequisite: nonmusic majors only with consent.

Mus 3212 Music History 1800-Present (3) Music of Beethoven, the Romantic era, and the twentieth century. For music majors and minors only. Prerequisite: nonmusic majors only with consent.

Mus 4201 Piano Literature Through Beethoven (2) Survey and analysis of music written for clavichord, harpsichord, and piano through the music of Beethoven. Prerequisite: four semesters of Mus 1510 or equivalent.

Mus 4202 Piano Literature From the Romantic Era to the Present (2) Survey and analysis of music written for piano from the Romantic era through the present. Prerequisite: four semesters of Mus 1510 or equivalent.

Mus 4230 Choral Literature (2) Music literature for all choral groups with emphasis on the performance style and interpretative problems of the choral conductor. Prerequisite: Mus 2400.

Mus 4235 Vocal Literature (3) A survey of solo literature for all voice classifications with emphasis on the development of art song in the Italian, British, German, French, and American repertoires. Prerequisite: Mus 2222 or consent of instructor.

Mus 4240 String Instrument Literature (2) A survey of instructional materials and studies for the various string instruments. Prerequisite: 12 semester hours credit on major instrument.

Mus 4245 Woodwind Instrument Literature (2) Instructional materials and studies for the various woodwind instruments. Prerequisite: 12 semester hours credit on major instrument.

Mus 4250 Brass Instrument Literature (2) A survey of instructional materials and studies for the various brass instruments. Prerequisite: 12 semester hours credit on major instrument.

Mus 4255 Organ Literature (2) Organ music and early keyboard music appropriate for organ from the fourteenth and fifteenth centuries to the present. Prerequisites: Mus 3211 and Mus 3212.

Mus 5205 Music of the Renaissance (3) Music of the era with specific reference to the Flemish school; the Italian motet, mass, and madrigal; the English madrigal and anthem; and the French chanson. Prerequisite: Mus 3211.

Mus 5210 Music of the Baroque (3) The Baroque styles and forms including opera, cantata, and oratorio; keyboard and instrumental music to 1750. Prerequisite: Mus 3211.

Mus 5215 Music of the Classicists and Romanticists (3) Musical forms and styles of Classicism and Romanticism. Prerequisites: Mus 3211 and Mus 3212.

Mus 5220 Music of the Twentieth Century (3) Origins and trends of twentieth century music. Prerequisite: Mus 3212.

Mus 5240 Chamber Music Literature (2) Formal and stylistic study of chamber music from 1600 to the present. Prerequisites: Mus 3211 and Mus 3212.

Mus 5250 American Music (3) American music from colonial days to the present time. Prerequisite: Mus 3212.

Music Education

Mus 3301 Music for Elementary Schools (2) The study of music fundamentals, methods and materials appropriate for teaching music to children K-6. Developing skills in listening, singing, playing percussion and tonal instruments. Planning and evaluating learning experiences.

Mus 3305 Music Education I (3) Musical growth and materials designed for music majors who are preparing to teach vocal music in the elementary schools. Prerequisite: Mus 1112 and admission to the Teacher Education Program.

Mus 3306 Music Education II (2-3) Materials, techniques, and organization of the elementary and middle school

instrumental program designed for music majors who are preparing to teach instrumental music. Includes an introduction to early childhood choral literature and musical instruments. Prerequisite: Mus 1112 and admission to the Teacher Education Program.

Mus 3308 Marching Band Techniques (1) The various techniques of pageantry, precision drill, arranging, charting and planning, as well as problems of organization, administration and public relations.

Mus 4300 Band and Orchestra Management (2) Philosophy, rehearsal techniques, scheduling, equipping, housing, and budgeting of the large instrumental ensemble. Prerequisites: Mus 3306 and EdCI 4700.

Mus 4320 Music in Junior High (2) Objectives, materials, subject matter and problems in the teaching of vocal and general music in the junior high school. Prerequisite: Mus 3305 or Mus 3306 or consent of instructor.

Mus 4370 Band Instrument Repair (2) A study and practice of band instrument maintenance and repair techniques. Prerequisite: one semester each of woodwind and brass study, or one year of teaching music in public schools.

Mus 4381 Jazz Pedagogy (2) Jazz styles as they relate to the jazz ensemble. Techniques, systems and materials for the teaching of jazz ensemble and jazz improvisation. Supervised conducting experience with one of the University jazz ensembles. Prerequisite: music major or consent of instructor.

Mus 5300 Band and Orchestra Literature (2) A study of music written and arranged for elementary and secondary school bands and orchestras. Prerequisites: Mus 3306 and EdCI 4700.

Mus 5308 Advanced Marching Band Techniques (2) Survey of history and function of the marching band with emphasis on special projects in advanced show design, music arranging and auxiliary units. Prerequisites: Mus 3415, Mus 4115 and marching band teaching experience, or consent of instructor.

Mus 5309 School Music Curriculum (3) Construction, development, current trends, and implementation of a school music curriculum, grades 1 through 12. Prerequisite: EdCI 4495 or EdCI 4700.

Mus 5310 Research and Evaluation in Music Education (3) Research methodologies and the measurement techniques used to evaluate all aspects of the elementary and secondary music program. Prerequisite: EdCI 4495 or EdCI 4700.

Mus 5311 Music for Early Childhood (2) An investigation of musical development during early childhood and of teaching methods, musical materials and equipment suitable for use with the young child. Prerequisite: Mus 3305.

Mus 5312 Elementary Listening Literature (2) Recorded music for presentation in the elementary classroom; themes, form and structure, style, instruments, and mood for primary and intermediate grades. Prerequisites: EdCI 4495 and EdCI 4700.

Mus 5330 Music Education Administration and Supervision (3) Factors involved in the administration of a well-rounded school music program. Prerequisite: EdCI 4700.

Conducting

Mus 2400 Conducting (2) Fundamentals of conducting. Practical experience with vocal and instrumental ensembles. Prerequisites: Mus 1112 and Mus 1122 or concurrently.

Mus 3410 Choral Conducting (2) Techniques of choral conducting, rehearsal procedures, and basic choral repertoire. Prerequisite: Mus 2400.

Mus 3415 Choral Techniques (2) Aspects of choral singing, including the human voice and choral tone, choral diction, organization, rehearsal procedures, and basic choral repertoire. Prerequisites: Mus 3410 or concurrently, successful completion of piano proficiency examination and admission to the Teacher Education Program.

Mus 3420 Instrumental Conducting (3) Advanced techniques of conducting instrumental ensembles, development of visual/aural discrimination skills for diagnosing and correcting problems in performance; techniques, systems and materials for the teaching of jazz ensembles and jazz improvisation, and selection of appropriate methods and literature. Prerequisites: Mus 2400 and successful completion of piano proficiency examination, and admission to the Teacher Education Program.

Mus 5400 Advanced Conducting (2) The development of adequate baton and rehearsal techniques based on practical work with groups of performers. Prerequisites: Mus 2400 and Mus 4115.

Piano and Organ

Mus 1501 Piano Class I (1) Study of the piano, especially for adult students who have had no previous training.

Mus 1502 Piano Class II (1) A continuation of Mus 1501. Prerequisite: Mus 1501.

Mus 1507 Secondary Keyboard Lessons (1) Private lesson study in any keyboard instrument listed in this catalog. Does not count for any music major or minor as the principal performing area. Prerequisite: initial enrollment by permission of applied area faculty. May be repeated.

Mus 1510 Piano I (1) Technical study and easier compositions selected from the various eras of keyboard literature. In addition to weekly lessons, attendance at biweekly studio classes is required. May be repeated for a maximum of 12 semester hours.

Mus 1520 Organ I (1) Manual and pedal study, elementary registration and specification; Bach short preludes and fugues, chorale preludes, etc. In addition to weekly lessons, attendance at biweekly studio classes is required. May be repeated for a maximum of 12 semester hours. Prerequisite: consent based on keyboard proficiency examination.

Mus 2501 Piano Class III (1) A continuation of Mus 1502 with additional emphasis on functional keyboard skills. May be repeated for a maximum of 4 semester hours. Prerequisite: Mus 1502.

Mus 2502 Piano Class IV (1) Emphasis on specific piano proficiency skills for vocal and instrumental students preparing for a teaching career. May be repeated for a maximum of 2 semester hours. Prerequisite: Mus 2501 or Mus 1510 or permission of instructor.

Mus 2515 Piano Accompanying (2) A study of and practical experience in piano accompanying in various musical mediums, using music from several styles and

historical eras. Prerequisite: one year of college level private piano or consent of instructor.

Mus 3510 Piano II (1.5) Technical study and moderately difficult compositions selected from the various eras of keyboard literature. In addition to weekly lessons, attendance at biweekly studio classes is required. May be repeated for a maximum of 15 semester hours. Prerequisite: successful completion of lower level credit as determined by departmental examination.

Mus 3520 Organ II (1.5) Continued manual and pedal study; Bach preludes and fugues; selections from advanced classic and modern organ works; church playing and accompaniments. In addition to weekly lessons, attendance at biweekly studio classes is required. May be repeated for a maximum of 15 semester hours. Prerequisite: successful completion of lower level credit as determined by departmental examination.

Mus 4511 Piano Pedagogy I--The Beginner (3) Goals, methods, and materials for individual and class instruction of beginning piano students. Includes practice teaching and observation. Prerequisite: Two semesters of Mus 1510 or equivalent.

Mus 4512 Piano Pedagogy II--The Intermediate Student (3) Goals, methods, and materials for teaching intermediate piano students. Includes practice teaching and observation. Prerequisite: Two semesters of Mus 1510 or equivalent.

Mus 4513 Piano Pedagogy III--The Advanced Student (3) Goals, methods, and materials of advanced piano teaching. Includes practice teaching and observation. Prerequisite: Two semesters of Mus 1510 or equivalent.

Mus 4514 Piano Pedagogy IV--Seminar (3) Intensive individual study in piano pedagogy designed to improve the student's understanding of a selected area of interest. Prerequisite: Mus 4511 or Mus 4512 or Mus 4513 or the equivalent.

Mus 4515 Practice Teaching in Piano (1.5) Supervised teaching of piano students. Course must be repeated. Prerequisites: Mus 4511 and Mus 4512 or the equivalent.

Mus 4590 Piano Tuning and Maintenance* (3) Structural, mechanical, and acoustical properties of the piano, tuning techniques, operation, and maintenance of the instrument. Supervised hands-on experience will be required.

*Not available for graduate credit.

Mus 5510 Piano III (1.5) Advanced study in applied music. Technical exercises and music literature adjusted to the needs of the individual. May be repeated. Prerequisite: approval by audition.

Mus 5520 Organ III (1.5) Advanced study in applied music. Technical exercises and music literature adjusted to the needs of the individual. May be repeated. Prerequisite: approval by audition.

Voice

Mus 1600 Beginning Singing (2) Voice class combining elementary vocal training and fundamentals of music for those students who wish to study singing, but who do not read music. Not open to music majors.

Mus 1601 Voice Class I (2) Breathing exercises, diction, stage deportment, acquaintance with familiar vocal literature, and experience in solo and duet singing. Designed for beginning voice students. Prerequisite: demonstrated ability to read music.

Mus 1602 Voice Class II (2) Instruction in breathing, resonance, diction, musicality, performance skills, and the nature of the vocal instrument, using solo song and duet literature in English and Italian. Prerequisite: one semester of Mus 1610, or Mus 1601.

Mus 1607 Secondary Voice Lessons (1) Private lesson study in voice. Does not count as credit for any music major or minor as the principal performing area. Prerequisite: initial enrollment by permission of applied area faculty. May be repeated.

Mus 1610 Voice I (1) Breath control; technical exercises represented by Sieber, Vaccai, and other specified methods. Early Italian songs. English songs of medium difficulty, and other repertoire suggested by the instructor. In addition to weekly lessons, attendance at biweekly studio classes is required. May be repeated for a maximum of 12 semester hours.

Mus 1615 Opera Theatre (1-2) Production of scenes from operatic repertoire. May be repeated for a maximum of 4 semester hours.

Mus 2632 Diction for Singers (3) Systematic instruction in singing English, French, German, and Italian art songs emphasizing clear, correct, and expressive diction. Prerequisite: Mus 1610 or consent of instructor.

Mus 3610 Voice II (1.5) Advanced technical exercises, modern art songs; the great Lieder composers; French art songs; and representative repertoire from opera and oratorio. In addition to weekly lessons, attendance at biweekly studio classes is required. May be repeated for a maximum of 15 semester hours. Prerequisite: successful completion of lower level credit as determined by departmental examination.

Mus 4600 Vocal Pedagogy (2) For prospective singing teachers. Includes study of the physiology of the vocal instrument, the techniques of singing production, goals and materials, teaching techniques, and analysis of vocal problems. Observation of master teachers, and supervised teaching will be required. Prerequisite: three years of vocal training.

Mus 5610 Voice III (1.5) Advanced study in applied music. Technical exercises and music literature adjusted to the needs of the individual. May be repeated. Prerequisite: approval by audition.

String Instruments

Mus 1701 String Class (1) A laboratory course in the fundamentals of playing and teaching string instruments. May be repeated for a maximum of 2 semester hours. Two different string instruments will be studied in each semester.

Mus 1703 Folk Guitar Techniques (2) Beginning instruction in folk guitar performance intended to equip the student with the skills required to harmonize folk melodies.

Mus 1704 Classical Guitar Techniques (2) Introduction to the fundamental skills of classical guitar performance. Prerequisite: Mus 1703 or equivalent.

Mus 1707 Secondary String Lessons (1) Private lesson study in any string instrument listed in this catalog. Does not count for any music major or minor as the principal performing area. Prerequisite: initial enrollment by permission of applied area faculty. May be repeated.

The course description is applicable for all applied string instruments courses: easy technical studies, easy standard sonatas, concertos, and short solos. In addition to weekly

lessons, attendance at biweekly studio classes is required. May be repeated for a maximum of 12 semester hours for each course.

Mus 1710 Violin I (1)

Mus 1715 Viola I (1)

Mus 1720 Cello I (1)

Mus 1725 String Bass I (1)

Mus 1760 Guitar I (1) Technical studies, standard solo literature from all style periods. In addition to weekly lessons, attendance at biweekly studio classes is required. May be repeated for a maximum of 12 semester hours. Prerequisite: Mus 1703 or Mus 1704 or equivalent.

The course description is applicable for the following string instruments courses: advanced technical studies, advanced standard sonatas, concertos, and short solos. In addition to weekly lessons, attendance at biweekly studio classes is required. May be repeated for a maximum of 15 semester hours for each course. Prerequisite: successful completion of lower level credit as determined by departmental examination.

Mus 3710 Violin II (1.5)

Mus 3715 Viola II (1.5)

Mus 3720 Cello II (1.5)

Mus 3725 String Bass II (1.5)

Mus 3760 Guitar II (1.5) Advanced technical studies, advanced standard sonatas, concertos, and short solos. In addition to weekly lessons, attendance at biweekly studio classes is required. May be repeated for a maximum of 15 semester hours. Prerequisite: successful completion of lower level credit as determined by departmental examination.

Mus 5700 Advanced String Techniques (1) A lecture and laboratory course in string playing and teaching techniques and materials. Prerequisite: 2 semester hours of Mus 1701.

The course description is applicable for the following applied string instruments courses: advanced study in applied music. Technical exercises and music literature adjusted to the needs of the individual. May be repeated. Prerequisite: approval by audition.

Mus 5710 Violin III (1.5)

Mus 5715 Viola III (1.5)

Mus 5720 Cello III (1.5)

Mus 5725 String Bass III (1.5)

Woodwind Instruments

Mus 1807 Secondary Woodwind Lessons (1) Private lesson study in any woodwind instrument listed in this catalog. Does not count for any music major or minor as the principal performing area. Prerequisite: initial enrollment by permission of applied area faculty. May be repeated.

The course description is applicable for the following woodwind instruments courses: breath control; fundamentals of mechanism, embouchure; proper tonal color; technical exercises; easy solos; supervised chamber ensemble rehearsals. In addition to weekly lessons, attendance at biweekly studio classes is required. May be repeated for a maximum of 12 semester hours for each course.

Mus 1810 Flute I (1)

Mus 1815 Clarinet I (1)

Mus 1820 Oboe I (1)**Mus 1825 Saxophone I (1)****Mus 1830 Bassoon I (1)**

Mus 2801 Woodwind Class I (1) A laboratory course in the fundamentals of playing and teaching the clarinet and the saxophone.

Mus 2802 Woodwind Class II (1) A laboratory course in the fundamentals of playing and teaching the oboe, the bassoon, and the flute.

The course description is applicable for all applied woodwind instruments courses: advanced technical studies; standard solos; chamber ensemble playing. In addition to weekly lessons, attendance at biweekly studio classes is required. May be repeated for a maximum of 15 semester hours for each course. Prerequisite: successful completion of lower level credit as determined by departmental examination.

Mus 3810 Flute II (1.5)**Mus 3815 Clarinet II (1.5)****Mus 3820 Oboe II (1.5)****Mus 3825 Saxophone II (1.5)****Mus 3830 Bassoon II (1.5)**

Mus 5800 Advanced Woodwind Techniques (1) A lecture and laboratory course in instrumental playing and teaching techniques and materials. Prerequisites: Mus 2801 and Mus 2802.

The course description is applicable for the following woodwind instruments courses: advanced study in applied music. Technical exercises and music literature adjusted to the needs of the individual. May be repeated. Prerequisite: approval by audition.

Mus 5810 Flute III (1.5)**Mus 5815 Clarinet III (1.5)****Mus 5820 Oboe III (1.5)****Mus 5825 Saxophone III (1.5)****Mus 5830 Bassoon III (1.5)**

Brass and Percussion Instruments

Mus 1907 Secondary Brass and Percussion Lessons (1)

Private lesson study in any brass instrument listed in this catalog or in percussion. Does not count for any major or minor as the principal performing area. Prerequisite: initial enrollment by permission of applied area faculty. May be repeated.

The course description is applicable for the following brass instruments courses: breath control; fundamentals of mechanism, embouchure; proper tonal color; technical exercises; easy solos; supervised chamber ensemble rehearsals. In addition to weekly lessons, attendance at biweekly studio classes is required. May be repeated for a maximum of 12 semester hours for each course.

Mus 1910 Trumpet I (1)**Mus 1915 French Horn I (1)****Mus 1920 Trombone I (1)****Mus 1925 Baritone Horn I (1)****Mus 1930 Tuba I (1)**

Mus 1960 Percussion I (1) Fundamental skills in rudimental and concert snare drum techniques. Study of the keyboard percussion instruments and an introduction to the timpani. In addition to weekly lessons, attendance at biweekly studio classes is required. May be repeated for a maximum of 12 semester hours.

Mus 2901 Brass Class I (1) A laboratory course in the fundamentals of playing and teaching the trumpet and French horn.

Mus 2902 Brass Class II (1) A laboratory class in the fundamentals of playing and teaching the baritone horn, the trombone, and the tuba.

Mus 2950 Percussion Class (1) A laboratory course in the basic techniques of playing and teaching the instruments of percussion.

The course description is applicable for the following applied brass instruments courses: advanced technical studies; standard solos; chamber ensemble playing. In addition to weekly lessons, attendance at biweekly studio classes is required. May be repeated for a maximum of 15 semester hours for each course. Prerequisite: successful completion of lower level credit as determined by departmental examination.

Mus 3910 Trumpet II (1.5)**Mus 3915 French Horn II (1.5)****Mus 3920 Trombone II (1.5)****Mus 3925 Baritone Horn II (1.5)****Mus 3930 Tuba II (1.5)**

Mus 3960 Percussion II (1.5) Advanced study of snare drum, keyboard, percussion, and timpani, as well as an emphasis in performance literature. In addition to weekly lessons, attendance at biweekly studio classes is required. May be repeated for a maximum of 15 semester hours. Prerequisite: successful completion of lower level credit as determined by departmental examination.

Mus 5900 Advanced Brass Techniques (1) A lecture and laboratory course in instrumental playing and teaching techniques and materials. Prerequisites: Mus 2901 and Mus 2902.

The course description is applicable for the following brass instruments courses: advanced study in applied music. Technical exercises and music literature adjusted to the needs of the individual. May be repeated. Prerequisite: approval by audition.

Mus 5910 Trumpet III (1.5)**Mus 5915 French Horn III (1.5)****Mus 5920 Trombone III (1.5)****Mus 5925 Baritone Horn III (1.5)****Mus 5930 Tuba III (1.5)**

Mus 5960 Percussion III (1.5) Advanced study in applied music. Technical exercises and music literature adjusted to the needs of the individual. May be repeated. Prerequisite: approval by audition.

Integrative Studies General

IGen 4234 Arts: An Integrated Approach* (3) An exploration of the integrative elements and commonalities among music, theatre, and the visual arts.

*Not available for graduate credit.

Political Science and Geography

Political Science

POLITICAL SCIENCE Major, B.A. Degree

(42 000425)

	Sem. Hours
MAJOR REQUIREMENTS	33
PoIS 1500 Introduction to Political Science 3	3
PoIS 1510 American Government 3	3
PoIS 2520 Comp. Government & Politics 3	3
PoIS 2530 International Relations 3	3
PoIS 3540 Survey of Political Theory 3	3
PoIS 4560 Cont. U.S. Pol. Sci.: Methodology 3	3
PoIS 4561 Data Analysis in Political Science 3	3
PoIS 4570 Public Administration 3	3
Electives in political science 9	9
MINOR REQUIREMENTS	18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, PoIS 1500 or PoIS 1510 fulfills 3 s.h. of Div. II B; the Modern Language Requirement fulfills 3 s.h. of Div. II C)	42
MODERN LANGUAGE REQUIREMENT (Refer to Bachelor's Degree Requirements section for fulfillment options.)	3-9
FREE ELECTIVES	15-28
MINIMUM TOTAL	124

POLITICAL SCIENCE Major, B.S. Degree

(43 000426)

	Sem. Hours
MAJOR REQUIREMENTS	33
PoIS 1500 Introduction to Political Science 3	3
PoIS 1510 American Government 3	3
PoIS 2520 Comp. Government & Politics 3	3
PoIS 2530 International Relations 3	3
PoIS 3540 Survey of Political Theory 3	3
PoIS 4560 Cont. U.S. Pol. Sci.: Methodology 3	3
PoIS 4561 Data Analysis in Political Science 3	3
PoIS 4570 Public Administration 3	3
Electives in political science 9	9
MINOR REQUIREMENTS	18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, PoIS 1500 or PoIS 1510 fulfills 3 s.h. of Div. II B)	45
FREE ELECTIVES	21-28
MINIMUM TOTAL	124

POLITICAL SCIENCE Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)

(000427)

	Sem. Hours
MINOR REQUIREMENTS	20
PoIS 1510 American Government 3	3
PoIS 2520 Comp. Government & Politics 3	3
Electives in political science 14	14
UNIVERSITY STUDIES REQUIREMENTS (In the minor, PoIS 1510 fulfills 3 s.h. of Div. II B)	45

INTERNATIONAL STUDIES Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)

(000489)

	Sem. Hours
MINOR REQUIREMENTS	24
One modern (foreign) language 6	6
Electives from the following 6	6
Anth 4870 Comparative Cultures 3	3
Geog 2212 World Geography 3	3
Rel 3210 Comparative World Religions 3	3
SpCm 3140 Intercultural Communication, 3 or	3
Engl 4120 Language & Culture, 3 3	3
Departmentally approved electives from one of the following areas listed below. A listing of courses is available from the Chair of the Department or Director of International Programs 12	12
Area 1 Generalist: Social Science	
Area 2 Generalist: Humanities	
Area 3 East Asia	
Area 4 Latin America	
Area 5 Europe	
Area 6 Agri-Business	
Area 7 International Economic Development	
Area 8 International Tourism	
Area 9 Intercultural Studies	

Students are required to seek advisement concerning courses taken toward a minor in International Studies from the Director of International Programs.

UNIVERSITY STUDIES REQUIREMENTS (In the minor, if elected Geog 2212 fulfills 3 s.h. of Div. II B; Modern (foreign) language fulfills 3 s.h. of Div. II C)

PoIS 1500 Introduction to Political Science (3) A survey of the determinants defining the relationship of the individual to the political environment and the political system. The primary focus is on the three fundamental levels of politics: the individual, the state, and the international community.

PoIS 1510 American Government (3) The nature, philosophical bases, development, functions, structure, and processes of the government and politics of the United States and of Missouri. Emphasis on and analysis of the nature and development of the provisions and principles of the Constitution of the United States and of Missouri. Fulfills state requirements of Section 170.011 RSMo.

PoIS 2511 State Government (3) Administrative, legislative, and judicial activities of state governments and their relationships to national and local governments with special emphasis on state and local governments in Missouri.

PoIS 2520 Comparative Government and Politics (3) Major forms of government with focus on England, France, Germany, and the Confederation of Independent States.

PoIS 2530 International Relations (3) Introduction to international relations with specific focus on balance-of-power, nature and cause of war, political, social, economic and military issues in international politics.

PoIS 2550 Political Parties and Pressure Groups (3) The theory, principles, structures, and functions of pressure groups and political parties in the American political system.

PoIS 2580 Public Law and the Judicial Process (3) Lawyers, judges, and the law from the perspective of political science. Development and types of law, jurisprudence, and use of precedent. Judicial selection, structure, and decision-making process.

PoIS 3520 Asian Government and Politics (3) Political systems of Asia, focusing on the institutions, decision-making process, and activities of governments and on political parties, pressure groups, and public opinion.

PoIS 3521 Latin American Government and Politics (3) A comparative study of the political system of the Latin American countries. Prerequisite: PoIS 1500 or PoIS 1510.

PoIS 3530 International Organizations (3) The role of international organizations in international relations with special emphasis on the United Nations, the specialized agencies of the United Nations, NATO, Warsaw Pact, and the European Economic Community.

PoIS 3540 Survey of Political Theory (3) Political philosophies from early recorded history through the eighteenth century.

PoIS 3541 Recent Political Theory (3) Political philosophy in the nineteenth and twentieth centuries. A continuation of PoIS 3540.

PoIS 3550 Public Opinion (3) Forces that mold political opinion, the techniques used in the relevant systematic study of opinion, and the practical application of the techniques of survey research.

PoIS 4511 Public Policy (3) Introduction to the public policymaking process and analysis of contemporary policy of the United States.

PoIS 4516 The Intelligence Community (3) The nature of intelligence, the historical background, legal foundations. U.S. Intelligence—structure, the intelligence process, and counterintelligence. Prerequisite: PoIS 1510 or consent of instructor.

PoIS 4520 Politics of the Developing Nations (3) Problems of political development in the new nations of the world and the concepts and theories for comparative analysis of them.

PoIS 4530 International Law (3) An examination of its nature, history, philosophies, and basic rules as found in treaties, court decisions, customs, and other sources.

PoIS 4531 American Foreign Policy (3) The foreign policy process with specific focus on the powers of the American President and foreign policies toward the Confederation of Independent States, Europe, the Middle East, Latin America, and East Asia.

PoIS 4532 International Relations of East Asia (3) Study and analysis of contemporary East Asia focusing on political culture, nationalism, the foreign policies of the United States, the Confederation of Independent States, Japan, China and the challenge of the East Asia edge to the Western industrial powers, particularly the United States.

PoIS 4533 Theory and Methods of International Relations (3) Study, analysis, and application of dominant approaches used in the research and study of international relations including consideration of images, conflict, balance-of-power politics, deterrence, and forecasting. Prerequisite: PoIS 2530 recommended.

PoIS 4550 Comparative Party Systems (3) Theories and methods of comparative inquiry plus an analysis of party structures and functions in contemporary political systems.

PoIS 4551 Culture and Politics of the Middle East (3) The influence of culture on the politics, political systems and issues of the Middle East.

PoIS 4555 The American Presidency (3) Examination of the powers, duties, and limitations of the American presidency. Prerequisite: PoIS 1510.

PoIS 4560 Contemporary United States Political Science: Methodology (3) New approaches to the study of politics in the United States with an emphasis on controversies among political scientists.

PoIS 4561 Data Analysis in Political Science (3) Quantitative research techniques, including hypothesis testing and statistical analysis using packaged computer program. Prerequisite: PoIS 4560 or Soc 4890.

PoIS 4570 Public Administration (3) A broad and basic study of public administration in the United States. Prerequisite: PoIS 1510.

PoIS 4571 Municipal Administration (3) Principles of municipal administration as they operate in the United States under the various forms of municipal governments. Prerequisite: PoIS 1510.

PoIS 4572 Intergovernmental Relations (3) Relationships of the various levels and units of American government. Prerequisite: PoIS 1510.

PoIS 4580 American Constitutional Law (3) An interpretation of our constitutional heritage, including the growth of Federal judicial power and the role of the Supreme Court.

PoIS 4581 Constitutional Rights (3) American constitutional rights as originally conceived, as interpreted by the Supreme Court, and as an object of struggle between conflicting groups.

PoIS 4590 Special Projects in Political Science (1-6) Study, interpretation, and discussion of special topics and problems in political science. May be repeated for a maximum of 6 semester hours.

PoIS 4591 Internship in Political Science (1-6) Practical experience with a governmental or political unit.

Supervision by professional of unit and by member of University faculty. May be repeated for a maximum of 6 semester hours. Prerequisite: consent of department.

PoIS 5510 Problems in National, State or Local Government (1-3) Special problems in government, selected by student and instructor. May be repeated for a maximum of 3 semester hours.

PoIS 5590 Readings in Political Science (1-6) Selected readings designed to strengthen weak points in student's program as recommended by the student's adviser. May be repeated for a maximum of 6 semester hours.

PoIS 6590 Thesis (1-6) A candidate for the Master of Arts degree with a major in political science selecting the thesis option shall be responsible for the oral defense of his/her thesis before a special committee. May be repeated for a maximum of 6 semester hours.

Interdisciplinary Studies Involving Political Science

A full description of Interdisciplinary Studies courses is listed in the section on Interdisciplinary Studies.

IndS 3340 Modern East Asia (3)

Geography

GEOGRAPHY Major, B.A. Degree

(42 000429)

		Sem. Hours
MAJOR REQUIREMENTS		33
Geog 2212	World Geography 3	Electives from the following, including two courses in regional geography 18 EaSc 1004 Intro. to the Sci.: Geology ... 4 EaSc 3111 Geomorphology 3 Electives in geography 11-18
Geog 2246	Economic Geography 3	
Geog 2285	Cartography 3	
Geog 3270	Research Methods in Geography ... 3	
Geog 3275	Climatology 3	
MINOR REQUIREMENTS		18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, Geog 2212 fulfills 3 s.h. of Div. II B; The Modern Language Requirement fulfills 3 s.h. of Div. II C)		42
EaSc 1004, if elected, fulfills 4 s.h. of Div. II A.		
MODERN LANGUAGE REQUIREMENT (Refer to Bachelor's Degree Requirements section for fulfillment options.)		3-9
FREE ELECTIVES		15-28
MINIMUM TOTAL		124

GEOGRAPHY Major, B.S. Degree

(43 000430)

		Sem. Hours
MAJOR REQUIREMENTS		33
Geog 2212	World Geography 3	Electives from the following, including two courses in regional geography 18 EaSc 1004 Intro. to the Sci.: Geology ... 4 EaSc 3111 Geomorphology 3 Electives in geography 11-18
Geog 2246	Economic Geography 3	
Geog 2285	Cartography 3	
Geog 3270	Research Methods in Geography ... 3	
Geog 3275	Climatology 3	
MINOR REQUIREMENTS		18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, Geog 2212 fulfills 3 s.h. of Div. II B)		45
EaSc 1004, if elected, fulfills 4 s.h. of Div. II A)		
FREE ELECTIVES		21-28
MINIMUM TOTAL		124

GEOGRAPHY Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)

(000431)

		Sem. Hours
MINOR REQUIREMENTS		21
Geog 2212	World Geography 3	Electives from the following, including one course in regional geography 9 EaSc 1004 Intro. to the Sci.: Geology ... 4 EaSc 3111 Geomorphology 3 Electives in geography 2-9
Geog 2246	Economic Geography 3	
Geog 3270	Research Methods in Geography ... 3	
Geog 3275	Climatology 3	
UNIVERSITY STUDIES REQUIREMENTS (In the minor, Geog 2212 fulfills 3 s.h. of Div. II B.		
EaSc 1004, if elected, fulfills 4 s.h. of Div. II A)		

Geog 1221 World Regional Geography (3) A general survey of the distinguishing characteristics of the major regions of the world. Emphasis on the human activities occurring within the regions.

Geog 2211 Geography of North America (3) Physical and cultural features of the United States and Canada, based on regional concepts. Prerequisite: Geog 2212.

Geog 2212 World Geography (3) A survey of the geography of the world and the principles underlying geographic development.

Geog 2246 Economic Geography (3) Influence of geographic factors upon economic life, including such topics as natural resources and the relations of geographic factors to industrial and commercial development.

Geog 2281 Map Interpretation (2) A survey of the problems encountered in reading maps. Emphasis is on the kinds of information that can be presented on maps, the kinds of symbols used, and limitations of maps.

Geog 2285 Cartography (3) An introduction to the techniques and tools of map construction. Emphasis will be placed on individual projects of map composition.

Geog 2290 Aerial Photograph Interpretation (3) An introductory presentation of aerial photograph interpretation; stereoscopy; elementary photogrammetry; and the determination from 3-D photo models of landforms, topographic features, plant ecology, and land use patterns. Practice in solution of problems useful to agricultural, military, and civil engineers; foresters; archeologists; geographers; and geologists.

Geog 3200 Geography of Europe (3) A systematic and regional approach to Europe involving the description and analysis of its major regions, political units, continental and world relations, and contemporary issues and problems. Prerequisite: Geog 2212.

Geog 3201 The Cultural Landscape (3) A survey of fundamental human needs, beliefs, and activities that have molded the varied human landscapes of the world. Emphasis on the identification, description, and correlation of spatial variations of population, land use, and social and economics activities.

Geog 3221 Geography of Africa (2) Historic and modern significance of Africa; description and delimitation of the major natural regions; and the dominant native cultures. Prerequisite: Geog 2212.

Geog 3225 Geography of Latin America (2) South America and Central America including Mexico and the Caribbean. Prerequisite: Geog 2212.

Geog 3270 Research Methods in Geography (3) An overview of and training in methods of geographic data selection, collection, and analysis. Prerequisite: Geog 1221 or Geog 2212 or Geog 3201 or permission of instructor.

Geog 3275 Climatology (3) Considers on a minimal basis the physics of the atmosphere, hydrosphere, and lithosphere requisite to an understanding of the cultural implications of climate. Prerequisite: Geog 2212.

Geog 3280 Computer Cartography (3) An introduction to the construction of computer drawn maps. Emphasis is placed on individual problems of data collection and processing plus student use of the computer.

Geog 4230 Geography of Asia (3) A systematic and regional approach to the several Asian landscapes. Emphasis is on physical geography and cultural regions. Prerequisite: Geog 2212 or consent of instructor.

Geog 4235 Geography of the Former Soviet Union (3) A regional geography of the F.S.U. The relationship of rigorous physical environment to national problems. Prerequisite: Geog 2212 or consent of instructor.

Geog 4240 Geography of Missouri (2) A description and analysis of the systematic and regional geography of Missouri. Prerequisite: Geog 2212.

Geog 4251 Special Projects in Geography (1-6) Study, interpretation, and discussion of special topics and problems in geography. May be repeated for a maximum of 6 semester hours.

Geog 4256 Physical Geography (3) The areal distribution of the major elements of the physical environment relevant to man's occupation of the earth's surface. Prerequisite: Geog 2212.

Geog 4260 Historical Geography of the United States (3) Relationship of changing geography to physical environment and developing technology in the United States. Prerequisite: Geog 2212.

Geog 4265 Urban Geography (3) Location of cities as related to other geographic phenomena. Urban units are analyzed with respect to general location theory. Prerequisite: Geog 2246.

Geog 4270 World Political Geography (3) The historical development of the political organization of area. Theoretical aspects of political geography are emphasized. Prerequisite: Geog 2212.

Geog 4275 Special Topics in Geography (1-3) Directed individual or group research of predetermined problems in geography for more intensive study. May be repeated for a maximum of 3 semester hours.

Geog 4291 Conservation of Natural Resources (3) Problems of availability, production, exploitation, appraisal, distribution, and renewability of natural resources.

Geog 4295 Land and Leisure (3) Focus upon land use patterns for recreational activities. Relationship of recreation to land uses and regional economic interaction.

Geog 5200 Readings in Geography (1-3) Selected readings in geography under the guidance of the instructor. Class sessions may be required as part of the program. May be repeated for a maximum of 3 semester hours. Prerequisite: consent.

Geog 5210 Problems in Geography (1-3) An in-depth study of the major problems in regional and systematic geography. May be repeated for a maximum of 3 semester hours. Prerequisite: consent.

Geog 5220 Industrial Geography (3) Areal distribution patterns of industry and their relation to other regionally varying geographic phenomena. Prerequisite: Geog 2246.

Geog 5230 Geography of International Trade (3) An analysis of the relationship of geography to international trade. Prerequisite: Geog 2246.

Religious Studies

In the area of Religious Studies, the second digit in the course number stands for the following: 1--Literature of Religions, 2--History of Religions, 3--Ethics and Moral Issues, 4--Interdisciplinary Studies Including Theologies, 5--Religion and Society, 9--Research and Readings.

Center for Religious Studies Statement of Policy

Students are encouraged to seek advisement concerning courses taken toward a minor in Religious Studies from the Director of the Center for Religious Studies.

RELIGIOUS STUDIES Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)
(000839)

MINOR REQUIREMENTS	Sem. Hours
Rel 2210 Religions in America, 3 or	
Rel 3210 Comparative World Religions, 3	3
Rel 2310 World Views & Values, 3 or	
Rel 2510 Gender & Religions, 3	3
Rel 4410 Modern Religious Thought, 3 or	
Rel 4520 Legal Issues & Religion, 3	3
Rel 3900 Special Projects in Religion	3
Elective from the following	3
Rel 1130 The Bible as Literature	3
Rel 2110 Images of Jesus of Nazareth	3
Rel 1510 Exploring Religion	3
Electives from the following	
or other approved electives	6
Art 1815 Art History Survey I	3
Art 1825 Art History Survey II	3
*Engl 4450 The Age of Milton	3
*Engl 4620 Early American Literature	3
Phil 3710 Philosophy of Religion	3
Hist 4412 Era of Renaissance & Reformation	3
Thea 4400 Lit. & History of Theatre I	3
Thea 4420 Lit. & History of Theatre II	3
Soc 4885 Sociology of Religion	3
21	

UNIVERSITY STUDIES REQUIREMENTS (In the minor, if elected, Rel 1510 fulfills 3 s.h. of Div. II C)

*Course has prerequisite(s) not listed in the program.

Literature of Religions

Rel 1130 The Bible as Literature (3) A literary and historical critical analysis of the Old Testament/Hebrew Bible, the Apocrypha, and the New Testament.

Rel 2110 Images of Jesus of Nazareth (3) An investigation of first and second century literature including the gospels of Matthew, Mark, Luke, John and apocryphal writings.

History of Religions

Rel 2210 Religions in America (3) Historical development of American religious pluralism.

Rel 3210 Comparative World Religions (3) Similar and contrasting aspects of the world's major religions.

Ethics and Moral Issues

Rel 2310 World Views and Values (3) Studies in selected contemporary religio-ethical problems. Topics will include bio-medical, computer, ecological, and gender issues, corporate responsibility, war and peace, racism, and death and dying.

Interdisciplinary Studies Including Theologies

Rel 4410 Modern Religious Thought (3) Selected contemporary religious writers. Topics may include liberation theology, civil religion, feminist criticism, and black theology. Prerequisite: one course in religious studies.

Religion and Society

Rel 1510 Exploring Religion (3) Definitions, experiences, expressions, beliefs, socio-cultural contexts, and concept of self within religious traditions and practices.

Rel 2510 Gender and Religions (3) Studies in how major world religions view the social responsibilities, activities, and relationships of males and females.

Rel 4520 Legal Issues and Religion (3) A survey of historic and recent legal issues dealing with the relationship between religion (church) and the state. Topics will include: Bible reading and curriculum in the schools, conscientious objectors, taxation and the church, prayer and the Pledge of Allegiance. Prerequisite: Rel 1510 or Phil 3710 or equivalent.

Research and Readings

Rel 3900 Special Projects in Religion (1-3) Individual or group study of problems in special areas of interest, such as research projects and travel seminars. May be repeated for a maximum of 6 semester hours.

Theatre

In the Department of Theatre, the second digit in the course number stands for the following: 1--Interpretation, 2--Children's Theatre and Creative Dramatics, 3--Production, 4--History and Literature, 5--Acting, 6--Crafts, 7--Directing, 8--Playwriting, 9--General.

SPEECH COMMUNICATION AND THEATRE Major, B.S. in Ed. Degree

(Certification to teach speech and theatre in grades 9-12)
(41 00362)

				Sem. Hours
CORE REQUIREMENTS				21
Thea 1500	Acting	3	SpCm 2130	Small Group Communication ... 3
Thea 1600	Stagecraft & Lighting	3	SpCm 2140	Argumentation & Debate
Thea 3700	Directing	3	SpCm 3125	Nonverbal Communication
SpCm 2110	Foundations of Comm. Theory	3	SpCm 3190	Forensics

Theatre Major Option, B.S. in Ed. Degree

				Sem. Hours
MAJOR REQUIREMENTS				36
Core Requirements				21
Thea 1100	Oral Interpretation	3	Thea 4420	Lit. & History of the Theatre II ... 3
Thea 4400	Lit. & History of the Theatre I	3	Thea 3630	Studio Theatre I
			Thea 4730	Studio Theatre II
			Electives in SpCm, Thea, or MCom	
MINOR REQUIREMENTS				18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, Thea 1100 fulfills 3 s.h. of Div. I B; in the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. III B)				42
Secondary Education students must have one course in a physical or earth science and one in a biological science in Div. II A.				
Hist 1350	Div. II B or		Thea 2400	Div. II C (required)
Hist 1351	Div. II B (required)	3	Psy 4230	Psy. of Adolescence
PolS 1510	Div. II B (required)	3		
Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. in Div. II E.				
PROFESSIONAL EDUCATION REQUIREMENTS (see pages 181-183)				28
MINIMUM TOTAL				124

Speech Communication Major Option, B.S. in Ed. Degree

See requirements as outlined in the Department of Communication.

SPEECH COMMUNICATION AND THEATRE Minor, B.S. in Ed. Degree

(Certification to teach speech and theatre in grades 5-9 with a middle school-junior high major.
Elementary education functional majors 1-6 may use this as an area of concentration.
(000363)

				Sem. Hours
MINOR REQUIREMENTS				21
Thea 1500	Acting	3	SpCm 2130	Small Group Communication ... 3
Thea 1600	Stagecraft & Lighting	3	SpCm 2140	Argumentation & Debate
Thea 3700	Directing	3	Elective in SpCm or Thea	
SpCm 2110	Foundations of Comm. Theory	3		

THEATRE Major, B.A. Degree

(42 000364)

				Sem. Hours
MAJOR REQUIREMENTS				35
Thea 1100	Oral Interpretation	3	Thea 3630	Studio Theatre I
Thea 1400	Script Analysis	3	Thea 3700	Directing
Thea 1500	Acting	3	Thea 4730	Studio Theatre II
Thea 1510	Stage Voice & Movement	3	Thea 4400	Lit. & History of the Theatre I ... 3
Thea 1600	Stagecraft & Lighting	3	Thea 4420	Lit. & History of the Theatre II ... 3
Thea 3600	Scene Design	3	Electives in theatre	
MINOR REQUIREMENTS				18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, Thea 1100 fulfills 3 s.h. of Div. I B; the Modern Language Requirement fulfills 3 s.h. of Div. II C)				42
IGen 4234	Div. III A (required)	3		
MODERN LANGUAGE REQUIREMENT				3-9
(Refer to Bachelor's Degree Requirements section for fulfillment options.)				
FREE ELECTIVES				12-29
MINIMUM TOTAL				124

THEATRE Functional Major, B.F.A. Degree
(47 000366)

		Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS		60
Thea 1100	Oral Interpretation	3
Thea 4300	Professional Practices	4
Thea 4310	Theatre Management	3
Thea 1400	Script Analysis	3
Thea 4400	Lit. & History of the Theatre I	3
Thea 4420	Lit. & History of the Theatre II	3
Thea 1500	Acting	3
Thea 1600	Stagecraft & Lighting	3
Thea 3630	Studio Theatre I	1
Thea 3700	Directing	3
Thea 4730	Studio Theatre II	1
Elect one of the following concentrations		18-21
Performance		
Thea 1510	Stage Voice & Movement	3
Thea 4500	Advanced Acting	3
Thea 1610	Stage Make-Up	3
MINOR NOT REQUIRED		
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Thea 1100 fulfills 3 s.h. of Div. I B)		45
IGen 4234	Div. III A (required)	3
FREE ELECTIVES		19
MINIMUM TOTAL		124

THEATRE Minor for a Bachelor's Degree
(Central does not confer teacher certification for this minor)
(000365)

		Sem. Hours
MINOR REQUIREMENTS		23
Thea 1100	Oral Interpretation	3
Thea 1400	Script Analysis	3
Thea 1500	Acting	3
Thea 1600	Stagecraft & Lighting	3
Thea 3700	Directing	3
Thea 4400	Lit. & History of the Theatre I, 3 or	3
Thea 4420	Lit. & History of the Theatre II, 3	3
Electives in theatre		5
UNIVERSITY STUDIES REQUIREMENTS (In the minor, Thea 1100 fulfills 3 s.h. of Div. I B)		

Interpretation

Thea 1100 Oral Interpretation (3) Skills used to convey the intellectual, emotional, and aesthetic values of literature to an audience.

Children's Theatre and Creative Dramatics

Thea 3220 Children's Theatre (3) The study and practice of producing plays for a children's audience.

Thea 4210 Creative Dramatics (2) Instruction in the supervision of pre-school through elementary grade children in the spontaneous expression of ideas and characters through the theatrical form.

Production

Thea 4300 Professional Practices (1-6) Extended, supervised experiences in any phase of theatre production. Credit allowed will depend upon the nature and scope of the assignment. May be repeated for a maximum of 10 semester hours. Prerequisite: consent.

Thea 4310 Theatre Management (3) Business theories and practices in the modern educational, community, and professional theatre.

Thea 5310 Modern Theatrical Styles (3) The origin and development of modern production practices with special attention to their use in the contemporary theatre.

History and Literature

Thea 1400 Script Analysis (3) Structural and performance dimensions of the playscript. It will focus on the role of the various theatrical artists in developing an effective methodology and application for translating the playwright's script into a public performance.

Thea 2400 Theatre in Western Civilization (3) An introductory examination of the various contemporary theatre arts with a survey of the drama and the developments of major theatrical periods in western civilization.

Thea 4400 Literature and History of the Theatre I (3) Works and writers for the stage from the beginning to 1700. The development of theatrical modes and presentation and their influences upon the drama of each period.

Thea 4420 Literature and History of the Theatre II (3) Works and writers for the stage from 1700 to the present. The development of theatrical modes and presentation and their influences upon the drama of each period.

Thea 5400 Development of the American Theatre (3) Plays and playwrights of the American theatre and of the

evolution of the physical theatre, acting, staging, and production practices.

Thea 5410 Contemporary Theatre and Drama (2)

Twentieth century plays, playwrights, and theatre artists with particular emphasis on the period since 1960.

Thea 5420 Dramatic Theory and Criticism (2) Dramatic theory and criticism of the Western World from Aristotle to modern critics and theorists.

Acting

Thea 1500 Acting (3) An extensive study in the theories and techniques of acting.

Thea 1510 Stage Voice and Movement (3) Analysis of basic problems of voice and body use in the theatre with the practice of exercises for correction or improvement.

Thea 4500 Advanced Acting (3) An intensified study of characterization centering around the study of difficult roles, and the adaptation of acting techniques to various styles of acting. Prerequisite: Thea 1500.

Crafts

Thea 1600 Stagecraft and Lighting (3) Lectures and laboratory experience in the construction, painting, rigging and shifting of stage scenery and study of theatrical lighting design and execution for stage and television. Scene shop work arranged as a portion of the course.

Thea 1610 Stage Make-up (3) Materials and methods of application of make-up artistry for cosmetic and character effects on stage.

Thea 2600 Stage Drafting (2) Methods of construction and processes of drafting working drawings for stage scenery.

Thea 2620 Theatrical Costume (3) Basics of costume design, survey of costume history, laboratory in construction of costumes.

Thea 3600 Scene Design (3) Theory and practice of design as applied to scenery for modern theatrical production. Prerequisites: theatre majors, Thea 1600; art majors, Art 3910 or Art 3310.

Thea 3630 Studio Theatre I (1) Technical direction of a play in the Studio Theatre series at approximately the junior class level. Prerequisites: Thea 1500, Thea 1600, Thea 3700 and consent.

Thea 4600 Advanced Technical Theatre (3) Advanced techniques in scenery construction and painting, plastics, and selection of stage equipment. Laboratory exercises will be required. Prerequisite: Thea 1600.

Thea 4610 Advanced Stage Lighting and Sound (3) Extensive investigation of stage lighting history and practices in the modern theatre and the study and use of live and recorded sound as a theatrical art. Prerequisite: Thea 1600.

Directing

Thea 3700 Directing (3) Problems, principles, and employment of various directing styles, and the adaptation of directing techniques to various physical facilities. Prerequisites: Thea 1500 and Thea 1600.

Thea 4710 Advanced Directing (3) Extensive examination of special directing problems with comedy, tragedy, period drama, and the musical show in arena and proscenium theatres. Prerequisite: Thea 3700.

Thea 4730 Studio Theatre II* (1) Direction of a play in the Studio Theatre series at approximately the senior class level. Prerequisite: Thea 3630 and consent.

*Not available for graduate credit.

Playwriting

Thea 4800 Playwriting (1-3) Dramatic writing, dramatic theory, style dialogue exercises, characterization, with opportunity for the production of student plays. May be repeated for a maximum of 3 semester hours.

General

Thea 1900 Theatre Practicum (1) Supervised work on selected problems in play direction, acting, scene design, scene construction, stage lighting, and business management. May be repeated for a maximum of 3 semester hours. Prerequisite: consent.

Thea 3900 Special Topics in Theatre (1-3) Individual study and research on topics that are of special interest to the student. May be repeated for a maximum of 6 semester hours. Prerequisite: consent.

Thea 4900 Repertory Theatre (3) Practical experience in theatre through participation in a summer repertory season of plays as an actor, a technician, or management personnel. May be repeated for a maximum of 6 semester hours.

Prerequisite: enrollment by department approval only.

Thea 5900 Seminar in Theatre (1-3) Studies in a specialized area of theatre, with emphasis on individual research. May be repeated for a maximum of 12 semester hours.

Thea 5910 Thesis (1-5) May be repeated for a maximum of 5 semester hours.

Thea 5920 Theatre Architecture (2) Analysis of and practice in modern theatre architectural design.

Thea 5990 Introduction to Graduate Study in Theatre (3) Recent theatre research and research methods, professional organizations, and employment.

Thea 6900 Readings in Theatre (1-3) Guided study in the literature of special and related fields of theatre. May be repeated for a maximum of 12 semester hours.

Integrative Studies General

IGen 4234 Arts: An Integrated Approach* (3) An exploration of the integrative elements and commonalities among music, theatre, and the visual arts.

*Not available for graduate credit.

Women's Studies

In the area of Women's Studies, the second digit in the course number stands for the following: 0--General, 1--Music/Art, 2--Literature/Language/Theatre/Philosophy, 3--History/Anthropology/Sociology, 4--Political Science/Criminal Justice/Safety, 5--Speech Communication/Mass Communication, 6--Psychology/Education/Physical Education, 7--Mathematics/Science, 8--Business/Economics/Home Economics, 9--Special Projects/Individual Study/Research.

WOMEN'S STUDIES Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)
(000471)

	Sem. Hours
MINOR REQUIREMENTS	21-22
WS 1050 Introduction to Women's Studies 3	
WS 4910 Spec. Proj. in Women's Studies 3	
Electives from the following 9-10	
Hist 4310 Women in America 2	
Anth 4820 Sexual Dynamics & Culture 3	
*SpCm 4135 Gender Communications 3	
Engl 2270 Fict. by Women Around the World 3	
Engl 4560 British Women Writers 3	
Engl 4660 Women Writers of the United States 3	
Electives (continued)	
Rel 2510 Gender & Religions 3	
Nur 2020 Health: Women's Perspective 2	
Nur 4030 Human Sexuality 2	
CJ 4403 Sexual Assault & the Criminal Justice System 3	
Psy 4320 Psychology of Women 2	
Soc 4865 Sociology of the Family 3	
Electives from the above list or as approved by the Women's Studies Coordinator 6	

*Course has prerequisite(s) not listed in the program.

General

WS 1050 Introduction to Women's Studies (3) Provides an overview of the interdisciplinary nature of the women's studies program. Focuses upon social, psychological, economic, political, cultural, religious, and historical aspects of women's roles in the United States.

WS 2000 Race, Class, and Gender (3) An exploration of the interrelations between gender, class, and race historically and cross-culturally. These interrelations will be explored using a multidisciplinary approach and a variety of kinds of materials, including ethnography, literature, life histories, and law.

Special Projects/Individual Study/Research

WS 4910 Special Projects in Women's Studies* (3) Extensive reading and discussion of selected topics to integrate the various courses in the women's studies program. Prerequisite: 15 semester hours in the minor, including WS 1050.

*Not available for graduate credit.

Adrian and Margaret Harmon College of Business Administration

In the Harmon College of Business Administration, the second digit in the course number stands for the following: 0--Economics, 1--Accounting, 2--Business Education, 3--Management, 4--Marketing, 5--Office Administration, 6--Computer Information Systems, 7--Business Law, 8--Finance, 9--Human Resource Management.

Bachelor of Science in Business Administration Degree Program Statement of Policy

The mission of the Adrian and Margaret Harmon College of Business Administration (HCBA) at Central Missouri State University is to provide quality business and economics education for present and future business and economics students. The College also serves the Central Missouri State University academic community in vital academic support roles that meet the educational needs of a variety of campus constituencies.

The faculty in the HCBA places an emphasis on effective classroom teaching and student learning. Business instruction programs are to provide graduates with theoretical and other knowledge in business functional areas that satisfies professional requirements for leadership positions in both the private and public sectors. High standards of academic excellence, assessment of present programs, and the emergence of new academic programs continue to guide and influence the content and design in all academic programs located in the College.

Admission to B.S.B.A. Programs.* Acceptance and registration in business administration courses or the declaration of intent to complete a business major do not guarantee admission to the Bachelor of Science in Business Administration programs. A student is not officially admitted to the HCBA until he/she is notified in writing by a representative of the HCBA. Only those students who have applied for admission to a program in the HCBA may file an application for graduation for the Bachelor of Science in Business Administration degree.

*Students seeking a Bachelor of Science in Education degree with a major in business education must meet requirements of the College of Education and Human Services for admission to the professional sequence.

The desire of the faculty in the HCBA is for all Central students to succeed. To facilitate and support (1) overall academic program quality, (2) student progress through his/her academic program at the desired rate and (3) to better ensure receiving the maximum benefit from the curriculum design, students who desire to earn a B.S.B.A. degree are to enroll and take courses that are specifically designed for their academic classification. This means that freshmen (those who have completed 0-29.5 semester hours of college credit) who take courses within the HCBA will enroll in 1000 level courses only, sophomores (completed 30-59.5 semester hours) will enroll in 2000 or 1000 level courses, juniors (completed 60-89.5 semester hours) will enroll in 3000, 2000, or 1000 level courses and seniors (all students who have completed 90 semester hours) will enroll in 4000 level courses or below.

All Central students enrolled in business and economics courses are required to comply with prerequisites for those courses.

Students who have not applied for admission to a B.S.B.A. degree program or other business and economics four-year academic programs may not enroll for more than 25 percent of their total Central course work (or 30 semester hours) in the HCBA courses.**

**Deviations from the preceding requirements must be approved in writing by the HCBA department where the course is offered. This written permission must be approved and filed in the Dean's Office of the HCBA prior to the last drop-and-add day of the semester in which the course is taken.

B.S.B.A. Admission Requirements. Central students who desire to graduate with a B.S.B.A. degree should declare themselves to be pre-business majors upon enrollment at the University. Admission to all B.S.B.A. degree programs is conditional upon the completion of the departmental requirements and the following prerequisites:

1. A minimum of 41 semester hours of credit including the following pre-admission courses:

Acct	2101	Principles of Financial Accounting	3
Acct	2102	Principles of Managerial Accounting	3
CIS	1610	Impact of Computer-Based Technology	2
Econ	1010	Principles of Economics	3
Econ	1011	Principles of Economics	3
Fin	2801	Business Statistics I	3
BLaw	2720	Legal Environment of Business	3
Math	1111	College Algebra	3

2. Attainment of a 2.25 (or above) grade-point average on a scale of 4.00 for credit hours completed at Central and elsewhere and attainment of 2.25 (or above) grade-point on the 23 semester hours of pre-admission courses.
3. Transfer students from other colleges and universities must meet all degree program admission requirements. Transfer students may take appropriate additional course work to fulfill admission requirements.
4. A student applies for admission at the HCBA Office of the Dean (Dockery 212). The admission process should be initiated prior to fulfillment of all admission requirements.

5. All students pursuing a Bachelor of Science in Business Administration degree must take the ACT before they may be officially admitted to the degree program.

Additional B.S.B.A. Graduation Requirements. In addition to specified major and other requirements, all students graduating with a B.S.B.A. degree must satisfy the following requirements:

1. Fifty percent of the hours required for a B.S.B.A. degree must be taken outside of the College of Business and Economics. Up to nine semester hours of economics and up to six semester hours of statistics may be counted either inside or outside the business-economics group.
2. Students are required to earn at least 50 percent of their required business credit hours for a B.S.B.A. degree at Central.
3. Students must achieve a minimum cumulative grade-point average of 2.25.

Transfer of Credit. Students planning to transfer to Central should expect to complete most major business courses during their junior and senior years. A student from a two-year or four-year institution may transfer pre-admission courses equivalent to those required for the B.S.B.A. degree at Central. Transfer students from four-year institutions should obtain transfer information from the academic department offering the major.

Upper division courses (courses at the 3000 and 4000 level) cannot generally be transferred from a two-year institution and applied to a B.S.B.A. degree. However, the department chair responsible for the Central course may elect to allow such a transfer for equivalent credit. Before the department chair may accept the transfer course for equivalent credit, the course must be "validated" through a departmentally administered examination or successful completion of a more advanced course in the discipline.

The specific validation requirement to be applied will be designated by the department chair. The validation policy for the HCBA is consistent with policies and guidelines at comparable business schools and is in effect for all students desiring to transfer courses completed at a community or junior college. Upper division course work transferred from a four-year institution must be reviewed by the department chair before such work can be applied to a B.S.B.A. degree. The department chair may choose to apply the validation requirement to such transfers.

B.S.B.A. Core Courses. All B.S.B.A. degree program students are required to successfully complete carefully selected and designed 3000 and 4000 level business core courses. Students may enroll in 3000 level core courses after successfully completing 59.5 semester hours and may enroll in 4000 level core courses after successfully completing 89.5 semester hours. Prerequisite course requirements are to be complied with at all levels of the core and in other Central business and economics courses. Exception to these rules concerning core courses may be granted by the Chair of the department in the HCBA in which the course is offered. HCBA 3000 and 4000 level core courses are listed as an integral part of departmental academic programs. Please refer to the following pages of this section of the Central catalog for a complete listing of core and major courses required by the faculty in each department in the HCBA.

The Harmon College of Business Administration intends to provide equal opportunities for all through careful blending of human and financial resources. By accentuating growth in the capabilities of people, the College seeks to improve the quality of life for each individual in the region served.

Accounting

Department of Accounting Statement of Policy

A minimum grade of C must be earned in the following courses, if they are to be applied toward the fulfillment of an accounting functional major or minor: Acct 2101, Acct 2102, Acct 2110, Acct 3111, Acct 3112, Acct 3120, Acct 3130, and Acct 3160.

Completion of the departmental exit examination is a graduation requirement for the accounting functional major.

A student with an accounting functional major or minor may enroll in a course offered by the Department of Accounting only if a grade of at least C is earned in each of the course's accounting prerequisites.

ACCOUNTING Functional Major, B.S. in Business Administration Degree (46 000501)

					Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS					66	
*Acct	2101	Principles of Financial Acct.	3	*Fin	2801 Business Statistics I	3
*Acct	2102	Principles of Managerial Acct.	3	Fin	3801 Business Statistics II	3
Acct	2110	Microcomputer Appl. in Acct.	3	Fin	3850 Principles of Finance	3
Acct	3111	Inter. Financial Accounting I	3	Mgt	3315 Management of Organizations ..	3
Acct	3112	Inter. Financial Accounting II	3	Mgt	3325 Business Communications	3
Acct	3120	Cost & Managerial Accounting	3	Mgt	3360 Production/Operations Mgt.	3
Acct	3130	Introduction to Income Tax	3	Mkt	3405 Marketing Policy	3
Acct	3160	Acct. Information Systems	3	*BLaw	2720 Legal Environment of Business ..	3
Acct	4100	Advanced Accounting I	3	BLaw	3721 Law of Business Transactions ..	3
Acct	4105	Auditing	3	Acct	4120 Adv. Managerial Accounting, 3 or	
CIS	3630	Management Information Systems ..	3	Acct	4130 Advanced Income Tax, 3	3
*Econ	1011	Principles of Economics	3			
MINOR NOT REQUIRED						
UNIVERSITY STUDIES REQUIREMENTS					48	
SpCm	1000	Div. I B (required)	3	Psy	1100 Div. II B or	
*Math	1111	Div. I C (required)	3	Soc	1800 Div. II B (required)	3
*CIS	1610	Div. II A (required)	2	ICap	4357 Div. III B (required)	3
*Econ	1010	Div. II B (required)	3			
ELECTIVES OUTSIDE OF THE HARMON COLLEGE OF BUSINESS ADMINISTRATION					8	
FREE ELECTIVES					2	
This program requires at least 90 hours of courses without the Acct prefix.						
MINIMUM TOTAL					124	

*Students expecting to receive the B.S. in Business Administration Degree must seek admission to this program upon the completion of a minimum of 41 semester hours of credit including Acct 2101, Acct 2102, BLaw 2720, CIS 1610, Econ 1010, Econ 1011, Fin 2801, and Math 1111. See pages 152-153 for the Statement of Policy on Admission to a B.S. in Business Administration Degree program.

ACCOUNTING Minor for a Bachelor's Degree (Central does not confer teacher certification for this minor) (000502)

					Sem. Hours		
MINOR REQUIREMENTS					21		
Acct	2101	Principles of Financial Acct.	3	Acct	3130 Introduction to Income Tax	3	
Acct	2102	Principles of Managerial Acct.	3	Acct	4100 Advanced Accounting	3	
Acct	3111	Inter. Financial Accounting I	3	Elective in accounting			3
Acct	3112	Inter. Financial Accounting II	3				

Accounting

Acct 2100 Survey of Accounting (3) Study of elementary financial and managerial accounting to include the preparation and use of accounting statements and use of accounting information for managerial decisions. Course may not be substituted for Acct 2101 and/or Acct 2102. Not available to students with credit in Acct 2102.

Acct 2101 Principles of Financial Accounting (3) Fundamental principles of financial accounting. The

preparation and use of financial accounting records and statements for business organizations.

Acct 2102 Principles of Managerial Accounting (3) Development and use of cost and managerial accounting information for management control and decision making. Prerequisite: Acct 2101.

Acct 2110 Microcomputer Applications in Accounting (3) Use of microcomputer to solve accounting related business problems. Prerequisites: Acct 2101 and CIS 1610.

Acct 3111 Intermediate Financial Accounting I (3)

Financial accounting theory and practice applied to selected topics with emphasis on assets and application of generally accepted accounting principles. Prerequisite: Acct 2101.

Acct 3112 Intermediate Financial Accounting II (3)

Continuation of financial accounting theory and practice applied to selected topics with emphasis on equities and application of generally accepted accounting principles. Prerequisite: Acct 3111.

Acct 3120 Cost and Managerial Accounting (3) Application of accounting for managerial decision making, financial reporting and control for business enterprises. Prerequisites: Acct 2102 and Fin 2801.

Acct 3130 Introduction to Income Tax (3) Federal Income Tax principles and procedures. Determination of gross income, exclusions from gross income, business and nonbusiness deductions. Application of the principles is by the use of actual tax forms.

Acct 3135 Internship in Accounting (3-9) Opportunity for students to gain theoretical knowledge and practical application within a particular field of specialization. May not be taken last semester of senior year. Enrollment normally in 6 or 9 semester hours. May be repeated for a maximum of 18 semester hours. Prerequisites: 60 semester hours and overall GPA 2.50 or above or permission of internship supervisor.

Acct 3160 Accounting Information Systems (3) The integration of information flows of various segments of a business into an information system of the total organization. Emphasis areas include accounting aspects of data processing, system security controls, and documentation. Prerequisites: Acct 2110, Acct 3111 and CIS 3630.

Acct 4100 Advanced Accounting I* (3) Selected topics including business combinations, consolidations, financial accounting and reporting practices; and accounting and reporting for non-profit entities. Prerequisite: Acct 3112.

Acct 4105 Auditing* (3) Study of theory and practice relating to attestation engagements, professional liability and ethics. Prerequisites: Acct 3112, Acct 3120, Acct 3130 and Acct 3160.

*Not available for graduate credit.

Acct 4115 Financial Statement Analysis (3) Allows students to gain financial statement analytical perspectives required of credit and equity analysts and others impacted by financial statements. Not available to accounting majors. Prerequisite: Fin 3850.

Acct 4120 Advanced Managerial Accounting (3) An in-depth analysis of advanced managerial accounting topics and literature. Prerequisite: Acct 3120.

Acct 4130 Advanced Income Tax (3) Continuation of the study of Federal Income Tax. Consideration of the special treatment received by the various business entities, including a study of partnerships, corporations, estates, and trusts. Prerequisite: Acct 3130.

Acct 4136 Estate Planning (3) Provides students with the knowledge base and analytical skills needed for effective planning and administration. Prerequisites: Acct 3130.

Acct 4140 Advanced Accounting II (3) In-depth study of preparation of consolidated financial statements. Prerequisite: Acct 3112.

Acct 4160 Professional Examination Problems (3) Selected subject areas in financial accounting theory and

practice, cost and managerial accounting, and auditing.

Prerequisites: Acct 3120, Acct 3130, and Acct 4105.

Acct 5101 Financial Accounting Information (3) Provides an understanding, ability to interpret, and analytical skills needed to use financial accounting statements for decision making. Prerequisite: CIS 1600 or equivalent.

Acct 5102 Managerial Accounting Information (3)

Provides an understanding of management use of accounting information with emphasis on decision making. Topics include controllership function, information needs, global influences and ethical consideration. Prerequisites: Acct 5101 and admission to MBA program.

Acct 5105 Controllership and the Treasury Function (3)

Advanced managerial accounting and finance topics necessary to compete in a global market place. Prerequisites: undergraduate MBA background and admission to MBA program; must be taken concurrently with Fin 5805.

Acct 5110 Professional Accountancy Problems (3)

Applications and case studies of ethics, selected financial accounting pronouncements, current literature and practice, and current developing issues in accounting as an integral part of financial accounting problems. Prerequisite: Acct 4105.

Acct 5120 Seminar in Accounting Theory (3) The development and application of current accounting theory. Prerequisite: Acct 4105.

Acct 5130 Seminar in Tax Research and Planning (3)

Graduate course in federal income taxes. The obtaining of tax information from its various sources and using it to make important management and financial decisions. Prerequisite: Acct 4130.

Acct 5150 Advanced Auditing (3) An in-depth study of external and internal auditing including the theory and application of auditing standards, authoritative literature, statistical techniques, the attest function and audit reports, and current topics in auditing. Prerequisite: Acct 4105.

Acct 5170 Accounting Studies (3) Develops student ability to apply managerial skills to specific accounting issues. Emphasis is on integration of skills and knowledge across accounting-related disciplines. Topics will vary in accordance with student needs and resources available. Prerequisites: Acct 5102 or admission to the MBA Accounting concentration.

Acct 5191 International Accounting (3) Accounting for international transactions, the operations of international firms, foreign exchange markets, comparisons of accounting standards in foreign countries and the procedures by which they and international standards are established. Integrates financial, managerial, and tax accounting in the conduct of international business. Prerequisites: Acct 4100, Acct 3120 and Acct 4130.

Acct 6160 Readings in Accounting (1-3) A directed study of selected accounting literature. May be repeated for a maximum of 6 semester hours. Prerequisite: Acct 3112.

Computer and Office Information Systems

Computer Information Systems

COMPUTER INFORMATION SYSTEMS Functional Major, B.S. in Business Administration Degree

(46 000534)

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						68	
CIS	1605	Microcomputer Application Software	2	Mgt	3325	Business Communications	3
CIS	2610	COBOL Programming	4	Mgt	3360	Production/Operations Mgt.	3
CIS	3605	Principles of Data Communication		Mkt	3405	Marketing Policy	3
		& Local Area Networking	2	*BLaw	2720	Legal Environment of Business	3
CIS	3620	Programming in C Language	3	Electives from the following			7
CIS	3630	Management Information Systems	3	CIS	3680	Systems Project	1-3
CIS	3650	Database Management Systems	3	CIS	3695	Intern. in Comp. Infor. Sys.	3-7
CIS	3660	Anlys. & Des. of Comp. Infor. Sys.	3	CIS	4600	Programming in	
CIS	3670	Adv. COBOL Programming	3			Generator Languages	2
CIS	3680	Systems Project	2	CIS	4620	Microcomputer Applications	3
CIS	4680	Client Server Computing	3	CIS	4635	Seminar in Bus. Comp. Appl.	3
*Acct	2101	Principles of Financial Acct.	3	CIS	4655	Software Engineering	3
*Acct	2102	Principles of Managerial Acct.	3	CIS	4665	Data Com. & Dist. Data Proc.	3
*Econ	1011	Principles of Economics	3	CIS	4667	Cont. Voice & Data Sys.	3
*Fin	2801	Business Statistics I	3	CIS	4675	Project Management	3
Fin	3801	Business Statistics II	3	CIS	4695	Adv. Prog. in C/C++	3
Fin	3850	Principles of Finance	3				
Mgt	3315	Management of Organizations	3				
MINOR NOT REQUIRED							
UNIVERSITY STUDIES REQUIREMENTS						48	
SpCm	1000	Div. I B (required)	3	Psy	1100	Div. II B or	
*Math	1111	Div. I C (required)	3	Soc	1800	Div. II B (required)	3
*CIS	1610	Div. II A (required)	2	ICap	4357	Div. III B (required)	3
*Econ	1010	Div. II B (required)	3				
ELECTIVES OUTSIDE OF THE HARMON COLLEGE OF BUSINESS ADMINISTRATION						8	
MINIMUM TOTAL						124	

*Students expecting to receive the B.S. in Business Administration Degree must seek admission to this program upon the completion of a minimum of 41 semester hours of credit including Acct 2101, Acct 2102, BLaw 2720, CIS 1610, Econ 1010, Econ 1011, Fin 2801, and Math 1111. See pages 152-153 for the Statement of Policy on Admission to a B.S. in Business Administration Degree program.

COMPUTER INFORMATION SYSTEMS Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)

(000535)

						Sem. Hours	
MINOR REQUIREMENTS						22	
CIS	1605	Microcomputer Application Software	2	CIS	3620	Programming in C Language	3
CIS	1610	Impact of Computer-Based Tech.	2	CIS	3670	Adv. COBOL Programming	3
CIS	2610	COBOL Programming	4	Acct	2101	Principles of Financial Acct.	3
CIS	3605	Principles of Data Communication		Acct	2102	Principles of Managerial Acct.	3
		& Local Area Networking	2				
UNIVERSITY STUDIES REQUIREMENTS (In the minor, CIS 1610 fulfills 2 s.h. of Div. II A)							

COMPUTER INFORMATION SYSTEMS, Associate in Science Degree

Inquiries about the status of this program should be directed to the chair of the Department of Computer Information Systems.

CIS 1600 Principles of Computer Information Systems (3)

Provides a working knowledge of computer information systems. Hands-on experience is gained in major microcomputer software packages including operating systems, word processing, spreadsheets, and databases.

CIS 1605 Microcomputer Application Software (2)

Provides experience with a microcomputer based operating system/environment as well as word processing and database applications.

CIS 1610 Impact of Computer-Based Technology (2)

Focuses on the synergistic relationship between humans

and computer technology in individual, organizational, and societal contexts. Students gain experience in the use of computer-based technologies for decision making and communication.

CIS 2605 Applications Development Using Visual Basic (3) Graphic User Interface (GUI) client server applications development and data processing using Visual Basic.

CIS 2610 COBOL Programming (4) Major emphasis on the developing of logical solutions to business problems. The development of programs on on-line terminals with job control and an overview of architecture of the latest IBM systems. Processing business data using COBOL (Common Business Oriented Language) on mainframe IBM systems. Prerequisites: CIS 1610 or CS 1110; and Math 1111 or a high school program including one unit of advanced algebra and one unit of geometry.

CIS 3605 Principles of Data Communications and Local Area Networking (2) Overview of the fundamental concepts needed to develop and work with a data communications system. Hardware, software, network topology, network design and implementation is covered with a particular emphasis on the application of theory to solving business data communication needs. Prerequisite: CIS 1610.

CIS 3612 Assembler Language Programming (3) Use of BAL (Basic Assembler Language) in solving computer programming problems. Prerequisite: CIS 2610 or CS 1110.

CIS 3620 Programming in C Language (3) Basic concepts of data representation, assembly language binary instructions, addressing and indexing. Study of the ANSI C programming language in business applications. Emphasis will be on business problem solving, system interface, and simple graphic implementation. Prerequisite: CIS 2610 or CS 1110.

CIS 3630 Management Information Systems (3) Emphasizes how general managers can participate in formulating data processing plans that support corporate goals. A working knowledge of systems analysis and design is covered to allow effective participation by information users. Covers what information systems resources are available and how those resources can be used to support the functional management areas. Prerequisites: CIS 1610, Acct 2102, Fin 2801 and MGT 3315.

CIS 3650 Database Management Systems (3) An in-depth treatment of relational database design and implementation. Programming is done using SQL-COBOL, IEF CASE tool, hierarchical database design and current trends are covered. Prerequisite: CIS 2610 or CS 1110.

CIS 3660 Analysis and Design of Computer Information Systems (3) Systems analysis and procedure writing, designing and maintaining business applications utilizing the latest integrated Computer Aided Software Engineering (CASE) products. Investigate hardware and software products. Prerequisite: CIS 3650.

CIS 3670 Advanced COBOL Programming (3) An extension of CIS 2610. Current version of COBOL is used. Other topics; DOS/VSE JCL, Utilities, VSAM, and CICS. Prerequisite: CIS 2610.

CIS 3680 Systems Project (1-3) An independent individual project to be completed by the student. May be repeated for a maximum of 5 semester hours. Prerequisites: CIS 3660 and CIS 3670.

CIS 3695 Internship in Computer Information Systems (3-9) Opportunity for students to gain theoretical

knowledge and practical application within a particular field of specialization. May not be taken last semester of senior year. Enrollment normally in 6 or 9 semester hours. May be repeated for a maximum of 18 semester hours.

Prerequisites: 60 semester hours and overall GPA 2.50 or above or permission of intern program Director.

CIS 4600 Programming in Generator Languages (2) Develops programming proficiency in applying contemporary generator languages, particularly RPG II and RPG III, to typical business situations. Special emphasis on using multi-file programming and file maintenance. Prerequisite: CIS 4630 or 3 semester hours of programming language credit.

CIS 4610 Special Projects (1-3) Special projects offerings in computer information systems. May be repeated for a maximum of 6 semester hours. Prerequisite: consent of instructor.

CIS 4620 Microcomputer Applications (3) Emphasis will be on current microcomputer hardware, operating system, and database management software. Applications will be developed using the operating system and the database software. Prerequisites: CIS 1610; and Math 1111 or a high school program including one unit of advanced algebra and one unit of geometry.

CIS 4625 Marketing Computer Technology* (3) A comprehensive introduction to marketing of computer technology for industrial and consumer users. The course will include techniques of market analysis, consumer consulting, and product development. Prerequisites: Mkt 4490 and CIS 4620.

*Not available for graduate credit.

CIS 4630 Data Processing in Business (3) Computer programming and system analysis procedures and techniques used in processing data. Computer uses and business applications are studied from the management viewpoint. Not open to students with credit in CIS 1600 or CIS 1605 or CIS 1610.

CIS 4635 Seminar in Business Computer Applications (2-3) Business applications and programming techniques will be studied and prepared for presentation and discussion. Prerequisite: CIS 4630 or at least one programming course.

CIS 4640 Contemporary Computer Programming and Business Systems (3) Comparison and application of two or three popular programming languages; systems analysis and procedure writing, flowcharting, designing, and maintaining business applications. Not open to computer information systems majors or minors.

CIS 4655 Software Engineering (3) An advanced course in the systematic approach to the specification, development, operation, maintenance, and retirement of software. Topics include formal specification tools, developmental strategies, software metrics, verification and validation techniques. Prerequisite: CIS 3660.

CIS 4665 Data Communication and Distributed Data Processing (3) A comprehensive introduction to the field of digital data communications. It provides an understanding of terminology, topology, protocol, and available systems network architecture. Prerequisite: 6 semester hours of programming courses.

CIS 4667 Contemporary Voice and Data Systems* (3) An in-depth study of the theory of telephony. Provides the student with tools to understand and manage a large voice and data communications network. Topics include Central

Office Switches, ISDN, Dial-Up and ISO-OSI. Prerequisite: CIS 4665.

CIS 4670 Advanced Computer Systems (2-3) An overview of CICS systems, interactive program development, checkpoints and restarts, systems case studies, and systems testing and implementation. Prerequisite: CIS 3660.

CIS 4675 Project Management (3) An advanced course in the planning and management of all phases of the computer information systems project, including the creation, execution, and monitoring of system project plans. Prerequisite: CIS 3660.

CIS 4680 Client Server Computing (3) In-depth study of client server computing including benefits, technological requirements, platforms and standards, planning and managing client server environments, application and systems software and key products. Prerequisites: CIS 3650 and CIS 3605.

CIS 4690 Advanced Systems Project (2-3) Independent study, analysis and development of a specific business computer application. May be repeated for a maximum of 6 semester hours. Prerequisite: CIS 4630 or at least one programming course.

CIS 4695 Advanced Programming in C/C++* (3) Advanced study of the ANSI C Programming Language and C++ programming constructs that improve upon C. Introduces object-oriented world with Objects, Classes, Operators and Friends. Prerequisite: CIS 3620.

*Not available for graduate credit.

CIS 5605 Technology Based Research and Quantitative Tools (3) Information gathering, storage, analysis, and communication as it relates to decision making in today's business environment. Prerequisites: undergraduate MBA background and admission to MBA program; must be taken concurrently with Econ 5005.

CIS 5630 Management Information Systems (3) Use of information technology for decision making and formulation of long- and short-term information systems plans. Working knowledge of systems analysis, design and development, understanding of conceptual and technical foundations and recent research issues. Prerequisites: admission to MBA program and consent of graduate advisor.

CIS 5650 Managing Corporate Information Systems (3) The principles and practice of managing corporate information systems, including acquisition, budgeting, development, and personnel issues.

CIS 5660 Legal Environment of Information Systems (3) An examination of jurisprudence influence and processes on contracts, acquisitions, and security in information systems area.

CIS 5669 Communications Network Management (3) In-depth treatment of planning, designing and managing communications networks; includes feasibility analysis, forecasting, optimizing using network management software. Prerequisite: admission to the Information Systems concentration in M.B.A. program.

CIS 6610 Readings in Computer Information Systems (1-3) Selected readings in data processing to extend student's understanding of the use of the computer in various business areas and his/her knowledge of current hardware and software in the field. May be repeated for a maximum of 6 semester hours. Prerequisite: CIS 4630 or equivalent.

Office Information Systems

BUSINESS EDUCATION Major, B.S. in Ed. Degree

(Certification to teach business education subjects in grades 9-12)

(41 000524)

						Sem. Hours	
MAJOR REQUIREMENTS						33	
BE&O	1510	Foundations of Administrative Management & Business Education	3	BE&O	4560	Infom. Design & Presentation	3
				Acct	2101	Principles of Financial Acct.	3
BE&O	1535	Word Processing I	3	Acct	2102	Principles of Managerial Acct.	3
BE&O	1536	Word Processing II	3	Mgt	3325	Business Communications	3
BE&O	3501	Office Technology	3	BLaw	2720	Legal Environment of Business	3
BE&O	3510	Desktop Publishing for Bus.	3				
BE&O	4550	Automated Office Management	3				
MINOR REQUIREMENTS						18-25	
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. III B)						45	
Secondary Education students must have one course in a physical or earth science and one in a biological science in Div. II A.							
SpCm	1000	Div. I B (required)	3	Hist	1350	Div. II B or	
Math	1111	Div. I C or		Hist	1351	Div. II B (required)	3
Math	1620	Div. I C (required)	3	Econ	1010	Div. II B (required)	3
CIS	1610	Div. II A (required)	2	PolS	1510	Div. II B (required)	3
				Psy	4230	Psy. of Adolescence	3
Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. of Div. II E.							
PROFESSIONAL EDUCATION REQUIREMENTS (see page 183)						28	
MINIMUM TOTAL						124	

BUSINESS EDUCATION Functional Major, B.S. in Ed. Degree

(Certification to teach business education subjects in grades 9-12)

(41 000525)

				Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS				39
BE&O	1510	Foundations of Administrative Management & Business Education	3	BE&O 4560 Infor. Design & Presentation 3
				Acct 2101 Principles of Financial Acct. 3
BE&O	1535	Word Processing I	3	Acct 2102 Principles of Managerial Acct. 3
BE&O	1536	Word Processing II	3	Mgt 3325 Business Communications 3
BE&O	3501	Office Technology	3	Mkt 3400 Principles of Marketing 3
BE&O	3510	Desktop Publishing for Bus.	3	BLaw 2720 Legal Environment of Business 3
BE&O	4550	Automated Office Management	3	BLaw 3721 Law of Business Transactions 3
MINOR NOT REQUIRED				
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. III B)				45
Secondary Education students must have one course in a physical or earth science and one in a biological science in Div. II A.				
SpCm	1000	Div. I B (required)	3	Hist 1350 Div. II B or
Math	1111	Div. I C or		Hist 1351 Div. II B (required) 3
Math	1620	Div. I C (required)	3	Econ 1010 Div. II B (required) 3
CIS	1610	Div. II A (required)	2	PolS 1510 Div. II B (required) 3
				Psy 4230 Psy. of Adolescence 3
Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. of Div. II E.				
PROFESSIONAL EDUCATION REQUIREMENTS (see page 183)				28
FREE ELECTIVES				12
MINIMUM TOTAL				124

BUSINESS EDUCATION Minor for a Bachelor's Degree

(Certification to teach Business Education in grades 5-9 with a middle school-junior high school major.

NOTE: See Director of Clinical Services and Certification.)

(000517)

				Sem. Hours
MINOR REQUIREMENTS				20
BE&O	1510	Foundations of Administrative Management & Business Education	3	BE&O 3501 Office Technology 3
				BE&O 3510 Desktop Publishing for Bus. 3
BE&O	1535	Word Processing I	3	CIS 1610 Impact of Computer-Based Tech. 2
BE&O	1536	Word Processing II	3	Econ 1010 Principles of Economics 3
UNIVERSITY STUDIES REQUIREMENTS (In the minor, CIS 1610 fulfills 2 s.h. of Div. II A; Econ 1010 fulfills 3 s.h. of Div. II B)				

OFFICE ADMINISTRATION Functional Major,

B.S. in Business Administration Degree

(46 000522)

				Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS				66
BE&O	1510	Foundations of Administrative Management & Business Education	3	*Econ 1011 Principles of Economics 3
				*Fin 2801 Business Statistics I 3
BE&O	1535	Word Processing I	3	Fin 3801 Business Statistics II 3
BE&O	1536	Word Processing II	3	Fin 3850 Principles of Finance 3
BE&O	3501	Office Technology	3	Mgt 3315 Management of Organizations 3
BE&O	3510	Desktop Publishing for Bus.	3	Mgt 3325 Business Communications 3
BE&O	3530	Automated Office Procedures	3	Mgt 3360 Production/Operations Mgt. 3
BE&O	4550	Automated Office Management	3	HRM 3920 Human Resource Management 3
BE&O	4560	Infor. Design & Presentation	3	Mkt 3405 Marketing Policy 3
*Acct	2101	Principles of Financial Acct.	3	*BLaw 2720 Legal Environment of Business 3
*Acct	2102	Principles of Managerial Acct.	3	BLaw 3721 Law of Business Transactions 3
CIS	3630	Management Information Systems	3	
MINOR NOT REQUIRED				
UNIVERSITY STUDIES REQUIREMENTS				48
SpCm	1000	Div. I B (required)	3	Psy 1100 Div. II B or
*Math	1111	Div. I C (required)	3	Soc 1800 Div. II B (required) 3
*CIS	1610	Div. II A (required)	2	ICap 4357 Div. III B (required) 3
*Econ	1010	Div. II B (required)	3	
ELECTIVES OUTSIDE OF THE HARMON COLLEGE OF BUSINESS ADMINISTRATION				8
FREE ELECTIVES				2
MINIMUM TOTAL				124

*Students expecting to receive the B.S. in Business Administration Degree must seek admission to this program upon the completion of a minimum of 41 semester hours of credit including Acct 2101, Acct 2102, BLaw 2720, CIS 1610, Econ 1010, Econ 1011, Fin 2801, and Math 1111. See pages 152-153 for the Statement of Policy on Admission to a B.S. in Business Administration Degree Program.

SECRETARIAL TRAINING, Associate in Science Degree**Secretarial Training Option (22 000530)**

					Sem. Hours	
FIRST YEAR REQUIREMENTS					30	
BE&O	1510	Foundations of Administrative Management & Business Education	3	Engl 1020	Composition I	3
BE&O	1535	Word Processing I	3	Math 1111	College Algebra	3
BE&O	1536	Word Processing II	3	Psy 1100	General Psychology	3
CIS	1610	Impact of Computer-Based Tech.	2	Hist 1350	History of the U.S. to 1877, 3 or	
Acct	2101	Principles of Financial Acct.	3	Hist 1351	History of the U.S. from 1877, 3 or	
Econ	1010	Principles of Economics	3	PolS 1510	American Government, 3	3
SECOND YEAR REQUIREMENTS					30	
BE&O	1550	Office Practicum	3	Acct 2101	Principles of Financial Acct.	3
BE&O	3501	Office Technology	3	Mgt 3325	Business Communications	3
BE&O	3510	Desktop Publishing for Bus.	3	BLaw 2720	Legal Environment of Business	3
BE&O	3530	Automated Office Procedures	3	Electives		9
MINIMUM TOTAL					60	

Secretarial Training--Legal Option (22 000531)

					Sem. Hours	
FIRST YEAR REQUIREMENTS					30	
BE&O	1510	Foundations of Administrative Management & Business Education	3	Math 1111	College Algebra	3
BE&O	1535	Word Processing I	3	Psy 1100	General Psychology	3
BE&O	1536	Word Processing II	3	Hist 1350	History of the U.S. to 1877, 3 or	
CIS	1610	Impact of Computer-Based Tech.	2	Hist 1351	History of the U.S. from 1877, 3 or	
Econ	1010	Principles of Economics	3	PolS 1510	American Government, 3	3
Engl	1020	Composition I	3	Electives		4
SECOND YEAR REQUIREMENTS					30	
BE&O	1550	Office Practicum	3	BE&O 3530	Automated Office Procedures	3
BE&O	2511	Legal Document Formatting & Transcription	3	Acct 2101	Principles of Financial Acct.	3
BE&O	2512	Legal Office Procedures & Tech.	4	Mgt 3325	Business Communications	3
BE&O	3501	Office Technology	3	BLaw 2720	Legal Environment of Business	3
BE&O	3510	Desktop Publishing for Bus.	3	LIS 2600	Introduction to Legal Research	2
MINIMUM TOTAL					60	

Business Education**BE&O 3240 Seminar in Vocational Student Organizations**

(3) Organizing, planning, and implementing activities involved in all vocational youth organizations.

BE&O 3241 Principles of Distributive Education (3) An introduction to the basic principles of distributive education.

BE&O 4240 Organization and Administration of Cooperative Education (3) Broad perspective of vocational cooperative education programs.

BE&O 4241 Coordination of Cooperative Education (2) Methods of teaching vocational office and distributive education. Majors in business and office education are not to take the course BE&O 4241 except as part of their graduate program.

BE&O 4242 Philosophy of Vocational Business Education (2) Past and current philosophy of vocational education. Majors in business and office education are not to take the course BE&O 4242 except as part of their graduate program.

BE&O 4243 Curriculum Construction for Business and Distributive Education (2) Development of vocational curriculum and teaching materials. Majors in business and office education are not to take the course BE&O 4243 except as part of their graduate program.

BE&O 4250 Business/Distributive Education Practicum (1-3) May be repeated for a maximum of 6 semester hours.

BE&O 4260 Special Topics in Business Education and Office Administration (1-3) Topics will be listed in appropriate course schedules. May be used to teach

specific microcomputer software or to cover other critical topics in business education and office administration as new technologies develop. Prerequisite: senior or graduate status.

BE&O 5200 Improvement of Instruction (2) Designed for teachers and prospective teachers of business and distributive education. Present methods of teaching leading to better organization and presentation of these courses in the secondary school. Will be offered on alternate years with subtitles--skills, basic business, and distributive education. Prerequisite: departmental consent.

BE&O 5231 Special Problems Business/Distributive Education (1-3) Designed to develop some aspect of business education or distributive education.

BE&O 5232 Adult Programs Business/Distributive Education (3) Overview of adult education; the curriculum; selecting, training and supervising adult teachers; counseling; preparing to teach adult classes; public relations and advisory committees.

BE&O 5235 Business, Distributive and Industrial Occupational Analysis (3) The techniques of job analysis and community occupational surveys to aid in developing supervisory and training techniques.

BE&O 5240 Seminar in Business Education (1-3)

Office Administration

BE&O 1510 Foundations of Administrative Management and Business Education (3) An overview of Business Education and Office Administration programs and course requirements. Exploration of careers. Emphasis on skills,

abilities, and aptitudes (language mechanics, personality inventories, and learning styles).

BE&O 1530 Keyboarding (2) Touch operation of alphabetic, numeric, and symbol keys found on most computer keyboards, word processors, and typewriters; introduction to document formatting.

BE&O 1532 Intermediate Typewriting (3) Primary emphasis on building speed and accuracy in touch typing. Tabulation, business letters, reports, centering, and arrangement of materials are included. May not be taken for credit by students who have more than one semester of high school typewriting. Prerequisite: BE&O 1530 or equivalent.

BE&O 1535 Word Processing I (3) A continuing emphasis on improvement of speed with accuracy and building production skill on business letters, forms, and reports using word processing software. Prerequisites: BE&O 1510 or concurrently and one unit of high school keyboarding or BE&O 1532 with a minimum grade of C or equivalent. Keyboarding speed of 35 wpm with 95 percent accuracy or higher on a 5-minute timed writing.

BE&O 1536 Word Processing II (3) Advanced word processing concepts and applications. Prerequisite: BE&O 1535 with a grade of C or higher.

BE&O 1550 Office Practicum (1-3) Practical supervised work experience for students enrolled in one-year certificate and two-year associate degree vocationally-funded programs. May be repeated for a maximum of 6 semester hours. Prerequisite: permission of vocational program supervisor.

BE&O 2511 Legal Document Formatting and Transcription (3) Formatting and production of legal documents, forms, and correspondence from longhand copy, typed copy, and recorded dictation. Emphasis is on legal terminology, purposes of documents, legal procedures, and word processing applications. Prerequisite: BE&O 1535.

BE&O 2512 Legal Office Procedures and Technology (4) Secretarial procedures for the legal office. Includes legal shorthand vocabulary and transcription; application of shorthand, transcription, typing, and word processing to secretarial procedures for the legal office; legal research; legal computer search programs. Prerequisites: BE&O 2511, and BE&O 1536 or concurrently.

BE&O 3501 Office Technology (3) Advanced work with current office technology software, electronic media management, business mathematics applications using the electronic calculator, and presentation graphics. Prerequisites: CIS 1600 or CIS 1610, and BE&O 1530 or one semester of high school keyboarding.

BE&O 3510 Desktop Publishing for Business (3) Desktop publishing concepts and applications. Prerequisite: BE&O 1536.

BE&O 3530 Automated Office Procedures (3) Practical secretarial problems in the automated office, including ethics of office technologies and procedures, traits and duties of an administrative assistant. High-level administrative assistant skills emphasized. Introduction to various software packages. Prerequisite: BE&O 3501 or BE&O 3510 or either concurrently.

BE&O 3535 Internship in Office Administration (3-9) Opportunity for students to gain theoretical knowledge and practical application within a particular field of specialization. May not be taken last semester of senior year. Enrollment normally in 6 or 9 semester hours. May be repeated for a maximum of 18 semester hours. Prerequisites: 60 semester hours and overall GPA 2.50 or above or permission of internship supervisor.

BE&O 4550 Automated Office Management (3) Office problems from the administrative point of view, with an emphasis on a systems approach to office automation, using lecture, case studies, current literature, and management decision making software.

BE&O 4560 Information Design and Presentation* (3) Study and application of information design and professional presentation for business and education using microcomputer software. Prerequisites: keyboarding ability and microcomputer proficiency (prior experience with word processing, database, and spreadsheet software).

*Not available for graduate credit.

Economics and Finance

ECONOMICS Major, B.A. Degree (42 000536)

		Sem. Hours
MAJOR REQUIREMENTS		30-33
Econ 1010	Principles of Economics	3
Econ 1011	Principles of Economics	3
Econ 3010	Intermediate Macroeconomics	3
Students using Econ 1010 to fulfill 3 s.h. of Div. II B of University Studies will take 21 elective hours in economics or related fields for a total of 33 s.h. in the major.		
MINOR REQUIREMENTS		18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (The Modern Language Requirement fulfills 3 s.h. of Div. II C)		42-45
If Econ 1010 is used to fulfill 3 s.h. of Div. II B, 42 s.h. of University Studies are required.		
Math 1111	Div. I C (required)	3
PolS 1510	Div. II B (required)	3
MODERN LANGUAGE REQUIREMENT (Refer to Bachelor's Degree Requirements section for fulfillment options.)		3-9
FREE ELECTIVES		12-31
MINIMUM TOTAL		124

ECONOMICS Major, B.S. Degree

(43 000537)

						Sem. Hours	
MAJOR REQUIREMENTS						33-38	
Econ	1010	Principles of Economics	3	Fin	2801	Business Statistics I	3
Econ	1011	Principles of Economics	3	Fin	3801	Business Statistics II	3
Econ	3010	Intermediate Macroeconomics	3	Econ	4015	Mathematical Economics I, 3 or	
Econ	3030	Intermediate Microeconomics	3	Math	1151	Calc. & Analytic Geometry I, 5	3-5
						Electives in economics or related fields	12-15
Students using Econ 1010 to fulfill 3 s.h. of Div. II B of University Studies will take 15 elective hours in economics or related fields for a total of 36 s.h. in the major.							
MINOR REQUIREMENTS						18-25	
UNIVERSITY STUDIES REQUIREMENTS						45-48	
If Econ 1010 is used to fulfill 3 s.h. of Div. II B, 45 s.h. of University Studies are required.							
Math	1111	Div. I C (required)	3	PolS	1510	Div. II B (required)	3
FREE ELECTIVES						13-28	
MINIMUM TOTAL						124	

ECONOMICS Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)

(000538)

						Sem. Hours
MINOR REQUIREMENTS						20
Econ	1010	Principles of Economics	3	Electives in economics		14
Econ	1011	Principles of Economics	3			
UNIVERSITY STUDIES REQUIREMENTS (In the minor, Econ 1010 fulfills 3 s.h. of Div. II B)						

FINANCE Functional Major, B.S. in Business Administration Degree

(46 000540)

								Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS								71
*Fin	2801	Business Statistics I	3	Mkt	3405	Marketing Policy	3	
Fin	3801	Business Statistics II	3	*BLaw	2720	Legal Environment of Business	3	
Fin	3850	Principles of Finance	3	BLaw	3721	Law of Business Transactions	3	
Fin	3861	Financial Management I	3	Acct	3111	Inter. Financial Accounting I, 3 or		
Fin	4813	Security Analysis	3	Acct	3120	Cost & Managerial Accounting, 3 or		
*Econ	1011	Principles of Economics	3	Acct	4115	Financial Statement Analysis, 3	3	
Econ	3020	Money & Banking	3	Electives from the following				12
Econ	3030	Intermediate Microeconomics	3	Fin	3862	Financial Management II	3	
Econ	4021	Money & Banking II	3	Fin	3880	Bank Management	3	
*Acct	2101	Principles of Financial Acct.	3	Fin	4803	Risk Management--Property &		
*Acct	2102	Principles of Managerial Acct.	3	Liability Insurance				3
CIS	1605	Microcomputer Application Software	2	Fin	4815	Investment Portfolio Admin.	3	
CIS	3630	Management Information Systems	3	Fin	4817	Managing Financial		
Mgt	3315	Management of Organizations	3	Derivatives				3
Mgt	3325	Business Communications	3	Fin	4820	International Finance	3	
Mgt	3360	Production/Operations Mgt.	3					
MINOR NOT REQUIRED								
UNIVERSITY STUDIES REQUIREMENTS								48
SpCm	1000	Div. I B (required)	3	Psy	1100	Div. II B or		
*Math	1111	Div. I C (required)	3	Soc	1800	Div. II B (required)	3	
*CIS	1610	Div. II A (required)	2	ICap	4357	Div. III B (required)	3	
*Econ	1010	Div. II B (required)	3					
ELECTIVES OUTSIDE OF THE HARMON COLLEGE OF BUSINESS ADMINISTRATION								5
MINIMUM TOTAL								124

*Students expecting to receive the B.S. in Business Administration Degree must seek admission to this program upon the completion of a minimum of 41 semester hours of credit including Acct 2101, Acct 2102, BLaw 2720, CIS 1610, Econ 1010, Econ 1011, Fin 2801, and Math 1111. See pages 152-153 for the Statement of Policy on Admission to a B.S. in Business Administration Degree program.

FINANCE Minor for a Bachelor's Degree
 (Central does not confer teacher certification for this minor)
 (000541)

					Sem. Hours	
MINOR REQUIREMENTS					24	
Fin	2801	Business Statistics I	3	Acct	2101 Principles of Financial Acct.	3
Fin	3850	Principles of Finance	3	Acct	2102 Principles of Managerial Acct.	3
Fin	3861	Financial Management I	3	Math	1111 College Algebra	3
Fin	4813	Security Analysis	3	Math	1131 Calculus for Business & Econ.	3
UNIVERSITY STUDIES REQUIREMENTS (In the minor, Math 1111 fulfills 3 s.h. of Div. I C)						

PERSONAL FINANCIAL PLANNING Minor for a Bachelor's Degree
 (Central does not confer teacher certification for this minor)
 (000546)

					Sem. Hours	
MINOR REQUIREMENTS					18	
Fin	3811	Investments	3	Fin	4805 Adv. Personal Financial Planning	3
Fin	4802	Life & Health Insurance	3	Acct	3130 Introduction to Income Tax	3
Fin	4804	Employee Benefits & Retirement Planning	3	Acct	4136 Estate Planning	3

Economics

Econ 1010 Principles of Economics (3) An introduction to principles underlying the operation of modern industrial countries. Special attention is given to the determinants of income and employment.

Econ 1011 Principles of Economics (3) An introduction to the functioning of a market economy. Emphasis is on behavior of consumers and business firms and the resulting allocation of resources and distribution of income.

Econ 2000 Economic Aspects of Current Social Issues (2) Contemporary economic issues of topical concern. Basic tools for analysis are presented. Not available for those with credit in Econ 1010 and/or Econ 1011 or their equivalents.

Econ 2005 Economic Analysis (3) The theoretical foundations of macro- and microeconomic analysis and policy application. Includes national income, stabilization, growth, pricing, and international economics. Not available to those with credit in Econ 1010 and Econ 1011 or equivalent.

Econ 3010 Intermediate Macroeconomics (3) Develop various theoretical frameworks for studying the forces affecting income, employment, and output in the economic system of the United States. Attention is given to the impact that government and other countries may have on these variables. Prerequisite: Econ 1010.

Econ 3013 Public Finance (3) The role of government in the modern mixed economy with emphasis on the impact of tax and expenditure policies on resource allocation and income distribution. Prerequisite: Econ 1011.

Econ 3020 Money and Banking (3) Money and banking structures including the Federal Reserve System and how it affects the economy. Monetary and National Income Theory are used to analyze economic policy. Prerequisite: Econ 1010.

Econ 3030 Intermediate Microeconomics (3) Conventional theory of consumption, production, pricing, and resource allocation. Prerequisite: Econ 1011.

Econ 3035 Internship in Economics (3-9) Opportunity for students to gain theoretical knowledge and practical application within a particular field of specialization. May not be taken last semester of senior year. Enrollment normally in 6 or 9 semester hours. May be repeated for a maximum of 18 semester hours. Prerequisites: 60 semester hours and overall GPA 2.50 or above or permission of internship supervisor.

Econ 3065 Labor Economics (3) Survey of the labor force, wage and employment theories, economic insecurity including unemployment, trade unionism and collective bargaining from the standpoint of public policy. Prerequisites: Econ 1010 and Econ 1011.

Econ 4010 International Economics (3) Principles underlying international trade and finance and analysis of current problems and related policies. Prerequisites: Econ 1010 and Econ 1011.

Econ 4015 Mathematical Economics I (3) A survey of mathematics including theory of sets, calculus, differential and difference equations, linear programming, matrices, and their application in economics. Prerequisites: Econ 1011 and Fin 2801 or Math 1131 or Math 1151.

Econ 4016 Mathematical Economics II (2) A continuation and more advanced study in the application of mathematical tools in economics. Prerequisite: Econ 4015.

Econ 4021 Money and Banking II (3) An analytic study of financial institutions, financial markets, and monetary policy. Prerequisite: Econ 3020.

Econ 4030 Directed Studies in Economics (1-3) Intensive study of significant economic topics. May be repeated for a maximum of 3 semester hours.

Econ 4040 History of Economic Thought (3) Classical economists and the development of economic thought from the mercantilist period through the development of present thought. The course aims at establishing a synthesis of evolving doctrines which have become the basis of currently accepted economic theory. Prerequisite: Econ 1011.

Econ 4044 Economic Development (3) Common problems, development theories, and policies related to less developed countries. Prerequisites: Econ 1011 and Econ 3010.

Econ 4050 Comparative Economic Systems (3) Analysis of alternate patterns of economic control, planning, and market structures. The experience of British socialism, American capitalism, and Soviet-type central planning is emphasized.

Econ 4052 Regional and Urban Economics (3) Geographic regions and urban areas as economic systems with emphasis on location theory and economic policy in the regional/urban environments. Prerequisite: Econ 1011 or Econ 2000.

Econ 4070 Industrial Organization (3) An analysis of selected economic problems of current interest dealing primarily with the structure of American industry, with

emphasis on the conduct and performance of large firms.

Prerequisite: Econ 1011.

Econ 4080 Econometrics I (3) Mathematical techniques and problems used in the quantitative approach to economic theory. Prerequisites: Econ 3030, Econ 3010 and statistics.

Econ 5001 Macroeconomics (3) A continuation of aggregate economics, with emphasis upon measurement, growth, and fluctuation of national income. Prerequisite: Econ 3010.

Econ 5002 Microeconomics (3) Price theory and the theory of the firm. The decision-making units in our economy and their market relationship. Prerequisite: Econ 3030.

Econ 5005 Technology Based Research and Quantitative Tools (3) Information gathering, storage, analysis, and communication as it relates to decision making in today's business environment. Prerequisites: undergraduate MBA background and admission to MBA program; must be taken concurrently with CIS 5605.

Econ 5010 National Economic Perspectives (3) Provides beginning MBA students with an introduction to the structure, operation, and performance of the U.S. economy. Introduces economic concepts to be integrated into advanced study of business and management. Not available for credit on Economics, Master of Arts program.

Econ 5043 Research Projects in Economics (1-3) Selected research projects in economics under the guidance and supervision of the graduate staff in economics.

Econ 5060 Economics of Transportation (3) Structure and operation of our economy, its relationship to the transportation field, as well as to the social and political arena.

Econ 5061 Managerial Economics (3) The application of economic analysis and models to business decisions involving demand, cost, pricing, and uncertainty. Prerequisites: Math 1131; admission to Economics, Master of Arts degree program, or admission to MBA program; and consent of graduate advisor.

Econ 5080 Econometrics II (3) A continuation of Econ 4080. A survey of econometrics literature is included. Prerequisite: Econ 4080.

Econ 5085 Readings in Economics (1-3) Intensive directed readings in economics designed to improve the graduate student's familiarity and understanding of the specific areas of interest. May be repeated for a maximum of 3 semester hours.

Econ 5090 Seminar in Applied Economics (3) Various topics in a given field of economics such as monetary, labor, public finance, urban and regional. Topic in any given semester will be prearranged according to the demands of students and availability of faculty. May be repeated for a maximum of 6 semester hours. Prerequisites: Econ 5001 or Econ 5002 or concurrently.

Econ 6099 Thesis (4-6)

Finance

Fin 1820 Personal Finance (3) For the student who desires information on managing his/her own personal income.

Fin 2801 Business Statistics I (3) Emphasizes the statistical analysis of business and economic data used in business and how this analysis aids in controlling operations and in making sound business decisions. Prerequisite: Math 1111 or equivalent.

Fin 3801 Business Statistics II (3) Emphasizes the statistical analysis of business and economic data and how

this analysis aids in controlling operations and in making sound business decisions. Prerequisite: Fin 2801.

Fin 3805 Real Estate Principles and Practices (3) Acquaints the student with the basic principles of real estate activity, examines some of the legal aspects, and inquires into the current practices in the field of real estate.

Fin 3811 Investments (3) A survey of the variety of investment opportunities available in the modern American market place. Not open to students with a major or minor in finance.

Fin 3835 Internship in Finance (3-9) Opportunity for students to gain theoretical knowledge and practical application within a particular field of specialization. May not be taken last semester of senior year. Enrollment normally in 6 or 9 semester hours. May be repeated for a maximum of 18 semester hours. Prerequisites: 60 semester hours and overall GPA 2.50 or above or permission of internship supervisor.

Fin 3850 Principles of Finance (3) An introduction to corporate financial decision-making, including financial analysis, working capital management, capital budgeting, long-term financing, and international finance. Prerequisites: Acct 2102 or Acct 2100, Fin 2801, and either admission to B.S. in Business Administration degree program or a declared minor in finance.

Fin 3861 Financial Management I (3) Organization goals and tools of financial management. Analysis of case materials illustrating problems encountered by firms of various sizes and operating characteristics. Examination of adjustment of financial policy of business to changing conditions. Prerequisite: Fin 3850.

Fin 3862 Financial Management II (3) Application of the theories and tools of financial decision making and control to case problems and business problem simulations. Prerequisite: Fin 3861.

Fin 3880 Bank Management (3) Study and analysis of the problems of management of commercial banks with an emphasis on investment and loan portfolios. Prerequisite: Fin 3850.

Fin 4801 Social Insurance (3) The application of the social security program, unemployment insurance, workers compensation, welfare, veterans programs, the Railroad Retirement Act, civil service program, and government pension programs plus new programs for compensating crime victims and the supplementary security income programs for the aged, blind, and disabled. Prerequisite: Math 1111 or equivalent.

Fin 4802 Life and Health Insurance (3) The nature and importance of life and health insurance risks. Topics will include the concept of human life value, types and uses of life and health insurance, and various annuity contracts in treating these risks. The perspective is that of broad-based financial planning from both the individual's and the business' viewpoints.

Fin 4803 Risk Management--Property and Liability Insurance (3) Insurance principles and practices of risk management applying to property and liability insurance. The study of direct and consequential losses to all property and liability insurance. Prerequisite: Fin 3850 or declared functional major in Actuarial Science and Mathematics.

Fin 4804 Employee Benefits and Retirement Planning (3) A planning perspective is developed for major employee benefit arrangements, retirement plan provisions, pension design, tax implications and suitability for different businesses.

Fin 4805 Advanced Personal Financial Planning (3) Develops ability to synthesize financial planning knowledge in order to analyze complex client case scenarios. Emphasis on characteristics of the financial planning

profession. Prerequisites: Acct 4136, Fin 3811, Fin 4802 and Fin 4804; or concurrently.

Fin 4813 Security Analysis (3) Classification and analysis of securities, markets, and industries. Formulation of investment policy for institutions and aggressive personal investors. Not available for credit to students who received credit in Fin 3811. Prerequisites: Fin 3801 or concurrently and Fin 3850.

Fin 4815 Investment Portfolio Administration (3) Application of security analysis and investment decision concepts to case problems and computer simulated investment situations. Additional readings in selected portfolio management theories. Prerequisite: Fin 4813.

Fin 4817 Managing Financial Derivatives (3) Applied analysis of pricing and hedging techniques for managing investments in derivative contracts (forward, futures, options, and swap contracts) involving the application of concepts and strategies to case problems and computer simulations. Prerequisite: Fin 4813 or concurrently or consent of instructor.

Fin 4820 International Finance (3) An intensified study of international banking and finance as it relates to international trade and the multinational corporation and the financing of imports and exports. Prerequisite: Fin 3850 or equivalent.

Fin 4830 Directed Readings in Finance (3) Intensive study of significant financial topics.

Fin 5800 Managerial Finance (3) Topics covered will include capital expenditures, capital structure, cost of capital, dividends, mergers, concept of income maintenance, and working capital. Cases in managerial finance and individual readings will supplement textbook learning. Prerequisites: Math 1131, Fin 2801, admission to MBA program and consent of graduate advisor.

Fin 5805 Controllership and the Treasury Function (3)

Advanced managerial accounting and finance topics necessary to compete in a global market place.

Prerequisites: undergraduate MBA background and admission to MBA program; must be taken concurrently with Acct 5105.

Fin 5810 Advanced International Finance (3)

Comprehensive study of finance in an international setting. Topics include financial management in a multinational corporation, international trade, international investments and global financial markets.

Fin 5820 Seminar in Finance (3) The financial problems of profit seeking corporations are examined. Consideration of such matters as operations, obtaining capital, and reorganization. Prerequisite: 6 semester hours credit in finance.

Fin 5830 Financial Institutions and Markets (3) In-depth study of managing risk and return in contemporary financial institutions with special emphasis on methods and markets through which these risks are managed. Prerequisites: Fin 3801 and either Fin 3850 or Fin 5800.

Fin 5840 Investment Analysis and Practice (3) Theoretical and applied analysis of securities and derivatives, and valuation, construction and risk hedging of portfolios.

Involves use of computer software, supplemental readings, and cases. Prerequisites: Fin 3801 and either Fin 3850 or Fin 5800.

Fin 5870 Quantitative Methods for Business Decisions (3)

Some of the quantitative methods used for business decisions, including Bayesian Statistics, the payoff table, and strategies in business. Prerequisite: Fin 2801.

Fin 6860 Readings in Finance (1-3) Selected readings in finance; e.g., financial management, commercial banking, investment banking, or investment. May be repeated for a maximum of 6 semester hours. Prerequisite: 6 semester hours credit in finance.

Management

MANAGEMENT Functional Major, B.S. in Business Administration Degree

(46 000543)

						Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS						56
Mgt	3315	Management of Organizations	3	CIS	3630	Management Information Sys. 3
Mgt	3320	Organizational Behavior	3	*Econ	1011	Principles of Economics 3
Mgt	3325	Business Communications	3	Econ	3065	Labor Economics 3
Mgt	3360	Production/Operations Mgt.	3	*Fin	2801	Business Statistics I 3
Mgt	4310	Total Quality Management	3	Fin	3801	Business Statistics II 3
Mgt	4320	Management Theory & Application	3	Fin	3850	Principles of Finance 3
HRM	3920	Human Resource Management	3	Mkt	3405	Marketing Policy 3
*Acct	2101	Principles of Financial Acct.	3	Mkt	4460	International Marketing 3
*Acct	2102	Principles of Managerial Acct.	3	*BLaw	2720	Legal Environment of Business . . 3
CIS	1605	Microcomputer Appl. Software	2			
MINOR NOT REQUIRED						
UNIVERSITY STUDIES REQUIREMENTS						48
SpCm	1000	Div. I B (required)	3	Psy	1100	Div. II B or
*Math	1111	Div. I C (required)	3	Soc	1800	Div. II B (required) 3
*CIS	1610	Div. II A (required)	2	ICap	4357	Div. III B (required) 3
*Econ	1010	Div. II B (required)	3			
ELECTIVES OUTSIDE OF THE HARMON COLLEGE OF BUSINESS ADMINISTRATION						8
FREE ELECTIVES						12
MINIMUM TOTAL						124

*Students expecting to receive the B.S. in Business Administration Degree must seek admission to this program upon the completion of a minimum of 41 semester hours of credit including Acct 2101, Acct 2102, BLaw 2720, CIS 1610, Econ 1010, Econ 1011, Fin 2801, and Math 1111. See pages 152-153 for the Statement of Policy on Admission to a B.S. in Business Administration Degree program.

HUMAN RESOURCE MANAGEMENT Functional Major, B.S. in Business Administration Degree

(46 000544)

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						59	
Mgt	3315	Management of Organizations	3	CIS	3630	Management Information Systems	3
Mgt	3320	Organizational Behavior	3	Mkt	3405	Marketing Policy	3
Mgt	3325	Business Communications	3	*BLaw	2720	Legal Environment of Business	3
Mgt	3360	Production/Operations Mgt.	3	BLaw	4740	Labor Legislation	3
HRM	3920	Human Resource Management	3	BLaw	4750	Collective Bargaining	3
HRM	4930	Compensation & Benefits	3	*Econ	1011	Principles of Economics	3
HRM	4960	Employment & Development	3	Econ	3065	Labor Economics	3
*Acct	2101	Principles of Financial Acct.	3	*Fin	2801	Business Statistics I	3
*Acct	2102	Principles of Managerial Acct.	3	Fin	3801	Business Statistics II	3
CIS	1605	Microcomputer Application Software	2	Fin	3850	Principles of Finance	3
MINOR NOT REQUIRED							
UNIVERSITY STUDIES REQUIREMENTS						48	
SpCm	1000	Div. I B (required)	3	Psy	1100	Div. II B or	
*Math	1111	Div. I C (required)	3	Soc	1800	Div. II B (required)	3
*CIS	1610	Div. II A (required)	2	ICap	4357	Div. III B (required)	3
*Econ	1010	Div. II B (required)	3				
ELECTIVES OUTSIDE OF THE HARMON COLLEGE OF BUSINESS ADMINISTRATION						5	
FREE ELECTIVES						12	
MINIMUM TOTAL						124	

*Students expecting to receive the B.S. in Business Administration Degree must seek admission to this program upon the completion of a minimum of 41 semester hours of credit including Acct 2101, Acct 2102, BLaw 2720, CIS 1610, Econ 1010, Econ 1011, Fin 2801, and Math 1111. See pages 152-153 for the Statement of Policy on Admission to a B.S. in Business Administration Degree program.

AGRICULTURE-BUSINESS Functional Major, B.S. Degree

See requirements as outlined in the Department of Agriculture.

MANAGEMENT Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)

(000510)

						Sem. Hours	
MINOR REQUIREMENTS						22	
Mgt	3315	Management of Organizations	3	Acct	2101	Principles of Financial Acct.	3
Mgt	3320	Organizational Behavior	3	CIS	1605	Microcomputer Appl. Software	2
Mgt	3325	Business Communications	3	CIS	1610	Impact of Computer-Based Tech.	2
HRM	3920	Human Resource Management	3	Econ	1010	Principles of Economics	3
UNIVERSITY STUDIES REQUIREMENTS (In the minor, CIS 1610 fulfills 2 s.h. of Div. II A; Econ 1010 fulfills 3 s.h. of Div. II B)							

Mgt 1300 Introduction to Business (3) Emphasizes the traditional facets of business (its environment, organization, and basic business functions) as well as the social and physical climate in which business, industry, and government operate. May not be taken for credit by students who have completed in excess of 12 semester hours of College of Business and Economics courses.

Mgt 3310 Principles of Management (3) Provides an intensive examination of the basic fundamentals of organization underlying the solution of management problems. Available only to nonbusiness majors.

Mgt 3315 Management of Organizations (3) An examination of the theory and practices of managing organizations, including planning, organizational theory, human behavior, and control. Prerequisites: Acct 2101 and Econ 1010. Available only to business majors.

Mgt 3320 Organizational Behavior (3) The organization as a social system with particular emphasis on the interpersonal relations between participants in that system. Prerequisite: Mgt 3315.

Mgt 3325 Business Communications (3) Improves the student's ability to plan and strategically write letters, memos, proposals, and reports and improve oral and interpersonal communication skills. Both listening and

speaking skills will be developed through formal presentations, class discussions, and group work.

Mgt 3335 Internship in Management (3-9) Opportunity for students to gain theoretical knowledge and practical application within a particular field of specialization. May not be taken last semester of senior year. Enrollment normally in 6 or 9 semester hours. May be repeated for a maximum of 18 semester hours. Prerequisites: 60 semester hours and overall GPA 2.50 or above or permission of internship supervisor.

Mgt 3360 Production/Operations Management (3) Managerial analysis of problems common to operations within a complex organization. Emphasis upon planning, control, and decision-making. Prerequisites: Mgt 3315 and Fin 2801.

Mgt 3370 Purchasing and Materials Management (3) Emphasizes the buyer's point of view of the industrial interface. Topics include: purchasing, inventory control, receiving, stores, production control, traffic and materials handling. Prerequisite: Mgt 3360.

Mgt 4300 Health Care Administration (3) Management concepts, tools, and techniques for effective administration of all types of health care facilities. Prerequisite: Mgt 3310 or Mgt 3315 or graduate standing.

Mgt 4303 Seminar in Business and Society (3) Research and analysis of problem factors emerging from our social institutions, with emphasis upon their concomitant impact upon business organizations and management. Prerequisite: Mgt 3320 or HRM 3920.

Mgt 4310 Total Quality Management* (3) Familiarizes students with the basic principles and methods associated with total quality management (TQM). Shows how these principles and methods have been put into effect in a variety of organizations. Illustrates the relationships between TQM principles and the theories and models studied in management. Prerequisite: Mgt 3360. *Not available for graduate credit.

Mgt 4315 Small Business Consulting* (3) Application of functional knowledge to identify, research, and develop solutions to problems of operating organizations. Prerequisite: senior standing, admission to the B.S. in Business Administration degree program, a 3.0 cumulative grade-point average, and approval of the Small Business Institute Director.

Not available for graduate credit.

Mgt 4320 Management Theory and Application (3) Learning and assessment of professional managements skills. Among the skills developed and assessed are goal setting, delegation, operational and project planning, subordinate development, team building, and performance monitoring. Prerequisite: last semester senior management major or consent of department chair.

Mgt 4350 Special Projects in Management (1-3) Advanced course in management theory, practice, methods, and strategies taught on an individual or group basis to advanced management students and graduate students. May be repeated for a maximum of 6 semester hours. Prerequisites: all preadmission courses or MBA background requirements, Mgt 3315, and Department Chair's approval with adequate preparation in area to be studied.

Mgt 5300 Seminar in Administrative Practices (3) The case method of approach in dealing with the personnel problems encountered on all levels of management.

Mgt 5305 Strategic Management and Marketing (3) Value-based integrated working knowledge of strategic management and marketing processes with emphasis on development of thinking, communicating and interacting skills in a global market place. Prerequisites: CIS 5605, Econ 5005, Acct 5105 and Fin 5805; must be taken concurrently with Mkt 5405.

Mgt 5310 Seminar in Management (3) Advanced problems in managerial functions, organizational theory, and group dynamics.

Mgt 5320 Organization Theory and Behavior (3) An analysis of managerial functions and processes and their cause/effect relationship to organizational theory and behavior. Assigned readings, case analysis and selected research projects under the instructor's guidance and supervision. Descriptive literature search and prescriptive project presentation. Prerequisites: admission to MBA program and consent of graduate advisor.

Mgt 5325 Managerial Communication (3) Communication in managerial situations, including ethics, oral presentations, written messages and reports, communication audits, group dynamics and organizational communication. Prerequisites: admission to MBA program and consent of graduate advisor.

Mgt 5340 Research Methods (3) Develops the student's ability to use analytic (qualitative and quantitative) and writing skills in applying the scientific method of behavioral theory and research. Research project requires selection

of research question, literature review, design, primary data collection and analysis, inference, implications, and written and oral presentation of results. Prerequisites: Math 1131 and Fin 2801 (or background in inferential statistics and regression analysis).

Mgt 5350 Special Problems in Management (1-3) Individual work under supervision of a staff member. Problems may be undertaken in any phase of business.

Prerequisite: adequate preparation in the area to be studied.
Mgt 5355 MBA Studies (3) Develops student ability to apply managerial skills to specific business issues. Integration of skills and knowledge across management-related disciplines. Topic will vary with student needs and resources available. Prerequisites: admission to MBA program and consent of graduate advisor.

Mgt 5360 Operations Management Seminar (3) Planning and design of operating systems, including layout, coordination, scheduling and balancing of the factors of production and quality. Selected applications of quantitative techniques to production system problem areas. Contemporary trends in research and development, automation and decision making, and quality control. Prerequisites: admission to MBA program and consent of graduate advisor.

Mgt 5390 Internship in Business (3, 6) Opportunity for students to gain theoretical knowledge and practical application in the student's field of specialization. Employment must be above entry level for graduate credit and must be approved by the Harmon College of Business Administration Director of Graduate Programs. May be repeated for a maximum of 6 semester hours. Prerequisite: overall graduate GPA 3.00.

Mgt 6305 Strategic Management (3) Capstone course in MBA program, requiring advanced proficiency in integrating highly quantifiable functional analysis with scenario construction which includes expert value judgment on qualitative factors, e.g., ethical and multicultural issues. Builds on previous work in the MBA program as well as on professional experience. Uses case approach and readings. Prerequisite: must be taken in the last semester of enrollment in the MBA program.

Mgt 6330 Readings in Management (1-3) Selected readings in group dynamics, communications, decision-making theory, and managerialism and its economic justification. May be repeated for a maximum of 6 semester hours. Prerequisite: Mgt 3315 or equivalent.

Mgt 6340 Thesis (1-3)

Integrative Studies Capstone

ICap 4357 Business Policy* (3) Capstone course requiring integration of business functional knowledge using conceptual, communication, interpersonal, and technical skills applied to environmental analysis and strategic management. Case method is used. Prerequisites: all preadmission courses, Mgt 3315, Mgt 3325, Mkt 3405, Fin 3850, and senior standing.

*Not available for graduate credit.

Human Resource Management

HRM 3920 Human Resource Management (3) Employment, training and development, employee and labor relations, compensation and benefits, health, safety and security, and personnel research. Prerequisite: Mgt 3310 or Mgt 3315 or equivalent.

HRM 4930 Compensation and Benefits (3) Concepts, models, theories, and application of processes and systems of employee compensation and benefits within organizations. Prerequisite: HRM 3920.

HRM 4960 Employment and Development (3) Concepts, models, theories, and application of human resource planning, employment, and training and development. Prerequisite: HRM 3920.

HRM 4990 Problems in Human Resource Management (3) An integrated approach to the administration of the human resource function in various types of organization settings through the use of the case and incident methods. Prerequisite: HRM 3920.

Marketing and Legal Studies

MARKETING Functional Major, B.S. in Business Administration Degree

(46 000511)

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						59	
Mkt	3405	Marketing Policy	3	Fin	3801	Business Statistics II	3
Mkt	3430	Personal Selling	3	Fin	3850	Principles of Finance	3
Mkt	3480	Consumer Behavior	3	Mgt	3315	Management of Organizations	3
Mkt	4460	International Marketing	3	Mgt	3325	Business Communications	3
Mkt	4470	Marketing Research	3	Mgt	3360	Production/Operations Mgt.	3
Mkt	4490	Marketing Management	3	Electives from the following			6
*BLaw	2720	Legal Environment of Business	3	Mkt	3410	Retail Management	3
*Acct	2101	Principles of Financial Acct.	3	Mkt	3420	Principles of Advertising	3
*Acct	2102	Principles of Managerial Acct.	3	Mkt	4420	Sales Management	3
CIS	1605	Microcomputer Application Software	2	Mkt	4430	Marketing Distribution	3
CIS	3630	Management Information Systems	3	Mkt	4440	Seminar in Marketing	3
*Econ	1011	Principles of Economics	3	Mkt	4450	Promotional Strategy	3
*Fin	2801	Business Statistics I	3				
MINOR NOT REQUIRED							
UNIVERSITY STUDIES REQUIREMENTS						48	
SpCm	1000	Div. I B (required)	3	Psy	1100	Div. II B or	
*Math	1111	Div. I C (required)	3	Soc	1800	Div. II B (required)	3
*CIS	1610	Div. II A (required)	2	ICap	4357	Div. III B (required)	3
*Econ	1010	Div. II B (required)	3				
ELECTIVES OUTSIDE OF THE HARMON COLLEGE OF BUSINESS ADMINISTRATION						8	
FREE ELECTIVES						9	
MINIMUM TOTAL						124	

*Students expecting to receive the B.S. in Business Administration Degree must seek admission to this program upon the completion of a minimum of 41 semester hours of credit including Acct 2101, Acct 2102, BLaw 2720, CIS 1610, Econ 1010, Econ 1011, Fin 2801, and Math 1111. See pages 152-153 for the Statement of Policy on Admission to a B.S. in Business Administration Degree program.

MARKETING Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)
(000512)

						Sem. Hours	
MINOR REQUIREMENTS						22	
Mkt	3405	Marketing Policy	3	Econ	1010	Principles of Economics	3
Mkt	3430	Personal Selling	3	Econ	1011	Principles of Economics	3
Mkt	3480	Consumer Behavior	3	Mkt	3410	Retail Management, 3 or	
CIS	1605	Microcomputer Application Software	2	Mkt	3420	Principles of Advertising, 3	3
CIS	1610	Impact of Computer-Based Tech.	2				
UNIVERSITY STUDIES REQUIREMENTS (In the minor, CIS 1610 fulfills 2 s.h. of Div. II A; Econ 1010 fulfills 3 s.h. of Div. II B)							

BUSINESS ADMINISTRATION Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)
(000545)

						Sem. Hours
MINOR REQUIREMENTS						18-19
Acct	2101	Principles of Financial Accounting, 3 or		Elective(s) from the following		3-4
Acct	2100	Survey of Accounting, 3	3	CIS	1600 Principles of Computer	
Econ	1010	Principles of Economics	3		Information Systems	3
Mgt	1300	Introduction to Business	3		or	
Mgt	3310	Principles of Management, 3 or		CIS	1605 Microcomputer Application	
Mgt	3315	Mgt. of Organizations, 3	3		Software	2
*Mkt	3400	Principles of Marketing	3	CIS	1610 Impact of Computer-Based	
					Technology	2

*Mkt 3405 can substitute for Mkt 3400.
UNIVERSITY STUDIES REQUIREMENTS (In the minor, if elected, CIS 1610 fulfills 2 s.h. of Div. II A; Econ 1010 fulfills 3 s.h. of Div. II B)

Mkt 1400 Orientation to Marketing (1) Orientation to the field of marketing. Available for those with less than 75 hours and no prior credit in Mkt 3405 or equivalent. Counts as a free elective.

Mkt 3400 Principles of Marketing (3) Methods used in determining the needs and desires of consumers and translating these findings into products of a suitable nature. Methods used in getting these products into the hands of the consumer. Basic marketing class for nonbusiness majors. Not available to students with prior credit in Mkt 3405 and may not be used as a marketing elective.

Mkt 3405 Marketing Policy (3) A comprehensive study of marketing theory and concepts and the application of these ideas in modern organizations by professionally trained managers. First course in marketing sequence for marketing functional majors and minors, and marketing foundation course for the business core requirement of B.S. in Business Administration degree students. May not be used as a marketing elective. Prerequisites: Econ 1010, Econ 1011 and 60 semester hours of college credit.

Mkt 3410 Retail Management (3) The initial considerations and decisions for establishing and managing a retail store. Prerequisite: Mkt 3400 or Mkt 3405.

Mkt 3420 Principles of Advertising (3) Advertising purposes and procedures covering primarily the point of view of the advertising manager. Study of proper appeals, copy preparation, layout, and media. Prerequisite: Mkt 3400 or Mkt 3405 or Agri 3120.

Mkt 3430 Personal Selling (3) Techniques involved in personal selling. Prerequisite: Mkt 3400 or Mkt 3405 or Agri 3120.

Mkt 3435 Internship in Marketing (3-9) Opportunity for students to gain theoretical knowledge and practical application within a particular field of specialization. May not be taken last semester of senior year. May not be used for the required marketing electives. May be repeated for a maximum of 18 semester hours. Prerequisites: admission to B.S. in Business Administration, Mkt 3405 and 2.50 overall GPA.

Mkt 3480 Consumer Behavior (3) The application of knowledge from the behavioral sciences to the study, analysis, and interpretation of consumer buying habits and motives. Individual, group, and cultural influences on consumer preferences and purchasing patterns are emphasized. Prerequisite: Mkt 3400 or Mkt 3405.

Mkt 4420 Sales Management (3) Management aspects of selling with emphasis on the role of the supervisor in the sales field. Prerequisites: Mkt 3405; admission to B.S. in

Business Administration for undergraduate students or department chair approval for graduate students.

Mkt 4430 Marketing Distribution (3) Methods and strategies used in distributing products including the design of channels and the activity performed by channel members to facilitate efficient movement of goods. Prerequisites: Mkt 3405; admission to B.S. in Business Administration for undergraduate students or department chair approval for graduate students.

Mkt 4440 Seminar in Marketing (3) Analysis of current issues and problems in marketing with emphasis on new theoretical and methodological developments. Prerequisites: Mkt 3405; admission to B.S. in Business Administration for undergraduate students or department chair approval for graduate students.

Mkt 4450 Promotional Strategy (3) The determination of the correct blend of advertising, personal selling, sales promotion, reseller support, and publicity. Prerequisites: Mkt 3405; admission to B.S. in Business Administration for undergraduate students or department chair approval for graduate students.

Mkt 4460 International Marketing (3) Marketing policies and practices in foreign trade. Prerequisites: Mkt 3405; admission to B.S. in Business Administration for undergraduate students or department chair approval for graduate students.

Mkt 4470 Marketing Research (3) Applications of research methods to the problems of marketing. Prerequisites: Mkt 3405; admission to B.S. in Business Administration for undergraduate students or department chair approval for graduate students.

Mkt 4480 Special Projects in Marketing (1-3) Individualized or group study under supervision of department faculty. May be repeated for a maximum of 6 semester hours. Prerequisite: department chair approval.

Mkt 4490 Marketing Management* (3) An overview of major areas of marketing from the viewpoint of the marketing executive; a capstone course integrating previous marketing study and background into a managerial context. Prerequisites: Mkt 3405, admission to B.S. in Business Administration, and last semester in program.

*Not available for graduate credit.

Mkt 5400 Marketing Strategy (3) Managerial techniques applied to the marketing functions of organizations; strategic implications of decision making with case study applications. Prerequisites: admission to MBA program and consent of graduate advisor.

Mkt 5405 Strategic Management and Marketing (3) Value-based integrated working knowledge of strategic management and marketing processes with emphasis on development of thinking, communicating and interacting skills in a global market place. Prerequisites: CIS 5605, Econ 5005, Acct 5105 and Fin 5805; must be taken concurrently with Mgt 5305.

Mkt 5480 Applications in Marketing (3) Specific marketing applications within the business-to-business environment, including areas of career applications and interests. Prerequisites: Mkt 4420 and Mkt 4440.

Mkt 6410 Readings in Marketing (1-3) Selected readings in diverse areas of marketing designed to complement and extend the student's program in marketing. May be repeated for a maximum of 6 semester hours. Prerequisite: Mkt 3405.

BLaw 2720 Legal Environment of Business (3) A survey of a number of areas of law that are important to persons as citizens and as participants in economic activity. Included are legal process, alternative dispute resolution, contracts, torts, product liability, employment law, antitrust, and international business law.

BLaw 3721 Law of Business Transactions (3) Provides a comprehensive discussion of the laws concerning the formation and performance of contracts, sales of goods transactions, creation and transfer of negotiable instruments, and selected transactions in real and personal property. Prerequisite: BLaw 2720.

BLaw 3775 Law of Business Associations (3) Designed to examine law as it relates to the business enterprise and legal aspects of its activities including bankruptcy, agency, partnerships, and corporations. Prerequisite: BLaw 2720.

BLaw 4725 Government and Business (3) An examination of the impact and effects of the exercise of government regulation and influence on business.

BLaw 4740 Labor Legislation (3) Policy and legal problems arising in an area of acute social and economic conflict.

BLaw 4750 Collective Bargaining (3) Roles and strategies of labor, management, and the Government as the active participants in the negotiation and performance of the labor contract. Prerequisite: BLaw 4740.

BLaw 5700 Legal Aspects of Business Decisions (3) An examination of the external influences on business in the jurisprudential context and emanating from political, global, economics, ethical, technological and social forces.

College of Education and Human Services

Integrative Studies General

IGen 3472 Sport in American Life (3) Provides for an understanding and appreciation of the role of sport in American life.

IGen 3896 Assessing Global Change for the Information Age (3) Challenges students to assess present and future trends, evaluate what is desirable, and reflect on their responsibility for the quality of life in the information age.

Communication Disorders

In the Department of Communication Disorders, the second digit in the course number stands for the following: 0--University Studies, 1--Professionalism, 3--Speech Science, 4--Language, 5--Speech Pathology, 7--Audiology, 8--Clinical Practicum, 9--Directed Studies.

Undergraduate Admission Policies and Procedures

Student enrollment is limited to the following Department of Communication Disorders' courses unless the student is either provisionally or fully admitted to the undergraduate functional major in speech pathology: CD 2000, CD 2301, CD 3301, CD 3501, CD 3802, CD 4401, CD 4402, CD 4900. If the student is not provisionally or fully admitted to the undergraduate program, enrollment in Department of Communication Disorders' courses other than the ones listed above, shall be determined in conference with the departmental undergraduate academic advisor.

Acceptance to the undergraduate functional major in speech pathology does not guarantee graduation from that program nor does it guarantee admission to the graduate program in Speech Pathology and Audiology at Central or any other college or university. Completion of an undergraduate degree does not prepare students for employment as speech-language pathologists or audiologists. The master's degree is the recognized entry-level degree for both professions in all employment settings and the purpose of the undergraduate degree is to prepare students to enter graduate programs in either Speech-Language Pathology or Audiology.

Students who have been admitted to the undergraduate program and have not enrolled in Communication Disorders courses for three consecutive semesters will be dropped from the undergraduate program. These students must reapply for admission to the undergraduate program prior to enrollment in any additional courses in Communication Disorders.

I. Admission of Non-Transfer Students

A. Admission Criteria

1. Must have a minimal overall GPA of 2.50.
2. Must have earned a minimum of 30 university credit hours, applicable to graduation, including a grade of "C" or better in Engl 1020 and Engl 1030 or Engl 1080.
3. Must have made a grade of "C" or better in CD 2301, CD 3301, CD 3501, CD 3802.

4. Students may enroll in the four courses listed under I.A.3. for a maximum of two times.
5. Students must complete a speech, language and hearing screening.
6. Students must submit a formal application by the first week of classes of the semester prior to admission.
7. Students who do not meet requirements I.A.1-6. are ineligible for admission to the undergraduate functional major in speech pathology.

B. Maintenance Criteria

1. The first semester the student's overall GPA drops below a 2.50 after being admitted to the undergraduate program in Communication Disorders, the student will receive a letter of written academic warning from the Department of Communication Disorders.
2. Any student under academic warning whose overall GPA falls below a 2.50 for any subsequent semester will become ineligible to continue taking courses in the Department of Communication Disorders and/or to re-apply for admission to the undergraduate program.

II. Admission of Undergraduate Transfer Students

A. Admission Criteria

1. Transfer students must meet requirements I.A.1-7.
2. Students who are transferring two or more of the courses listed in I.A.3. and meet other criteria listed in I.A. will be provisionally admitted and must take an additional six semester hours of Department of Communication Disorders' courses at Central Missouri State University before applying for full admission.
3. Transfer students must demonstrate the competencies required for the Central

- equivalent for any courses being transferred before applying for full admission to the undergraduate program.
- B. Maintenance Criteria
 - 1. Same as for non-transfer students.
- C. Other
 - 1. A minimum letter grade of a "C" must be obtained for the six semester hours under II.A.2. for the transfer student to be able to apply for full admission to the undergraduate program. Those courses in which the undergraduate transfer student makes a grade below a "C" can be retaken only once. If this requirement is not met, the student becomes ineligible to continue taking courses in the Department of Communication Disorders and/or to apply for full admission to the undergraduate functional major in speech pathology.

III. Admission of International Undergraduate Students*

*International students participating in the Department of Communication Disorders' official international exchange program do not need to be admitted to the undergraduate program and will be allowed to enroll in courses on a case-by-case basis.

- A. Admission Criteria
 - 1. Must meet requirements I.A.1-7.
 - 2. Must score 600 or greater on the TOEFL.

- 3. Must score 55 or greater on the Test of Spoken English.
- 4. Must score 5 or greater on the Test of Written English.
- 5. Must complete an oral interview with designated faculty from the Department of Communication Disorders.
- 6. International students who are transferring two or more of the courses listed in I.A.3. and meet other criteria listed in I.A. will be provisionally admitted and must take an additional six semester hours of Department of Communication Disorders' courses at Central Missouri State University before applying for full admission.
- 7. International transfer students must demonstrate the competencies required for the Central equivalent for any courses being transferred before applying for full admission to the undergraduate program.

B. Maintenance Criteria

- 1. Same as for non-transfer students

C. Other

- 1. Same as for transfer students.

IV. Post-Baccalaureate Students

Post-Baccalaureate Students must have permission of the Department Chair to enroll in any Communication Disorders course.

NOTE: The Bachelor of Science degree in Speech Pathology and Audiology is a pre-professional degree. Since the Master's Degree is the recognized entry-level degree for both professions in all employment settings, the purpose of the degree is to prepare students to enter graduate programs in either Speech-Language Pathology or Audiology. Completion of an undergraduate degree does not prepare students for employment as speech-language pathologists or audiologists. Students selecting Speech Pathology and Audiology as a major should be aware that successful completion of the B.S. degree does not guarantee admission to the graduate program at Central or any other college or university. Admission to graduate programs in Speech-Language Pathology and Audiology is highly competitive because of the limited number of students that may be admitted in order for programs to meet accreditation standards of the American Speech-Language-Hearing Association.

SPEECH PATHOLOGY Functional Major, B.S. Degree

(43 000844)

Sem. Hours

FUNCTIONAL MAJOR REQUIREMENTS			48
CD	4101	Communication Disorders in the Schools	3	
CD	2301	American Phonetics	3	
CD	3301	Anatomy & Neurology of Spch./Lang.	3	
CD	3304	Speech Science	3	
CD	4401	Language Development	3	
CD	3501	Intro. to Comm. Disorders	3	
CD	3503	Principles of Clinical Mgt.	3	
CD	4504	Assessment & Intervention I: Articulation	3	
CD	4505	Assessment & Intervention II: Language	3	
CD	4701	Introduction to Audiology	3	
CD	4706	Hearing Measurement	3	
CD	3802	Observ. of Clinical Practicum in Communication Disorders	1	
CD	4803	Clinical Practice in Language Disorders of Children	1	
CD	4804	Clinical Practice in Speech Disorders of Children	1	
Psy	4520	Statistics for the Behavioral Sciences	3	
Engl	4110	Linguistics	3	
		Electives from the following	6	
CD	4403	Early Childhood Language Disorders	2	
CD	4900	Special Topics in Comm. Disorders	1-6	
Psy	2130	Learning	3	
Psy	4110	Systems of Psychology	3	
Psy	4130	Sensation & Perception	3	
Psy	4140	Physiological Psychology	3	
Psy	3340	Social Psychology	3	
Psy	4310	Theories of Personality	3	
Psy	4440	Abnormal Psychology	3	
Psy	4750	Rehabilitation: Deaf Com. I	2	
Psy	4770	Medical Aspects of Disability	3	
SoWk	2600	Intro. to Social Welfare & Social Work	3	
EdSp	4300	Ment. Retarded Children	3	
*EdSp	4350	Augmentative & Alternative Communication	3	
Nur	4020	Grief & Loss	2	
Nur	4405	Aging of Self & Others	2	
Biol	2401	Anatomy & Physiology I	4	

(elective continued on next page)

(electives continued from previous page)

Phys 1611	Physics of Sound	3	HES 3222	Early Childhood	3
Engl 3110	English Grammar	3			

MINOR NOT REQUIRED

UNIVERSITY STUDIES REQUIREMENTS--48 (In the professional education requirements, ICap 4468 fulfills

3 s.h. of Div. III B)					45
SpCm 1000	Div. I B (required)	3	Hist 1350	Div. II B or	
Biol 1004	Div. II A (required)	4	Hist 1351	Div. II B (required)	3
Phys 1103	Div. II A (required)	3	PolS 1510	Div. II B (required)	3
			Psy 4230	Psy. of Adolescence	3

Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. in Div. II B.

PROFESSIONAL EDUCATION REQUIREMENTS 24-25

EdCI 2100	Foundations of Education & Field Experience	3	ICap 4468	Student Tchg. Secondary II	4
EdCI 4495	Student Tchg. Elementary I	5	EdCI 4210	Tchg. of Rdg. in the Sec. Sch., 2 or	
Psy 2220	Child Psychology	3	EdCI 3220	Tchg. of the Language Arts, 3	2-3
Psy 2240	Educational Psychology	3	EdSp 2100	Ed. of the Exceptional Child, 2 or	
EdSp 4140	Couns. Parents of Except. Children	2	Psy 4200	Psy. of Except. Children, 2	2

FREE ELECTIVES 6-7

MINIMUM TOTAL 124

*Course has prerequisite(s) not listed in the program.

University Studies

CD 2000 The Bases of Speech and Language (2) The nature and function of speech and language from the standpoint of normal development. Provides a basis for understanding communicative disorders of a pathological and/or psychological nature.

Professionalism

CD 4101 Communication Disorders in the Schools (3) Organization and management of school programs for students who have communication disorders. Prerequisite: admission to the Teacher Education Program, enrollment in the Professional Education Semester or consent of the instructor, and admission to the undergraduate functional major in speech pathology.

Speech Science

CD 2301 American Phonetics (3) Sound system of American English with emphasis on the international phonetic alphabet and dialects.
CD 3301 Anatomy and Neurology of Speech/Language (3) The anatomical, neural, and endocrinological bases for production of normal speech.
CD 3304 Speech Science (3) An introduction to basic physiological and acoustical properties of human communication. Prerequisite: admission to the undergraduate functional major in speech pathology.

Language

CD 4401 Language Development (3) Theories and sequence of normal language acquisition.
CD 4402 Language Development for the Handicapped (2) Theories and sequence of language acquisition with emphasis on language development and deficiencies of handicapped children.
CD 4403 Early Childhood Language Disorders (2) Emphasis on diagnostic procedures, management/treatment principles and procedures, transdisciplinary programming, behavior management, and

implementation of a cognitively based preschool for language delayed children. Prerequisite: admission to the undergraduate functional major in speech pathology or consent of instructor.

CD 5402 Language Disorders of Children (3) Types of language disorders, identification and management of the problem. Prerequisite: CD 3501 or CD 4401.

Speech Pathology

CD 3501 Introduction to Communication Disorders (3) Etiology, incidence, and characteristics of communicative disorders. Prerequisite: CD 3802 must be taken concurrently.
CD 3503 Principles of Clinical Management (3) Fundamental clinical concepts as a foundation for diagnosis and intervention in communication disorders. Prerequisite: admission to the undergraduate functional major in speech pathology.
CD 4504 Assessment and Intervention I: Articulation* (3) Specific methodologies and competencies in both diagnosis and treatment planning for individuals with phonological defects. Prerequisite: admission to the undergraduate functional major in speech pathology.
CD 4505 Assessment and Intervention II: Language* (3) Types of language disorders; formal and informal assessment procedures of language leading to a diagnosis of language disability; prescriptive intervention procedures for the remediation of language disabilities including both commercially available programs and clinician-made material. Prerequisite: admission to the undergraduate functional major in speech pathology.

*Not available for graduate credit.

CD 5501 Articulation Disorders (2) Phonetic, physical, and physiological aspects of the articulation of speech and the etiology of articulation disabilities.
CD 5502 Fluency Disorders (3) Major theories of the etiology and treatment of fluency disorders.
CD 5503 Voice Disorders (3) Voice disorders which result from laryngopathologies and psychoneuroses.
CD 5504 Aphasia Rehabilitation (3) Aphasia, its possible etiology, characteristics, diagnostic evaluations and

therapy; head trauma, the language of confusion, and other language problems of the aging population.

CD 5506 Neurogenic Speech Disorders (3) Clinical evaluation and treatment of persons with speech disorders with neurogenic etiology, including developmental dysarthria, the acquired dysarthrias, oroverbal apraxia, traumatic brain injury, and dysphagia. Special consideration is included for persons who require augmentative communication devices.

CD 5507 Special Projects in Speech Pathology (2)

Individual study and/or research in speech pathology.

Prerequisite: approval of graduate adviser.

CD 5508 Dysphagia (2) Develops diagnostic and treatment skills in the management of swallowing disorders in children and adults.

Audiology

CD 4701 Introduction to Audiology* (3) Hearing impairment as related to basic acoustics and psychoacoustics, anatomy and physiology of the ear, and theories of hearing.

Prerequisite: admission to the undergraduate functional major in speech pathology.

CD 4706 Hearing Measurement* (3) Hearing measurement procedures including pure tone and speech audiometry and some site of lesion testing. Prerequisite: admission to the undergraduate functional major in speech pathology and CD 4701.

*Not available for graduate credit.

CD 5701 Clinical Audiology I (3) The theory and practice of advanced audiological testing.

CD 5702 Industrial Audiology (2) A study and practicum of the measurement of noise and vibration and their effect on man. The organization and administration of programs for safety control of environmental noise and for hearing conversation.

CD 5703 Hearing Aids (3) Hearing aids, their function and use in aural rehabilitation. Includes practicum experience in hearing aid fittings.

CD 5704 Impedance Audiometry (2) Measurement and interpretation of tympanometry, static compliance, stapedial reflex, reflex decay and SPAR. The study of the theory of impedance and admittance.

CD 5705 Special Projects in Audiology (2) Individual study and/or research in audiology. Prerequisite: approval of graduate adviser.

CD 5706 Clinical Audiology II (3) Theory, administration, and interpretation of electro-physiological tests of auditory and vestibular function. Prerequisite: CD 5701.

CD 5707 Hearing Science (2) In-depth study of the anatomy and physiology of the auditory periphery with a review of basic acoustics and physical concepts. Prerequisite: CD 4701.

CD 5708 Aural Rehabilitation (3) Effects of hearing impairment of verbal communication. Principles and methods of aural rehabilitation. Prerequisite: CD 4706.

CD 5709 Pediatric Audiology (3) Prenatal and postnatal development of the auditory system, assessment of auditory disorders in infants and children. Prerequisite: CD 4701.

CD 5710 Medical Audiology (3) In-depth study of the anatomy and physiology of the ear. The pathology, incidence, etiology, otologic, and audiologic findings and treatment for hearing impairments. Prerequisite: CD 4701.

CD 5711 Clinical Audiology III (2) Regulations and procedures required in the calibration of audiometric equipment. Prerequisite: CD 5707.

Clinical Practicum

CD 3802 Observation of Clinical Practicum in Communication Disorders (1) Twenty-five (25) clock hours of supervised observation in the evaluation and treatment of children and adults with disorders of speech, language, and hearing. Prerequisite: CD 3501 must be taken concurrently.

CD 4803 Clinical Practice in Language Disorders of Children* (1) Specialized practice in management of language disorders of children. Twenty-five clock hours are required for one semester hour of credit. Prerequisite: admission to the undergraduate functional major in speech pathology or consent of department chair, overall GPA of 2.50; CD 3503, CD 4701 and either CD 4504 or CD 4505; the remaining CD 4504 or CD 4505 must be taken concurrently with the first semester of clinical practicum. CD 4706 must be taken prior to serving on an audiology diagnostic team.

CD 4804 Clinical Practice in Speech Disorders of Children* (1) Specialized practice in management of speech disorders of children. Twenty-five clock hours are required for one semester hour of credit. Prerequisite: admission to the undergraduate functional major in speech pathology or consent of department chair, overall GPA of 2.50; CD 3503, CD 4701 and either CD 4504 or CD 4505; the remaining CD 4504 or CD 4505 must be taken concurrently with the first semester of clinical practicum. CD 4706 must be taken prior to serving on an audiology diagnostic team.

CD 4805 Introduction to Clinical Practice in Audiology* (1) Specialized practice in screening, air and bone conduction thresholds, and rehabilitation. Twenty-five clock hours are required for one semester hour of credit. Prerequisite: admission to the undergraduate functional major in speech pathology or consent of department chair, overall GPA of 2.50; CD 3503, CD 4701 and either CD 4504 or CD 4505; the remaining CD 4504 or CD 4505 must be taken concurrently with the first semester of clinical practicum. CD 4706 must be taken prior to serving on an audiology diagnostic team.

*Not available for graduate credit.

CD 5801 Internship in Communication Disorders (6)

Scheduled by the department's graduate advisor, the internship requires ten weeks of full-time practicum in a hospital or rehabilitation setting during the student's last semester of enrollment in the graduate program.

Prerequisite: consent of the graduate advisor one semester in advance.

CD 5805 Treatment of Hearing Disorders in Children/Adults (1-2) Specialized practice in management of communication disorders accompanying hearing loss. Twenty-five clock hours are required for one semester hour credit. May be repeated for a maximum of 2 semester hours. Prerequisites: CD 3503 or concurrently, 3.00 graduate GPA in departmental courses, and a speech and hearing screening.

CD 5806 Clinical Practice: Hearing Evaluation in Children (1-2) Specialized practice in the evaluation of hearing disorders in children. Twenty-five clock hours are required for one semester hour of credit. May be repeated

for a maximum of 2 semester hours. Prerequisites: CD 3503 or concurrently, 3.00 graduate GPA in departmental courses, and a speech and hearing screening.

CD 5807 Clinical Practice: Hearing Evaluation in Adults (1-2) Specialized practice in the evaluation of hearing disorders in adults. Twenty-five clock hours are required for one semester hour of credit. May be repeated for a maximum of 2 semester hours. Prerequisites: CD 3503 or concurrently, 3.00 graduate GPA in departmental courses, and a speech and hearing screening.

CD 5808 Clinical Practice: Amplification and Assistive Devices for Children (1-2) Specialized practice in the evaluation and use of amplification and assistive devices for children. Twenty-five clock hours are required for one semester hour of credit. May be repeated for a maximum of 2 semester hours. Prerequisites: CD 3503 or concurrently, 3.00 graduate GPA in departmental courses, and a speech and hearing screening.

CD 5809 Clinical Practice: Amplification and Assistive Devices for Adults (1-2) Specialized practice in the evaluation and use of hearing aids and assistive devices for adults. Twenty-five clock hours are required for one semester hour of credit. May be repeated for a maximum of 2 semester hours. Prerequisites: CD 3503 or concurrently, 3.00 graduate GPA in departmental courses, and a speech and hearing screening.

CD 5811 Advanced Clinical Practice in Language Disorders of Children (1) Advanced specialized practice in management of language disorders of multiply and severely handicapped children. Twenty-five clock hours are required for one semester hour of credit. Prerequisites: CD 3503 or concurrently, 3.00 graduate GPA in departmental courses, and a speech and hearing screening.

CD 5812 Advanced Clinical Practice in Speech Disorders of Children (1) Advanced specialized practice in management of speech disorders of multiply and severely handicapped children. Twenty-five clock hours are required for one semester hour of credit. Prerequisites: CD 3503 or concurrently, 3.00 graduate GPA in departmental courses, and a speech and hearing screening.

CD 5813 Clinical Practice in Speech Disorders of Adults (1) Specialized practice in management of speech disorders of adults. Twenty-five clock hours are required for one semester hour of credit. Prerequisites: CD 3503 or concurrently, 3.00 graduate GPA in departmental courses, and a speech and hearing screening.

CD 5814 Clinical Practice in Language Disorders of Adults (1) Specialized practice in management of language disorders of adults. Twenty-five clock hours are required for one semester hour of credit. Prerequisites: CD 3503 or concurrently, 3.00 graduate GPA in departmental courses, and a speech and hearing screening.

CD 5815 Advanced Clinical Practice in Public Schools (1) Advanced specialized practice in diagnosis and management of speech, language, and hearing disorders in the schools. Twenty-five clock hours are required for one semester hour of credit. May be repeated for a maximum of 2 semester hours. Prerequisites: CD 3503 or concurrently, 3.00 graduate GPA in departmental courses, and a speech and hearing screening.

CD 5816 Clinical Evaluation: Speech Disorders in Children (1) Specialized practice in diagnosis of speech disorders in children. Twenty-five clock hours are required for one semester hour of credit. Prerequisites: CD 3503 or concurrently, 3.00 graduate GPA in departmental courses, and a speech and hearing screening.

CD 5817 Clinical Evaluation: Speech Disorders in Adults (1) Specialized practice in diagnosis of speech disorders in adults. Twenty-five clock hours are required for one semester hour of credit. Prerequisites: CD 3503 or concurrently, 3.00 graduate GPA in departmental courses, and a speech and hearing screening.

CD 5818 Clinical Evaluation: Language Disorders in Children (1) Specialized practice in diagnosis of language disorders in children. Twenty-five clock hours are required for one semester hour of credit. Prerequisites: CD 3503 or concurrently, 3.00 graduate GPA in departmental courses, and a speech and hearing screening.

CD 5819 Clinical Evaluation: Language Disorders in Adults (1) Specialized practice in diagnosis of language disorders in adults. Twenty-five clock hours are required for one semester hour of credit. Prerequisites: CD 3503 or concurrently, 3.00 graduate GPA in departmental courses, and a speech and hearing screening.

Directed Studies

CD 4900 Special Topics in Communication Disorders (1-3) Selected topics of contemporary interest in speech pathology and audiology; variable content. May be repeated for a maximum of 6 semester hours. Prerequisite: consent of instructor.

CD 5900 Seminar in Communication Disorders (2) Detailed studies in a specialized area of communication disorders. May be repeated for a maximum of 12 semester hours.

CD 5902 Research Design in Communication Disorders (3) An introduction to research design strategies in communication disorders. Prerequisite: Psy 4520.

CD 6901 Thesis (1-5)

Criminal Justice

In the Department of Criminal Justice, the second digit in the course number stands for the following: 0--General, 1--Administration, 2--Traffic, 3--Law, 4--Investigation, 5--Police Science, 6--Problems and Research, 7--Juvenile Justice.

CONSERVATION ENFORCEMENT Functional Major, B.S. Degree

See requirements as outlined in the Departments of Biology and Earth Science.

CORRECTIONS Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)
(000709)

						Sem. Hours	
MINOR REQUIREMENTS						24	
CJ	1000	Introduction to Criminal Justice	3	Psy	4740	Rehab. of the Law Offender	3
CJ	2000	Hist. of Corrections & Penal Inst.	3	Soc	3890	Criminology	3
CJ	4006	Probation, Parole & Community Corrections	3	Soc	4845	Juvenile Delinquency	3
CJ	4330	Criminal Justice & the Mental Health Systems	3	Soc	4846	Corrections & Preventions	3

CRIMINAL JUSTICE Major, B.S. Degree

(43 000842)

						Sem. Hours	
MAJOR REQUIREMENTS						46	
CJ	1000	Introduction to Criminal Justice	3	CJ	3600	Intro. to Crim. Justice Research	3
CJ	3006	Corrections	3	CJ	4605	Senior Sem. in Criminal Justice	1
CJ	3010	Policing a Democratic Society	3	CJ	2700	Introduction to Juvenile Justice	3
CJ	2300	Criminal Law	3	Soc	3890	Criminology	3
CJ	3303	Criminal Procedure	3	Departmentally approved electives			21
MINOR REQUIREMENTS						18-25	
UNIVERSITY STUDIES REQUIREMENTS						48	
FREE ELECTIVES						5-12	
MINIMUM TOTAL						124	

CRIMINAL JUSTICE Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)
(000829)

						Sem. Hours	
MINOR REQUIREMENTS						24	
CJ	1000	Introduction to Criminal Justice	3	CJ	3303	Criminal Procedure	3
CJ	3006	Corrections	3	CJ	2700	Introduction to Juvenile Justice	3
CJ	3010	Policing a Democratic Society	3	Soc	3890	Criminology	3
CJ	2300	Criminal Law	3	Elective in criminal justice			3

General

CJ 1000 Introduction to Criminal Justice (3) The history, nature and function of the criminal justice system in America. Special attention is given to the philosophical basis underlying this system and to the problems associated with crime control in a democratic society. At each stage of the process, major issues confronting the system are examined.

CJ 2000 History of Corrections and Penal Institutions (3) Historical analysis of the development of corrections and penal institutions and the influence of social thought and philosophy on this development. Prerequisite: CJ 1000 or consent.

CJ 3006 Corrections (3) An overview course in correctional theory and practice. Traces the historical development of corrections with emphasis on changing

social standards and philosophies. Examines the various types of correctional institutions, their mission, physical structure, management, and problems. Also examines probation and parole, including theory, practice and major issues confronting these correctional alternatives. Prerequisite: CJ 1000.

CJ 3010 Policing a Democratic Society (3) An in-depth look at the relationship between law enforcement and American society. Focus is on police-community relations, the police sub-culture, and the need for police objectives to conform to constitutional procedures. Prerequisite: CJ 1000.

CJ 4000 Special Projects in Criminal Justice Administration (1-3) Individual or group study of problems in special areas of interest. May be repeated for a maximum of 6 semester hours.

CJ 4006 Probation, Parole and Community Corrections

(3) An examination of the roles of probation, parole and other community correctional methods as they relate to other elements of the criminal justice system. Prerequisite: CJ 3006.

CJ 4015 The Criminal Court System (3) An overview of the goals, functions, and processes of the criminal court system with an examination of current legal issues and trends. Prerequisite: CJ 1000 or consent.

CJ 5000 The Criminal Justice System (3) Historical development and present structure and function of the American criminal justice system.

CJ 5003 Criminal Justice Studies in Group Behavior (3)

The dynamics of interpersonal, group, and societal relationships as they impinge on the criminal justice mission.

CJ 5006 Comparative Criminal Justice Systems (3)

Criminal justice systems worldwide and means of establishing cooperation toward mutual goals despite structural, historical and ideological differences.

Administration

CJ 2101 Police Organization and Management (3) The principles and practices common to the effective management of American law enforcement agencies. Prerequisite: CJ 1000.

CJ 2102 Jail Management (3) An in-depth study of jail operations and procedural guidelines which define the role, duties and responsibilities of jail personnel.

CJ 3104 Institutional Operations (3) An examination of the procedures of correctional institutions and of the problems encountered in the classification, care and treatment of incarcerated offenders. Prerequisite: CJ 3006.

CJ 3107 Patrol Administration (3) An in-depth study of the theories and techniques utilized in providing police service to the public. Focus is on proactive vs. reactive policing and on the usage of computers for prediction of criminal activity and in the assignment of police personnel. Prerequisite: CJ 2101.

CJ 4100 Advanced Police Management (3) Intensive study of administrative theory with special emphasis on the systems concept as it applies to the management of police organizations. Prerequisite: CJ 2101.

CJ 4101 Criminal Justice Planning (3) Planning concepts and development of comprehensive criminal justice plans; their integration into meaningful crime reduction and resistance programs; and their influence on the operations of police, judicial, and correctional agencies. Prerequisite: CJ 2101 or consent.

CJ 5102 Administration in Criminal Justice (3) An intensive, in-depth analysis of criminal justice agencies (law enforcement, corrections, and court administration), organizational structures, and management techniques.

CJ 5105 Custody, Care and Treatment in the Institutional Setting (3) An examination of operations in the institutional setting relating to classification, custody, care, and treatment of the confined offender.

Law

CJ 2300 Criminal Law (3) Origin, development, and classification of the substantive criminal law, defenses, and criminal responsibility. Prerequisite: CJ 1000 or consent.

CJ 3303 Criminal Procedure (3) Selected constitutional aspects of law enforcement including the law of arrest,

search and seizure. Students are encouraged to take CJ 2300 prior to taking CJ 3303. Prerequisite: CJ 1000.

CJ 3304 Constitutional Aspects of Criminal Justice II (3)

An examination through U.S. Supreme Court decisions of the government's and the criminal defendant's rights and privileges regarding electronic surveillance, entrapment, self-incrimination, lineups, preliminary examination, plea bargaining, trial, double jeopardy, and sentencing. Prerequisite: CJ 3303 or consent of instructor.

CJ 3310 Law of Corrections and Prisoners' Rights (3)

An examination of federal and state laws and resultant judicial interpretation regarding the substantive and procedural protections applied in the correctional setting with regard to the rights of the confined. Prerequisite: CJ 3303 or consent.

CJ 4300 Case Preparation and Courtroom Procedure (3)

Criminal procedure from arrest through trial. Preparation for and participation in mock trial. Prerequisite: CJ 3303 or consent.

CJ 4301 Motor Vehicle Law (3) Uniform Vehicle Code of the National Committee on Uniform Traffic Law and Ordinances and the Model Traffic Ordinance with a view to understanding the fundamentals of traffic regulation and control as they relate to the police service motor vehicle administration, traffic courts and other governmental functions.

CJ 4302 Criminal Evidence (3) The rules of evidence as they relate to the prosecution and defense of criminal cases: general provisions, judicial notice, presumptions, relevancy, privileges, witnesses, hearsay, expert testimony, authentication, and identification. Prerequisite: CJ 2300 or consent.

CJ 4321 Civil Remedies in Criminal Justice (3) State and federal legal liabilities and remedies in criminal justice and policy implications. Prerequisite: CJ 3303 or consent.

CJ 4330 Criminal Justice and the Mental Health Systems

(3) The relation of the criminal justice system and the mental health process; legal concepts regarding the mentally disabled. Prerequisite: CJ 1000 or consent.

CJ 5301 Legal Aspects of the Criminal Justice System

(3) Current legal issues affecting the various areas of criminal justice.

Investigation

CJ 2405 Global Crime (3) International crime operations including sea and air piracy, smuggling, and terrorism. Focus on how these groups operate and techniques for investigation and apprehension.

CJ 3400 Criminal Investigation (3) Principles involved in the investigation of crimes with particular attention given to its historical origins, the investigator, organization and management of the investigative function, and investigative methods; including crime scene processing, suspect identification and use of information sources. Consideration is also given to the investigation of specific crimes.

CJ 3405 Homicide Investigation (3) An in-depth study of homicide investigation including tactics, procedures, problems, forensic techniques, and legal issues. Prerequisite: CJ 3400.

CJ 4403 Sexual Assault and the Criminal Justice System

(3) In-depth study of sexual assault and sex offenders. Investigation into the motivation of sex offenders, the victim's responses to assault, and investigative procedures.

CJ 4420 Organized Crime (3) An analysis of both the historical development of organized crime and its current impact on society. The enforcement, prosecutorial, judicial, and legislative actions utilized to combat organized crime will be examined.

Police Science

CJ 3501 Police Laboratory Methods (5) An overall view of the field of forensic science/criminalistics with an emphasis on the importance of the scientific treatment of physical evidence in criminal investigations.

Problems and Research

CJ 3600 Introduction to Criminal Justice Research (3) An introductory examination of the research methods with application most commonly utilized in criminological and criminal justice research.

CJ 4601 Directed Studies (1-6) Individual research and study in student's field of interest as approved and directed by major professors. The examination of selected problems affecting various criminal justice agencies. May be repeated for a maximum of 6 semester hours. Prerequisite: consent.

CJ 4602 Internship in Criminal Justice (1-6) Practical experience in the operation of various components of the criminal justice system. May be repeated for a maximum of 12 semester hours. Prerequisite: consent.

CJ 4605 Senior Seminar in Criminal Justice* (1) Current issues and trends in criminal justice with emphasis on group discussion. Each student will be required to prepare, submit and defend a senior thesis. Successful completion of the thesis is mandatory. Prerequisite: senior major in Criminal Justice.

*Not available for graduate credit.

CJ 5600 Individual Research (2-6) Individual study and research of pertinent criminal justice administration problems. Not open to those enrolled in CJ 4601. May be repeated for a maximum of 6 semester hours. Prerequisites: 12 semester hours graduate credit and consent.

CJ 5602 Readings in Criminal Justice Administration (1-5) Selected readings that allow the student to pursue areas of particular interest or need not covered in established courses or programs. May be repeated for a maximum of 5 semester hours. Prerequisite: consent.

CJ 5610 Statistics for Criminal Justice (3) Graduate introduction to statistical techniques in criminal justice. The course provides an understanding of the relationship

between statistical analysis and research methodology. It is a basic graduate course in statistics and presumes minimal mathematical or statistical background. Stress is placed on the assumptions, restrictions and uses of various statistical techniques rather than on mathematical derivation of formulas or detailed examination of theoretical statistics.

CJ 5620 Methods of Criminal Justice Research (3) A comprehensive examination of the basic concepts of research, causal order of variables, sampling techniques, research designs, techniques of data collection and analysis that will enable the student to critically evaluate crime and delinquency research as well as design and implement his/her own research.

CJ 5625 Crime Analysis (3) The patterns of crime, the analysis of such patterns and applications of crime analysis. Focus is on temporal and spatial distributions of crime, crime analysis charting and visual investigative analysis.

Prerequisite: admission to departmental graduate program.

CJ 6600 Thesis (6) Special investigation into a specific area of criminal justice administration. It is recommended that the student should have completed the major courses in his/her program before enrolling in this course. Prerequisite: CJ 5620.

Juvenile Justice

CJ 2700 Introduction to Juvenile Justice (3) An examination of the origins, philosophy and objectives of the juvenile justice system. Focus is on the operation, legal processes, current trends and roles of the various actors within the juvenile justice system.

CJ 5700 The Juvenile Justice System (3) The historical development and assessment of current policies and practices of agencies involved in the juvenile justice system.

CJ 5701 The Juvenile and the Law (3) The jurisdiction of juvenile courts, role of law enforcement agents, judicial process, fact-finding hearings, dispositions, waivers, appeals, philosophy of the juvenile court with attention to the legal rights of children, and comparative analyses of juvenile codes.

CJ 5702 Juvenile Corrections (3) An analysis of the theories, concepts, practices and special problems of juvenile corrections, including a review of contemporary juvenile correctional systems and discussion of recent research concerning the juvenile institution and the various field services.

Teacher Education Policies and Procedures

CERTIFICATION

All teacher certification programs offered by Central are accredited nationally by the National Council for Accreditation of Teacher Education. Programs in education also meet all certification requirements set by the Missouri Department of Elementary and Secondary Education.

Missouri state regulations stipulate these basic requirements for students seeking initial teacher certification (or extended certification in some instances): (1) for admission to teacher education programs, passing all sections of the College Basic Academic Subjects Examination (C-BASE) and receiving a grade of "C" or better in an oral communications class; (2) a minimum cumulative grade-point average of 2.50 on a 4-point scale on all college work attempted prior to initial certification; (3) a minimum grade-point average of 2.50 on a 4-point scale in each initial certificate subject area, and any additional area of endorsement for extended certification; (4) a minimum grade-point average in professional education courses of 2.50, with no grade lower than "C"; "professional education courses" are defined as those listed in the state certificate requirements as (a) Foundations of Teaching, (b) Teaching Methods, and (c) Clinical Experiences; (5) completion of a specialty area test on the National Teacher Examination with a score no lower than a minimum determined by the state for each test ("exit test"); (6) for all persons seeking school administrator certification, satisfactory appraisal upon completion of the state Administrator Assessment Center program.

Initial teacher certification may be earned at Central via completion of the Bachelor of Science in Education degree, the Bachelor of Music Education degree and in certain instances the Bachelor of Science degree. Students may apply for certification upon completion of degrees with major and minor programs that are designated as meeting certification guidelines of the state of Missouri. The degree earned, however, does not automatically lead to certification; failing to complete satisfactorily the "exit test" requirement (see above) does not prevent the awarding of the degree but will be cause for non-issuance of the certificate. Initial teacher certification may also be obtained through a post-baccalaureate program. In addition, Central has instituted an alternative program for certification for people with degrees not in education who are otherwise eligible for immediate employment in a school position. See the Director of Clinical Services and Certification for further information about both of these special programs.

Central offers undergraduate majors in the following fields which lead to initial teacher certification:

Agriculture Education (Vocational)
Art
Business Education
Early Childhood Education
Elementary Education
English
Home Economics (Vocational)
Mathematics
Middle School-Junior High School Education
Modern Languages (French, German, or Spanish)
Music, Instrumental and/or Vocal

Physical Education
Sciences (Biology, Chemistry, Earth Science, Physics)
Social Studies
Special Education (Educable Mentally Handicapped, Behaviorally Disordered, Severely Developmentally Disabled, Early Childhood Special Education)
Speech Communication and Theatre
Technology Education

NOTE: Other certification programs are available that require initial certification or graduate degrees. See the Graduate Catalog for further information.

Central offers minor programs in many of the above areas that may provide teacher certification for grades 5-9 or K-9. In addition, the following minors, all requiring completion of a major teaching program, are available:

Driver Education
Health Education
Journalism
Science Education 5-9

ADMISSION TO THE TEACHER EDUCATION PROGRAM

Students seeking an initial teaching certificate (as candidates for the Bachelor of Science in Education, the Bachelor of Science, or the Bachelor of Music Education degrees, or as post-baccalaureate students) must gain admission to the Central Missouri State University Teacher Education Program.

Admission to Teacher Education is required before enrolling in courses identified as PROFESSIONAL EDUCATION REQUIREMENTS (with the exception of the courses listed below) as well as those courses identified by departments representing the major area of study in the preparation for teaching.

1. Application for admission.
2. Evidence of having completed a minimum of 48 semester hours of college credit (with at least six (6) hours from Central), earned a minimum cumulative GPA 2.50 overall and at Central. (If a Post-Baccalaureate applicant graduates with a GPA of 2.50 or higher, he/she is exempt from the 6-hour rule.)
3. Completion of the following courses with a grade of C or higher:
 - A. EdCI 2100, Foundations of Education and Field Experience.
 - B. EDCI 2150, Introductory Field Experience
 - C. Psy 2240, Educational Psychology (or equivalent course)
 - D. Engl 1020, Composition I (or approved equivalent course emphasizing writing skills.)
 - E. College-level mathematics course (at the level of Math 1101, 1111, or 1620)
 - F. An oral communication course (SPCM 1000 or equivalent course)
4. Recommendation for admission from the department representing the major area of study in the preparation for teaching (interviews or other means of assessment as determined by individual departments).
5. Evidence of having passed all sections of the C-BASE (undergraduates only - Post-Baccalaureate students are exempt)
6. Post-Baccalaureate students must contact the Office of Clinical Services and Certification to clarify admission requirements.

ADMISSION TO THE PROFESSIONAL EDUCATION SEMESTER AND STUDENT TEACHING

Approval for admission to the professional education semester, including student teaching, involves meeting or completing the following minimum requirements:

1. Admission to the Teacher Education Program.
2. Submission of a completed application form by December 1 for the Fall Semester, or May 1 for the Spring Semester.
3. Completion of a minimum of 90 semester hours of university credit prior to the beginning of student teaching; meeting all prerequisites for professional semester courses and student teaching.
4. A minimum cumulative grade-point average of 2.50 on all university work attempted, on all courses taken at Central, and in the field or fields for which teacher certification is being sought (determined on the basis of courses approved for the teaching area, whether taken at Central or elsewhere).
5. A satisfactory appraisal for student teaching from each department or area in which student teaching placement is requested.
6. Evidence of proficiency in the operation of audiovisual equipment. (An audiovisual course may be taken for credit or the requirement may be met by a noncredit laboratory.)
7. Evidence of computer proficiency. (A computer course may be taken for credit or the requirement may be met by a noncredit laboratory.)
8. A doctor's certificate or other evidence of good health, if required by the school system where the student is placed for student teaching.
9. Students using Central for certification must have earned a minimum of six semester hours of credit at Central before qualifying for student teaching.

NOTE: Students who are deficient in one or more of the requirements for Admission may petition the Teacher Education Council for permission to enroll in the Professional Education Semester. This petition privilege does not include C-BASE.

NOTE: The Teacher Education Council requires the NTE/PRAXIS II be taken prior to receiving a grade for student teaching.

All requirements set by the state of Missouri for certification following completion of university requirements must be met prior to endorsement for certification by the appropriate university official, including the following: (1) minimum overall GPA of 2.50; (2) minimum GPA of 2.50 in the certificate subject area and in professional education courses; (3) no grade lower than "C" in professional education courses; (4) minimum score on the specialty test of the National Teacher Examination that is applicable to the initial certificate endorsement being requested.

FEDERAL FINANCIAL AID

Students completing initial teacher certification via completion of a bachelors degree may receive Federal grant, loan and work assistance in accordance with their calculated eligibility. Students pursuing teacher certification after completion of a bachelors degree may receive Federal loan and work assistance only. In both circumstances, the Free Application for Federal Student Aid (FAFSA) must be filed to determine the student's eligibility.

Curriculum and Instruction

In the Department of Curriculum and Instruction, the second digit in the course number stands for the following: 0--Special Projects, 1--Foundations, 2--Reading, 3--Curriculum and Instruction, 4--Elementary Education, 5--Secondary Education, 6--Adult Education, 7--Special Methods, 8--Early Childhood Education, 9--Individual Study and Research.

EARLY CHILDHOOD EDUCATION Minor, B.S. in Ed. Degree

(Certification to teach grades K-3 with an elementary education functional major.)
(000723)

						Sem. Hours	
MINOR REQUIREMENTS			28	
EdCI	2830	Early Childhood Principles	2	EdSp	4370	Screening, Diagnosing & Prescribing Instructions	3
EdCI	2850	Dev. & Learning Through Play	3	HES	1220	Child Development	3
EdCI	4830	Early Childhood Curriculum	3	HES	1240	Pract. in Child Development	2
PE	2410	Movement Skills & Activities for Primary Grades	2	HES	2310	Early Childhood Nutr. & Health	2
EdSp	3150	Community & Family Resources	2	HES	3250	Org. & Adm. of Programs for Young Children	3
EdSp	3151	Community & Family Resources Practicum	1	CD	2000	The Bases of Speech & Lang.	2

Clinical Experiences for Teacher Education Students

Early Field Experience

Education students are required to participate in early field/clinical experiences prior to student teaching. All education majors enroll in a six-hour block of two courses, scheduled to provide flexibility for off-campus time in field experiences, typically taken at the sophomore level. The field experience portion of this block is incorporated in EdCI 2100.

Early childhood, elementary and middle school majors have a field experience in EdCI 3210 (Methods of Reading Instruction). Early childhood majors have additional field experiences in EdSp 3151 (Community and Family Resources Practicum) and EdCI 4400 (Classroom Management and Interactions). Elementary education majors have additional field experiences in EdCI 4250 (Practicum in Reading) and EdCI 4400 (Classroom Management and Interactions). Middle school majors have additional field experience in EdAd 4130 (The Middle School) and EdCI 4340 (Teaching Strategies in the Middle School).

Secondary majors, after the early two-course block, complete their second pre-student-teaching field experience in EdCI 3550 (Practicum in Secondary Instruction) and their third in EdCI 4520 (Secondary Field Experience II) which is offered in conjunction with the special methods course in the Professional Education Semester.

Professional Education Semester

Elementary and middle school majors using this catalog are required to student teach for 14 weeks, earning 12 semester hours during the Professional Education Semester.

Majors in special education using this catalog are required to student teach for a minimum of 12 weeks (usually 14), earning 12 semester hours during the Professional Education Semester. Special education majors also have the option of enrolling for student teaching for 16 weeks, earning 16 semester hours of credit (spring semester only).

Secondary and K-12 education majors must plan for a senior semester in which they enroll full-time in a professional block of courses which includes student teaching. The 16-week semester consists of two parts--four weeks on campus in 3-4 semester hours of course work and twelve weeks of student teaching (all day, five days a week in a school setting). Secondary and K-12 majors customarily enroll in EdCI 4520, a special methods course in their major field, and EdCI 4595 and ICap 4468. See the appropriate department program listing for any variations in this requirement. Students following programs not clearly covered by these general statements or the department program listing should see the Director of Clinical Services and Certification for information.

Attendance at all professional education semester activities is required. Any exceptions must be approved by the Director of Clinical Services and Certification.

ELEMENTARY EDUCATION Functional Major, B.S. in Ed. Degree

Elementary teacher certification in Missouri is available at two levels--for Grades 1-6 and for early childhood education Birth-Grade 3. Careful program planning could lead to certification in both of these levels, or for one level with special education certification. Students interested in two levels of certification should see the Director of Clinical Services and Certification.

		Sem. Hours
CORE REQUIREMENTS		28
EdCI 3210	Methods of Reading Instruction 3	Hed 3310 Health Ed. in the Elem. School . . 2
EdCI 3220	Teaching of the Language Arts 3	Hed 4330 First Aid & CPR for Educators . . . 1
EdCI 2310	Computer/Technology in Ed. 2	Art 3910 Art for Elementary Schools 2
EdCI 3410	Children's Literature 2	Math 2810 Concepts & Methods in Elementary School Mathematics 5
EdCI 3420	Tchg. Social Studies & Economics in Elementary & Middle Schools 3	Mus 3301 Music for Elementary Schools . . . 2
ScEd 4120	Elem. Science Tchg. Strategies 3	
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, HEd 3310 and HEd 4330 will be allowed to fulfill 3 s.h. of Div. II E; IGen 3468 fulfills 3 s.h. of Div. III A)		42
SpCm 1000	Div. I B (required) 3	PoIS 1510 Div. II B (required) 3
Math 1620	Div. I C (required) 3	Hist 1350 Div. II B or
Science Choice	Group I or Group II of Div. II A 7	Hist 1351 Div. II B (required) 3
Group I		Geog 2212 Div. II B (required) 3
ScEd 1120	Biology for Teachers 3	Art 1800 Div. II C or
EaSc 1004	Div. II A or	Mus 1210 Div. II C (required) 3
Chem 1104	Div. II A or	Modern (Foreign)
Phys 1104	Div. II A (required) 4	language Div. II C (required) 3
or		EdCI 2110 Div. II D (required) 3
Group II		
ScEd 1110	Physics for Teachers 3	
Biol 1004	Div. II A (required) 4	

Elementary Education functional majors will be allowed to substitute ScEd 1110 or ScEd 1120 to fulfill 3 s.h. of Div. II A.

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GRADES 1-6 Functional Major Option, B.S. in Ed. Degree (41 000720)

(Certification to teach elementary education in grades 1-6)

					Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS					36	
Core Requirements					28	
EdCI	4215	Tchg. Reading in Content Fields	3	EdCI 4250	Practicum in Reading	1
EdCI	4220	Analysis & Corr. of Rdg. Disabil.	2	PE 3420	Elem. School Phys. Ed. Activities	2
AREA OF CONCENTRATION REQUIREMENTS					21	
An approved minor in a teaching/specialty area appropriate for elementary majors.						
UNIVERSITY STUDIES REQUIREMENTS (listed for this program)					42	
PROFESSIONAL EDUCATION REQUIREMENTS					31	
EdCI	2100	Foundations of Education		IGen 3468	Community, School &	
		& Field Experience	3		Family Connections	3
EdCI	2101	Models of Teaching	2	Psy 2220	Child Psychology	3
EdCI	4400	Classroom Mgt. & Interactions	3	Psy 2240	Educational Psychology	3
EdCI	4495	Student Tchg. Elementary I	6	EdSp 2100	Ed. of the Exceptional Child, 2 or	
EdCI	4496	Student Tchg. Elementary II	6	Psy 4200	Psy. of Exceptional Children, 2	2
MINIMUM TOTAL					130	

EARLY CHILDHOOD, Birth-Grade 3 Functional Major Option, B.S. in Ed. Degree (41 000722)

(Certification to teach early childhood education and elementary education, Birth-Grade 3)

					Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS					28	
Core Requirements					28	
AREA OF CONCENTRATION REQUIREMENTS					28	
EdCI	2830	Early Childhood Principles	2	PE 2410	Movement Skills & Activities	
EdCI	2850	Dev. & Learning Through Play	3		for Primary Grades	2
EdCI	4830	Early Childhood Curriculum	3	EdSp 3150	Community & Family Resources	2
HES	1220	Child Development	3	EdSp 3151	Community & Family Resources	
HES	1240	Pract. in Child Development	2		Practicum	1
HES	3250	Org. & Adm. of Programs		EdSp 4370	Screening, Diagnosing &	
		for Young Children	3		Prescribing Instructions	3
HES	2310	Early Childhood Nutr. & Health	2	CD 2000	The Bases of Speech & Lang.	2
UNIVERSITY STUDIES REQUIREMENTS (listed for this program)					42	
PROFESSIONAL EDUCATION REQUIREMENTS					31	
EdCI	2100	Foundations of Education		IGen 3468	Community, School &	
		& Field Experience	3		Family Connections	3
EdCI	2101	Models of Teaching	2	Psy 2220	Child Psychology	3
EdCI	4400	Classroom Mgt. & Interactions	3	Psy 2240	Educational Psychology	3
EdCI	4495	Student Tchg. Elementary I	6	EdSp 2100	Ed. of the Exceptional Child, 2 or	
EdCI	4496	Student Tchg. Elementary II	6	Psy 4200	Psy. of Exceptional Children, 2	2
MINIMUM TOTAL					129	

MIDDLE SCHOOL-JUNIOR HIGH SCHOOL Major, B.S. in Ed. Degree(Certification to teach language arts, grades 5-9,
and selected area(s) of concentration/endorsement, grades K-9 or 5-9)
(41 000840)

					Sem. Hours	
MAJOR REQUIREMENTS					38	
EdCI	3210	Methods of Reading Instruction	3	Hed 4320	Teaching Sex Education in	
EdCI	3220	Teaching of the Language Arts	3		the School	3
EdCI	4215	Tchg. Reading in the Content Fields	3	Hed 4330	First Aid & CPR for Educators	1
EdCI	4220	Analysis & Corr. of Rdg. Disabil.	2	Engl 1020	Composition I	3
EdCI	4250	Practicum in Reading	1	Engl 1030	Composition II	3
EdCI	2310	Computer/Technology in Ed.	2	Math 3812	Mathematics in the Integrated	
EdCI	3440	Literature for the Middle Level	2		Middle School Curriculum	3
EdAd	4130	The Middle School	3	Engl 2205	American Lit. 1865 to Present, 3 or	
Hed	4310	Drugs & Youth	3	Engl 2220	World Masterpieces, 3	3

A student with a math minor will not enroll in Math 3812, see minor advisor.

MINOR REQUIREMENTS

Select one area of concentration from the following list: Art (27 s.h.), Business Education (21 s.h.), English (24 s.h.), French (21 s.h.), German (21 s.h.), Home Economics (25 s.h.), Mathematics (24-25 s.h.), Science (24 s.h.), Social Studies (26-27 s.h.), Speech Communication & Theatre (21 s.h.), Spanish (21 s.h.), Technology Education (21 s.h.)

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An additional certification may be obtained by choosing one of the above areas of concentration plus the following area of concentration: Health Education (22 s.h.)

UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, Engl 1020 and Engl 1030 fulfill 6 s.h. of Div. I A;					
Engl 2205 or Engl 2220 fulfills 3 s.h. of Div. II C; IGen 3468 fulfills 3 s.h. of Div. III A)				36	
Math	1620	Div. I C (required)	3	PolS 1510 Div. II B (required)	3
Science Choice	Group I or Group II of Div. II A		7	Geog 2212 Div. II B (required)	3
Group I				Hist 1350 Div. II B or	
ScEd	1120	Biology for Teachers	3	Hist 1351 Div. II B (required)	3
EaSc	1004	Div. II A or		Modern (Foreign)	
Chem	1104	Div. II A or		language	Div. II C (required)
Phys	1104	Div. II A (required)	4	EdCI 2110 Div. II D (required)	3
or				Psy 4230 Psy. of Adolescence	3
Group II					
ScEd	1110	Physics for Teachers	3		
Biol	1004	Div. II A (required)	4		
Middle School majors will be allowed to substitute ScEd 1110 or ScEd 1120 to fulfill 3 s.h. of Div. II A and to substitute Psy 4230 to fulfill 3 s.h. in Div. II E.					
PROFESSIONAL EDUCATION REQUIREMENTS				32-33	
EdCI	2100	Foundations of Education & Field Experience	3	IGen 3468 Community, School & Family Connections	3
EdCI	2101	Models of Teaching	2	Psy 2240 Educational Psychology	3
EdCI	4300	Ed. Measurement & Evaluation	2	EdSp 2100 Ed. of the Exceptional Child, 2 or	
EdCI	4340	Tchg. Strategies in the Middle School	3	Psy 4200 Psy. of Exceptional Children, 2	2
EdCI	4497	Student Tchg. Middle School I	6	A teaching methods course is required for each area of concentration or area of endorsement	
EdCI	4498	Student Tchg. Middle School II	6		2-3
MINIMUM TOTAL				127	

SECONDARY EDUCATION B.S. in Ed. and B.M.E. Degrees

Bachelor of Science in Education and Bachelor of Music Education degree programs include the following professional education components toward the total of a minimum of 124 semester hours required. A teaching degree shall include a major and a minor, two teaching majors, or a functional major. (Minors need not be in a teaching field.) Majors, functional majors, and minors leading to certification to teach are listed in the respective

departments or service fields with teaching programs. Professional education requirements listed here apply to each secondary or K-12 program, with exceptions as noted in certain majors.

Before being admitted to the Professional Education Semester, secondary education candidates must have completed a course in adolescent psychology (Psy 4230).

MAJOR OR FUNCTIONAL MAJOR REQUIREMENTS				Sem. Hours	
				30-67	
Central offers certification as indicated under Certification (see page 179) in the College of Education and Human Services.					
MINOR REQUIREMENTS				0-25	
Central offers certification as indicated under Certification (see page 179) in the College of Education and Human Services.					
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. III B)				45	
PROFESSIONAL EDUCATION REQUIREMENTS				28-29	
EdCI	2100	Foundations of Education & Field Experience	3	EdCI 4595 Student Teaching Secondary I	5
EdCI	4210	Tchg. of Rdg. in the Sec. School	2	Psy 2240 Educational Psychology	3
EdCI	4300	Ed. Measurement & Evaluation	2	Psy 4200 Psy. of Exceptional Children, 2 or	
EdCI	3500	Sec. Tchg. & Behavioral Mgt.	3	EdSp 2100 Ed. of the Exceptional Child, 2	2
EdCI	3550	Practicum in Secondary Instruction	1	ICap 4468 Student Teaching Secondary II	4
EdCI	4520	Secondary Field Experience II	1	Special methods in major field	2-3
Minimal computer literacy and proficiency in media technology are required prior to student teaching. These requirements may be met by EDCI 2310 - 2 hours. Majors in Business Education, Technology Education, Mathematics, Physical Education, Vocational Agriculture, and Vocational Home Economics satisfy computer proficiency through their programs, but must meet the audio-visual requirements.					
FREE ELECTIVES				0-11	
See program listings as indicated above for number of hours available.					
MINIMUM TOTAL				124	

Special Projects

EdCI 1001 Special Projects in Undergraduate Education (1-3) Freshman and sophomore independent study or specially constructed experiences for a group on specific areas of concern. May be repeated for a maximum of 6 semester hours.

EdCI 4000 Special Projects in Education (1-6) Individual or group study of problems in special areas of interest. May be repeated for a maximum of 6 semester hours.

EdCI 5000 Special Projects (1-6) Opportunities for individual or groups of students to pursue an emerging or special professional topic or issue. May be repeated for a maximum of 6 semester hours. Prerequisite: consent of instructor.

Foundations

EdCI 2100 Foundations of Education and Field Experience (3) An overview of the American public school; its nature, purpose, history, philosophy, organization and administration; contemporary issues and trends. Includes 25 hours of public school classroom observation. Prerequisites: 2.5 cumulative GPA; should be taken concurrently with Psy 2240 during the sophomore year. In addition, should be taken concurrently with EdCI 2101 by early childhood, elementary, and middle school majors.

EdCI 2101 Models of Teaching (2) Furnishes the pre-service teacher models of teaching and an orientation to the Teacher Education Program. Prerequisites: 2.5 cumulative GPA; should be taken concurrently with EdCI 2100 and Psy 2240 during the sophomore year.

EdCI 2110 World Diversity and America (3) Provides an analysis of global interdependence with an emphasis in cultural interaction to better understand human diversity issues, diverse perspectives, one another, and one's own place in the world and America.

EdCI 2150 Introductory Field Experience (1) Introductory experiences in the classroom that provide opportunities for becoming involved with students and professional teachers in the school setting. Prerequisite: Should be taken concurrently with EdCI 2100 and Psy 2240 during the sophomore year.

EdCI 4100 History of Education (2) Development of the educational system with reference to social movements and the educational philosophies of important educators.

EdCI 4120 Career Education and Public Schools (2) Historical, philosophical, and psychological backgrounds of career education to develop the ability of integrating career education with the regular curriculum.

EdCI 4150 Summative Seminar* (1) A culminating experience for elementary education majors which will provide an opportunity for students to synthesize the learnings from their program. Prerequisites: admission to Teacher Education Program.

*Not available for graduate credit.

EdCI 5120 Philosophy of Education (2) A critical analysis of the basic characteristics of alternative philosophical families of thought, with their implications and applications in the schools.

EdCI 5130 Comparative Education (2) Provides a broad understanding of educational organizations, practices, and developments in other countries, and the resulting influence upon contemporary American educational practice.

EdCI 6140 Education in the Social Order (3) A study of the school as a social institution in relationship to its role to the total society. Attention will be focused on the pluralistic uniqueness of American society and the resulting multicultural makeup of American society which may affect major educational issues. Prerequisite: EdCI 5900 or equivalent.

Reading

EdCI 3210 Methods of Reading Instruction (3) Fundamental concepts, skills, attitudes and methods of developing, promoting and managing reading instruction. The course includes tutoring and teacher-aide field experiences outside of class hours. Prerequisites: EdCI 2100 and Psy 2240.

EdCI 3220 The Teaching of the Language Arts (3) All aspects of communication will be considered--reading, writing, listening, and speaking. Prerequisites: EdCI 2100 and Psy 2240.

EdCI 4210 The Teaching of Reading in the Secondary School (2) Designed to prepare both the regular secondary teacher to handle reading problems common to his/her special subject matter area and the reading teacher to carry out a general reading program in the high school. Prerequisites: admission to Teacher Education Program; EdCI 2100 and Psy 2240, or equivalent.

EdCI 4215 Teaching Reading in Content Fields (3) An examination of reading comprehension strategies, study skills, concept development, and critical thinking, especially with regard to the reading demands of content subjects and the needs of typical and atypical learners. Prerequisites: admission to Teacher Education Program and EdCI 3210 or equivalent.

EdCI 4220 Analysis and Correction of Reading Disabilities* (2-3) A focus on assessment of students' reading abilities and selecting appropriate teaching methods and materials to meet individual needs in reading instruction. The course includes a practicum, or field experience component, which permits application of learning and instructional decision-making. Prerequisites: admission to Teacher Education Program; EdCI 4210 or EdCI 4215; EdCI 4220 must be taken concurrently with EdCI 4250.

EdCI 4250 Practicum in Reading* (1) A supervised field experience in the assessment of reading, analysis of reading difficulties, and educational decision-making in planning and teaching appropriate lessons. Prerequisites: admission to Teacher Education Program, EdCI 4215, and must be taken concurrently with EdCI 4220.

*Not available for graduate credit.

EdCI 5205 Evaluation of Reading Methods and Materials (3) Evaluation and comparison of the most recent approaches to reading instruction, as well as traditional approaches. Provides theoretical bases of developmental reading and prevention of reading difficulties, and evaluation of materials.

EdCI 5210 Diagnosis and Remediation of Reading Difficulties (3) Various syndromes of reading difficulty, the diagnostic instruments and techniques useful in identifying those syndromes, and the theory and use of remedial methods in conducting a case study. Prerequisite: EdCI 5205 or consent.

EdCI 5220 Practicum in Diagnostic Techniques in Reading (3) Practice in administering, interpreting, and reporting results of formal and informal diagnostic tests of reading difficulties. Prerequisites: EdCI 5210; must be taken concurrently with EdCI 5230; Central graduate students who have an approved program of study or consent of department chairperson.

EdCI 5230 Practicum in Remedial Techniques in Reading (3) Practice of planning and conducting appropriate instruction for two or more school-age children and reporting results of remedial methods in a case study of reading difficulties. Prerequisite: EdCI 5210; must be taken concurrently with EdCI 5220; Central graduate students who have an approved program of study or consent of department chairperson.

EdCI 5240 Investigations in Reading (2) An intensive analysis of reading programs from the standpoint of current instructional and remedial methodologies. Prerequisite: a basic course in reading or consent.

EdCI 6240 Supervision of Instruction in Reading (2) Consideration of the supervisory problems concerned with reading, including grade placement, methods and materials, and evaluation of achievement. Prerequisites: EdCI 5240 and EdCI 5210.

Curriculum and Instruction

EdCI 2310 Computer/Technology in Education (2) Provides pre-service teachers with basic knowledge and skill in microcomputer and instructional media operation for instructional purposes in schools. Meets the proficiency requirement for microcomputer/audiovisual equipment that is a prerequisite for student teaching.

EdCI 4300 Educational Measurement and Evaluation* (2) Instruction in the use and interpretation of standardized tests, the construction of classroom tests, and the interpretation of tests results. Prerequisites: admission to Teacher Education Program; should be taken concurrently with EdCI 4520 and special methods in the major field during the Professional Education Semester.

*Not available for graduate credit.

EdCI 4312 LOGO for Teachers (1) Provides teachers with a basic knowledge of the LOGO programming language, teaching strategies to incorporate LOGO into the school curriculum, and skills for teaching the programming language. Prerequisite: EdCI 2310 or consent of instructor.

EdCI 4314 Integrated Microcomputer Applications for Teachers (2) Develops knowledge and skill in using word processing, database, and spreadsheet in the classroom. Students may select Apple II, IBM, and/or Macintosh computers. Prerequisite: EdCI 2310 or consent of instructor.

EdCI 4318 Telecommunications in Education (2) Provides students in education with the concepts and skills needed in using telecommunications networks for instructional purposes, research, and information access and delivery. Prerequisite: EdCI 2310 or equivalent experience.

EdCI 4320 Classroom Discipline and Motivation (2) Designed to help teachers advance their knowledge and skills in general classroom management and in helping the apathetic and/or behaviorally troubled student.

EdCI 4340 Teaching Strategies in the Middle School (3) Middle school teaching strategies building upon middle

level organization and curriculum, with particular emphasis on integration and interdisciplinary teaming. Prerequisites: admission to Teacher Education Program, Psy 4230 and EdAd 4130.

EdCI 5320 Elementary School Curriculum (3) Principles, techniques, and present trends in curriculum construction and evaluation for the elementary school.

EdCI 5330 Secondary School Curriculum (2) Principles, techniques, and present trends in curriculum construction and evaluation for the secondary school.

EdCI 5340 Improvement of Teaching (2) A comprehensive course in the development of plans for the improvement of teaching.

EdCI 5350 Supervision of Student Teaching (2) Designed to meet the practical needs of elementary and secondary teachers who are responsible for the supervision of student teachers.

EdCI 5360 Seminar in Curriculum and Instruction (2-3) An in-depth study of topics current in education such as multicultural education, competency-based education, values education, rural education, the improvement of instruction and instructional programs, and other topics relevant to education. May be repeated with a different focus for a maximum of 6 semester hours.

EdCI 6340 Curriculum Design and Construction (3) Designed to survey the theory and practice of curriculum development as determined by social and cultural change, learning theory, and the nature of knowledge. The processes of curriculum design and construction receive major emphasis. Prerequisite: EdCI 5320 or EdCI 5330.

Elementary Education

See pages 178-181 for specific policies and procedures governing the administration of the Teacher Education Program, and for requirements for eligibility for student teaching.

EdCI 3410 Children's Literature (2) Familiarity with various types of literature for children, principles for selection of children's books, and methods of presentation for integration of children's literature into the total elementary curriculum. Prerequisites: EdCI 2100, EdCI 2101 and Psy 2240.

EdCI 3420 Teaching Social Studies and Economics in Elementary and Middle Schools (3) Social studies and economics education competencies are developed. These are related to teaching methods; content, skills, and attitudes; and evaluative devices and assessments. Prerequisites: EdCI 2100 and Psy 2240.

EdCI 3440 Literature for the Middle Level (2) Familiarity with various types of literature for middle level children, principles for selection of books, and methods of presentation for integration of literature into the middle school curriculum. Prerequisites: EdCI 2100, EdCI 2101 and Psy 2240.

EdCI 4400 Classroom Management and Interactions* (3) Helps pre-service teachers advance their knowledge and skills using general, age appropriate classroom management techniques, integrating them with developmentally appropriate teaching strategies. Prerequisites: admission to Teacher Education Program and should be taken the semester just prior to student teaching.

EdCI 4495 Student Teaching Elementary I* (3, 5, 6, 8) To be taken in the Professional Semester. For elementary

majors, double majors in elementary education and special education, K-12 majors and elementary physical education. Prerequisites: admission to Teacher Education Program; EdCI 4400. Should be taken concurrently with EdCI 4496 or EdCI 4498 or ICap 4468 or EdSp 4395, depending on the sequence followed. (See description of Professional Education Semester.)

EdCI 4496 Student Teaching Elementary II* (4, 6, 8) To be taken in the Professional Semester. For elementary classroom majors and majors which provide K-12 certification (except speech pathology). Prerequisites: admission to Teacher Education Program; must be taken concurrently with EdCI 4495 or EdCI 4595.

*Not available for graduate credit.

EdCI 4497 Student Teaching Middle School I (6) To be taken in the Professional Semester. For middle school majors, double majors in elementary education, special education, or secondary education. Prerequisites: admission to Teacher Education Program; EdCI 4340; should be taken concurrently with EdCI 4498 or ICap 4468 or EdCI 4496 or EdSp 4395, depending on sequence followed.

EdCI 4498 Student Teaching Middle School II (6) To be taken in the Professional Semester. For middle school majors. Prerequisites: admission to Teacher Education Program; should be taken concurrently with EdCI 4497 or EdCI 4495 or EdCI 4595 or EdSp 4395.

Secondary Education

See pages 179-181 for specific policies and procedures governing the administration of the Teacher Education Program, and for requirements for eligibility for student teaching.

EdCI 3500 Secondary Teaching and Behavioral Management* (3) An analysis of the teaching/learning process with emphasis on instructional planning, component teaching skills and adolescent behavior management. This course should be taken no earlier than one semester prior to student teaching. Analysis of the teaching/learning process with emphasis on instruction and adolescent behavior management. Practical experience of 25 hours at a secondary public school is required. Prerequisites: must be taken concurrently with EdCI 3550 and admission to Teacher Education Program. Should be taken no earlier than one semester prior to student teaching.

EdCI 3550 Practicum in Secondary Instruction (1) Requires a minimum of 50 hours of co-teaching with a public school classroom teacher. Prerequisites: admission to Teacher Education Program and must be taken concurrently with EdCI 3500. Should be taken no earlier than one semester prior to student teaching.

EdCI 4520 Secondary Field Experience II* (1) Experiences in the secondary school classroom that provide the teacher candidate more advanced involvement in the teaching-learning process. Prerequisites: admission to Teacher Education Program; should be taken concurrently with special methods in the major field and EdCI 4300 during the Professional Semester.

EdCI 4595 Student Teaching Secondary I* (3, 5-6) To be taken in the Professional Semester. For secondary and modern language majors. Prerequisites: admission to Teacher Education Program; EdCI 3500. Should be taken

concurrently with ICap 4468 or EdCI 4496 or EdCI 4498, depending on the sequence followed. (See description of Professional Education Semester.)

Adult Education

EdCI 4620 Foundations and Organization of Adult Education (3) An analysis of the philosophy, objectives, nature, and scope of adult education as synthesized in the organization of adult education programs.

EdCI 4630 Curriculum and Instruction in Adult Education (2) A survey of the theory, development, and trends in designing programs of learning experience for adult education. Prerequisites: EdCI 4620 and Psy 4210.

EdCI 4640 Methods of Teaching Adults (2) Methodology (methods, techniques, and/or skills) to teach adults with functional illiteracy.

EdCI 5640 Teaching Reading to Adults (2) The teaching of basic reading skills to adults, especially nonreaders and functional illiterates.

EdCI 5650 Seminar in Adult Education (3) Current issues, problems and trends in adult education. Prerequisites: EdCI 4620, Psy 4210 and EdAd 5120.

Special Methods

Prerequisites: admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with EdCI 4300 and EdCI 4520 during the Professional Semester.

EdCI 4700 Methods of Teaching Music* (2) Piano proficiency exam must have been passed prior to enrollment in this course.

EdCI 4710 Methods of Teaching Physical Education* (2)

EdCI 4720 Methods of Teaching Art* (2)

EdCI 4730 Methods of Teaching Business--General* (2)

EdCI 4740 Methods of Teaching Vocational Home

Economics* (3) A course for students preparing to teach vocational home economics. The organization and philosophy of vocational home economics, planning of home economics departments and determination of the contents of home economics programs at the elementary, secondary, and adult levels. Prerequisites: 15 semester hours of home economics with 5 semester hours of foods and nutrition, 5 semester hours of textiles and clothing, and 5 semester hours in related subjects; EdSp 2100; and EdCI 4300 or concurrently.

EdCI 4754 Methods of Teaching Foreign Languages* (2)

EdCI 4760 Principles of Teaching Industrial Education* (2) Prerequisite: IA&T 3110.

EdCI 4770 Methods of Teaching Mathematics* (2)

EdCI 4774 Methods of Teaching Social Studies* (2)

EdCI 4780 Methods of Teaching Vocational Agriculture* (2)

EdCI 4784 Methods of Teaching Speech and Theatre* (2)

EdCI 4790 Methods of Teaching English* (2)

EdCI 4794 Methods of Teaching Science* (2)

*Not available for graduate credit.

Early Childhood Education

EdCI 2830 Early Childhood Principles (2) Provides students a critical understanding concerning the application of educational principles in order to make professional decisions about young children (birth-8).

EdCI 2850 Development and Learning Through Play (3) Provides theoretical and empirical perspectives connecting play to young children's learning and development. Develops knowledge and skills to implement play-based curriculum in diverse settings. Prerequisite: EdCI 2830 for students seeking teacher certification.

EdCI 4830 Early Childhood Curriculum (3) Provides students with the theories and principles of curriculum development, knowledge, and skills of implementing integrated (developmentally and culturally appropriate) curriculum in early childhood (birth-8). Prerequisites: admission to Teacher Education Program and EdCI 2830 for undergraduates.

EdCI 4850 The Child's Physical and Social World (3) Experiences with materials, techniques, and resources for broadening the child's awareness and understanding of his/her physical and social environment. Prerequisites: admission to Teacher Education Program; Psy 2240 or equivalent.

Individual Study and Research

EdCI 5900 Introduction to Research (3) Overview and planning for graduate school with an introduction and study of the major principles, tools, and techniques employed in educational research, including the development of a research prospectus.

EdCI 6900 Readings in Education (1-5) For advanced students in education. Individual study and research regarding problems or areas of particular interest in education. A written report or reports will be required. May be repeated for a maximum of 5 semester hours.

EdCI 6960 Research Problems (2) Special investigation of an approved problem in the major field. A prospectus is required. May be repeated for a maximum of 6 semester hours. Prerequisite: EdCI 5900.

EdCI 6990 Thesis (3-6) Special investigation of an approved problem in classroom teaching resulting in a formal thesis. A prospectus is required.

Integrative Studies Capstone

ICap 4468 Student Teaching Secondary II* (4) To be taken in the Professional Semester. For all secondary majors, all K-12 majors, and K-9 majors in elementary physical education. Prerequisites: admission to Teacher Education Program; must be taken concurrently with EdCI 4495 or EdCI 4595 or EdSp 4395. **To be effective Fall Semester 1999-2000.**

*Not available for graduate credit.

Integrative Studies General

IGen 3468 Community, School and Family Connections (3) Focuses on the interactions among community, school and family systems relative to existing and emerging paradigms.

IGen 3896 Assessing Global Change for the Information Age (3) Challenges students to assess present and future trends, evaluate what is desirable, and reflect on their responsibility for the quality of life in the information age.

Science Education

In the area of Science Education, the second digit in the course number stands for the following: 0--Unclassified, 1--General Science, 2--Astronomy, 3--Biology, 4--Chemistry, 5--Earth Science, 6--Mathematics, 7--Physics, 8--Science Education, 9--Research.

SCIENCE Minor, B.S. in Ed. Degree

(Certification available to teach science in grades 5-9 for elementary/middle school-junior high school functional majors only. Elementary education functional majors 1-6 may use this as an area of concentration. This minor is not available for secondary or K-12 education majors.) (000821)

				Sem. Hours	
MINOR REQUIREMENTS				24	
ScEd	1110	Physics for Teachers	3	EaSc 3114 Meteorology	3
ScEd	1120	Biology for Teachers	3	Biol 1004 Intro. to the Sciences: Ecology	4
EaSc	1004	Intro. to the Sciences: Geology	4	Chem 1104 Intro. to the Sciences: Chemistry	4
EaSc	3010	Environmental Geology	3		

UNIVERSITY STUDIES REQUIREMENTS (In the minor, Biol 1004 and Chem 1104 fulfill 7 s.h. of Div. II A)

General Science

ScEd 1110 Physics for Teachers (3) A demonstration, laboratory, lecture and discussion course in physics designed for elementary and nonscience secondary teachers. Credit earned in this course may not be substituted for any courses required for a secondary major or minor in the sciences.

ScEd 1120 Biology for Teachers (3) A demonstration, laboratory, lecture, and discussion course in biology designed for elementary and nonscience secondary teachers. Credit earned in this course may not be substituted for any courses required for a secondary major or minor in the sciences.

ScEd 4120 Elementary Science Teaching Strategies (3) Science concepts commonly developed in the elementary grades, with special emphasis on objective materials, field trips, experiments, laboratory and other activities. Enrollment is limited to students preparing to become elementary teachers. Prerequisites: admission to Teacher Education Program; completion of a physical science and biological science, each with labs, (ScEd 1110 and Biol 1004) or (ScEd 1120 and EaSc 1004 or Chem 1104 or Phys 1104).

Science Education

ScEd 4800 Special Projects in Science Education (1-3) May be repeated for a maximum of 3 semester hours.

ScEd 4820 Curriculum Development in Physical Science (3) The review and analysis of curriculum materials and laboratory strategies in physical science. Prerequisite: 20 semester hours of science.

ScEd 5800 Special Topics in Science Education (1-3) Individual work under supervision of a staff member. May be repeated for a maximum of 3 semester hours.

ScEd 5813 Problems in Elementary Science Education (3) Current problems in improving the teaching of science in the elementary school. Prerequisite: ScEd 4120.

Human Environmental Sciences

In the Department of Human Environmental Sciences, the second digit in the course number stands for the following: 0--General, 1--Family Economics and Management, 2--Family and Individual Development, 3--Foods and Nutrition, 4--Textiles and Clothing, 5--Housing, Home Furnishings and Equipment, 6--Family Health, 7--Professional, 8--Hospitality.

Department of Human Environmental Sciences Statement of Policy

A grade of "C" or above required of all courses listed as curriculum requirements of all majors/minors.

CHILD DEVELOPMENT, Associate in Science Degree

(22 000115)

						Sem. Hours	
FIRST YEAR REQUIREMENTS						30	
HES	1220	Child Development	3	PE	2410	Movement Skills & Activities for Primary Grades	2
HES	1230	Observation of Children	2			Ed. of the Exceptional Child	2
HES	1240	Pract. in Child Development	3	EdSp	2100	The Bases of Speech & Lang.	2
HES	2310	Early Childhood Nutr. & Health	2	CD	2000	History of the U. S. to 1877, 3 or	3
HES	1700	Introduction to Home Economics	3	Hist	1350	History of the U. S. from 1877, 3 or	3
Art	3910	Art for Elementary Schools	2	Hist	1351	American Government, 3	3
Engl	1020	Composition I	3	PolS	1510		
EdCI	2850	Dev. & Learning Through Play	3				
SECOND YEAR REQUIREMENTS						32	
HES	2240	Field Exp. in Early Childhood	3	EdCI	2310	Computer Technology in Education	2
HES	3222	Early Childhood	3			Children's Literature	2
HES	3230	Family Syst. & Lifespan Dev.	3	EdCI	3410	First Aid & CPR for Educators	1
HES	3240	Parent-Child Interaction	3	Hed	4330	Community & Family Resources	2
HES	3250	Org. & Adm. of Programs for Young Children	3	EdSp	3150	Departmentally approved electives	8
Mus	3301	Music for Elementary Schools	2				
MINIMUM TOTAL						62	

DIETETICS Functional Major, B.S. Degree

(Registration as a dietitian requires internship beyond B.S. degree. Fulfills the "Didactic Program in Dietetics Academic Requirements" of the American Dietetic Association.)
(43 000116)

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						65	
HES	2322	Food Preparation	3	HES	4345	Senior Dietetics Seminar	3
HES	3332	Quantity Food Prod. & Service	3	Biol	2401	Anatomy & Physiology I	4
HES	3333	Food Systems Management	3	Biol	2402	Anatomy & Physiology II	4
HES	3334	Food Service Equip. & Purch.	3	Biol	3611	Microbiology	4
HES	3340	Nutrition	3	Chem	2651	Elementary Organic Chemistry ..	3
HES	3350	Community Nutrition	3	Chem	2652	Elementary Biochemistry	2
HES	3360	Entrepreneurship for Dietetics Professionals	3	Acct	2101	Principles of Financial Acct.	3
HES	4326	Experimental Foods	3	Mgt	3310	Principles of Management	3
HES	4340	Advanced Nutrition	3	HRM	3920	Human Resource Management ..	3
HES	4342	Diet Therapy	3	Psy	4520	Statistics for the Behavioral Sciences	3
HES	4343	Medical Nutrition	3				
MINOR NOT REQUIRED							
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Biol 2401 and Biol 2402 are allowed to fulfill 3 s.h. of Div. II A)						45	
Chem	1104	Div. II A (required)	4	Soc	1800	Div. II B (required)	3
Psy	1100	Div. II B (required)	3				
FREE ELECTIVES						14	
MINIMUM TOTAL						124	

EARLY CHILDHOOD EDUCATION Minor, B.S. in Ed. Degree

See requirements as outlined in the Department of Curriculum and Instruction.

FOODS Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)
(000124)

						Sem. Hours	
MINOR REQUIREMENTS						24	
HES	2110	Consumer Problems	3	HES	3333	Food Systems Management	3
HES	2322	Food Preparation	3	HES	3334	Food Service Equip. & Purch.	3
HES	3324	Marketing & Serving	3	HES	3340	Nutrition	3
HES	3332	Quantity Food Prod. & Service	3	Acct	2101	Principles of Financial Acct.	3
UNIVERSITY STUDIES REQUIREMENTS (Chem 1104 Div. II A is required)							

GENERAL HOME ECONOMICS Major, B.S. Degree

(43 000121)

						Sem. Hours
MAJOR REQUIREMENTS						47
HES	2110	Consumer Problems	3	Departmentally approved electives from one of the following areas		27-30
HES	1220	Child Development	3	Area 1	Family Economics & Management	
HES	3230	Family Sys. & Lifespan Development	3	*Area 2	Foods & Nutrition	
HES	1700	Introduction to Home Economics ...	3	**Area 3	Textiles & Clothing	
*HES	1310	Intro. to Foods & Nutrition	3	Area 4	Family Dev. & Comm. Services	
**HES	2410	Textiles & Clothing Fund.	3	Area 5	Child Development	
FAMe	1420	Applied Design in Fashion & Apparel Merchandising	2			
MINOR REQUIREMENTS						18-25
UNIVERSITY STUDIES REQUIREMENTS						48
FREE ELECTIVES						4-11
MINIMUM TOTAL						124

*HES 1310 is not available for credit to students choosing Area 2, Foods & Nutrition.

**HES 2410 is not available for credit to students choosing Area 3, Textiles & Clothing.

HOME ECONOMICS Minor, B.S. in Ed. Degree

(Certification to teach general home economics in grades 5-9 available with middle school-junior high school functional major. Elementary education functional majors may use this as an area of concentration.)
(000122)

MINOR REQUIREMENTS				Sem. Hours	
.....				25	
HES	2110	Consumer Problems	3	HES 2424 Clothing Construction	3
HES	1220	Child Development	3	HES 3510 Housing & Home Furnishings	3
HES	1240	Prac. in Child Development	2	FAME 1420 Applied Design in Fashion &	
HES	3230	Family Syst. & Lifespan Development	3	Apparel Merchandising	2
HES	1310	Intro. to Foods & Nutrition	3	FAME 2442 Textiles	3

HOME ECONOMICS Minor for a Bachelor's Degree

(Except for a B.S. in Ed. Degree)
(000225)

MINOR REQUIREMENTS				Sem. Hours	
.....				20-21	
HES	2110	Consumer Problems	3	HES 1310 Intro. to Foods & Nutrition	3
HES	1220	Child Development	3	HES 2410 Text. & Clothing Fund.	3
HES	3230	Family Sys. & Lifespan Development	3	HES 3510 Housing & Home Furnishings	3
				Elective in human environmental sciences	2-3

HOTEL AND RESTAURANT ADMINISTRATION Functional Major, B.S. Degree

(43 000205)

FUNCTIONAL MAJOR REQUIREMENTS				Sem. Hours	
.....				68	
HES	2110	Consumer Problems	3	HES 3860 Beverage Mgt. & Marketing	3
HES	2322	Food Preparation	3	HES 4800 Hotel & Restaurant Management	3
HES	3332	Quantity Food Prod. & Service	3	HES 4830 Hotel-Res. Sanitation & Safety	2
HES	3333	Food Systems Management	3	HES 4840 Legal Asp. of Hotel & Res. Mgt.	3
HES	3334	Food Service Equip. & Purch.	3	HES 4850 Hotel & Res. Equip. & Furn.	3
HES	1700	Introduction to Home Economics	3	Acct 2101 Principles of Financial Acct.	3
HES	4710	Internship in Home Economics	5	Acct 2102 Principles of Managerial Acct.	3
HES	4720	Demonstration Techniques	2	Mgt 3310 Principles of Management	3
HES	4745	Senior Seminar	3	Mgt 3325 Business Communications	3
HES	3800	Front Office Oper. & Management	3	HRM 3920 Human Resource Management	3
HES	3844	Dining Room Management	3	Mkt 3400 Principles of Marketing	3
HES	3850	Plant Operation & Maint. Mgt.	2		
MINOR NOT REQUIRED					
UNIVERSITY STUDIES REQUIREMENTS				48	
Chem	1104	Div. II A (required)	4	CIS 1610 Div. II A or	
Econ	1010	Div. II B (required)	3	LIS 1600 Div. II A (required)	2
FREE ELECTIVES				8	
MINIMUM TOTAL				124	

VOCATIONAL HOME ECONOMICS Functional Major, B.S. in Ed. Degree

(Certification to teach vocational home economics in grades 9-12)
(41 000132)

FUNCTIONAL MAJOR REQUIREMENTS				Sem. Hours	
.....				53	
HES	2110	Consumer Problems	3	HES 3510 Housing & Home Furnishings	3
HES	3120	Family Resource Management	3	HES 3610 Family & Individual Health	2
HES	1220	Child Development	3	HES 1700 Introduction to Home Economics	3
HES	1240	Prac. in Child Development	3	HES 3710 Org. of Voc. Home Econ. Ed.	2
HES	3230	Family Sys. & Lifespan Dev.	3	HES 3750 Coordination of Occupational	
HES	3240	Parent-Child Interaction	3	Home Economics Prog.	2
HES	2322	Food Preparation	3	FAME 1420 Applied Design in Fashion	
HES	3324	Marketing & Serving	3	& Apparel Merchandising	2
HES	3340	Nutrition	3	FAME 2430 Fashion in Dress	3
HES	2424	Clothing Construction	3	FAME 2442 Textiles	3
HES	2520	Household Equipment	3		
MINOR NOT REQUIRED					
(continued on next page)					

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UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the professional education requirements, ICap 4468 fulfills						
3 s.h. of Div. III B)						45
Chem	1104	Div. II A (required)	4	Hist	1350	Div. II B or
Biol	1003	Div. II A (required)	3	Hist	1351	Div. II B (required)
PolS	1510	Div. II B (required)	3	Psy	4230	Psy. of Adolescence
Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. in Div. II B.						
PROFESSIONAL EDUCATION REQUIREMENTS (see page 183)						26
This includes 3 s.h. of "special methods in major field" required for certification. Students shall substitute						
HES 3710 for EdCI 3500.						
MINIMUM TOTAL						124

General

HES 1010 Individual and Family Relationships (3) Focus on family relationships and personal development including topics of self-esteem, informed decision making, gender roles, love and mate selection, stress and crisis management, communication and conflict resolution, domestic violence, sexuality, parenting and human diversity.

HES 4000 Special Projects in Home Economics (1-3) Investigation of contemporary problems and issues in home economics. May be repeated for a maximum of 6 semester hours.

HES 6080 Research in Home Economics (2-3) Independent investigation of a specific problem. May be repeated for a maximum of 6 semester hours. Prerequisite: IA&T 5130 or EdCI 5900 or equivalent.

HES 6090 Thesis (6) Special investigation of an approved problem based on a prospectus in the area of home economics resulting in a formal thesis. Prerequisites: consent and IA&T 5130 or EdCI 5900 or equivalent.

Family Economics and Management

HES 2110 Consumer Problems (3) Assists students in becoming aware of the rights and responsibilities of the consumer in the economy and the resulting relationship to market operations.

HES 3120 Family Resource Management (3) Effective and efficient management of family resources to maximize personal and family satisfactions. Prerequisite: HES 2110.

HES 4150 Special Problems in Family Economics and Management (2-3) Recent trends. Group and individual problems which will include reports, discussions, bibliographies, research, and experiments. Prerequisite: HES 3120.

HES 5160 Seminar in Family Economics and Management (2-3) Intensive investigation and discussion of specific problems in family economics or management. Research problems may lead to a thesis. Prerequisite: consent of instructor.

Family and Individual Development

HES 1220 Child Development (3) An introduction to the field of child development. Emphasis is on dynamic forces underlying growth and change. Techniques in the study and observation of children.

HES 1230 Observation of Children (2) Techniques of observation and actual observation of children.

HES 1240 Practicum in Child Development (1-3) Student observation and participation with preschool children. Students have the option of working with 2, 3 or 4 year old

children. May be repeated for a maximum of 6 semester hours. Prerequisite: HES 1220.

HES 2240 Field Experience in Early Childhood (3) Supervised training and work experience in an approved child care establishment with emphasis on guiding young children in all aspects of development within the group setting. Prerequisites: consent of instructor and 30 semester hours completed in program.

HES 3222 Early Childhood (3) The physical, motor, intellectual, social, and emotional development of the child. Development of an intelligent philosophy of adult-child relationships. Prerequisite: HES 1240.

HES 3230 Family Systems and Lifespan Development (3) Family relationships and human development with focus on change over the course of the family life cycle.

HES 3240 Parent-Child Interaction (3) Development and understanding of adult-child interaction in the family setting.

HES 3250 Organization and Administration of Programs for Young Children (3) Methods and procedures for setting up and administering a variety of programs for young children. Includes study of state licensing. Prerequisite: HES 1240 or consent of instructor.

HES 4250 Special Problems in Family and Individual Development (2-3) A supervised individual study or group examination of selected recent trends in family or individual development. May include reports, discussions, bibliographies, research, and experiments. May be repeated for a maximum of 6 semester hours. Prerequisite: HES 1240 or equivalent.

HES 5236 Current Issues in Family Development (2) Study of current issues to assist in understanding family development. May be repeated for a maximum of 4 semester hours. Prerequisite: HES 3230 or equivalent.

HES 5250 Special Problems in Lifespan of the Family (2) Study of a variety of topics dealing with the development of families through the life cycle. May be repeated for a maximum of 6 semester hours. Prerequisite: 6 semester hours in family/individual development or consent.

HES 5280 Professional Issues in Sexuality Education (3) Examination of issues related to sexuality education including program models, role of parents, research, and resource development with an emphasis on preparation for certification by the American Association of Sex Educators, Counselors and Therapists. Prerequisite: Nur 4030 or departmental approval.

HES 6260 Seminar in Family and Individual Development (2-3) Intensive investigation and discussion of particular problems with family and individual development. Students may carry on minor research studies of a professional nature which may lead to a thesis. May be repeated for a maximum of 6 semester hours. Prerequisite: background in child development and family living.

Foods and Nutrition

HES 1310 Introduction to Foods and Nutrition (3) A composite course including selection, planning, and nutritional content of food. Not open to foods and nutrition or dietetics majors.

HES 2310 Early Childhood Nutrition and Health (2) Application of principles of nutrition, significance of food habits, including the influences of family living, cultural patterns, and commercialization in relation to the health of young children.

HES 2322 Food Preparation (3) Properties and preparation of grains, fruits, vegetables, milk products, protein foods, fats, sugar products, and flour mixtures through demonstrations and laboratory experiences. Prerequisite: Chem 1104.

HES 3324 Marketing and Serving (3) Consumer-producer problems related to purchasing and serving of meals for different occasions and budgets. Prerequisite: HES 1310 or HES 2322.

HES 3332 Quantity Food Production and Service (3) Principles and standard methods of quality food production, menus, and service in institutions and their application in work experience. Prerequisite: HES 2322.

HES 3333 Food Systems Management (3) Organization and management in food service areas including administrative responsibilities, qualifications, personnel management, and cost control. Prerequisite: HES 3332 or concurrently and Acct 2101.

HES 3334 Food Service Equipment and Purchasing (3) Selection, layout and maintenance of equipment in large quantity food service areas. Also a study of food purchasing for institutions. Prerequisite: HES 3332 or concurrently.

HES 3340 Nutrition (3) Digestive process and fundamental principles of nutrition and their application to the feeding of individuals. Prerequisite: Chem 1103 or Chem 1104.

HES 3350 Community Nutrition (3) Public health nutrition and nutrition care delivery in community programs. Prerequisite: HES 3340.

HES 3360 Entrepreneurship for Dietetics Professionals (3) Identifies and develops dietetic entrepreneurial opportunities in a rapidly changing employment environment. Prerequisites: HES 3333 and HES 3340.

HES 4326 Experimental Foods (3) An experimental approach to the study of factors which influence the behavior of foods. Group and individual experiments. Prerequisite: HES 2322 or equivalent.

HES 4340 Advanced Nutrition (3) An in-depth study of human nutrition and the evaluation of nutritional status. Prerequisites: Biol 2402, HES 3340 and Chem 2652 or Chem 4421.

HES 4341 Child Nutrition (2) Nutritive requirements of mothers during pregnancy and lactation and of children during early childhood. Bases of determining reliability of nutrition information. Prerequisite: HES 1310 or HES 3340.

HES 4342 Diet Therapy (3) Role of nutrition in the prevention and dietary treatment of disease. Prerequisites: Biol 2402, HES 3340 and Chem 2652 or Chem 4421.

HES 4343 Medical Nutrition* (3) A case study oriented approach to nutritional medicine with an in-depth emphasis on pathophysiology and the nutritional care plan in the prevention and treatment of disease. Prerequisite: HES 4342 or concurrently.

HES 4345 Senior Dietetics Seminar* (3) Philosophy and current issues and trends in dietetics. Group and individual problems which will lead to investigation of individual research problem. Prerequisites: Psy 4520 or equivalent and senior class standing.

*Not available for graduate credit.

HES 4350 Special Problems in Foods and Nutrition (2-3) An in-depth study of human nutrition; some foods emphasis. Group and/or individual problems including reports, discussion, bibliographies, research, and experiments. May be repeated for a maximum of 6 semester hours. Prerequisites: HES 3340 and Biol 2402.

HES 4351 Geriatric Nutrition (2) Dietary needs and feeding of the elderly. Prerequisite: HES 3340 or consent.

HES 5360 Seminar in Foods and Nutrition (2-3) Intensive investigation and discussion of specific problems in foods and nutrition. Minor professional research problems may lead to a thesis. May be repeated for a maximum of 6 semester hours. Prerequisite: HES 3340.

Textiles and Clothing

HES 2410 Textiles and Clothing Fundamentals (3) Application of clothing selection and design principles to career apparel. Business applications of textile selections made in the food service and hospitality industry and child care centers. Prerequisite: HES 1700 for human environmental sciences majors.

HES 2424 Clothing Construction (3) Principles and techniques of making alterations in commercial patterns, clothing construction, and care and use of the sewing machine.

Housing, Home Furnishings and Equipment

HES 2520 Household Equipment (3) Selection, use and care of major equipment and small appliance products found in the residential unit. Technical aspects of energy, decision-making and consumer rights and responsibilities. **HES 3510 Housing and Home Furnishings (3)** Housing and home furnishing problems in relation to family living. Application of art principles to selecting, decorating, and furnishing the home. Prerequisite: FAME 1420.

HES 5510 Family Housing (2) Social, psychological, economic, and design aspects of American family housing. Needs, conditions, types of dwellings. Role of local, state, and federal governments in housing.

Family Health

HES 3610 Family and Individual Health (2) Concepts of family health maintenance and practical knowledge of care for illness in the home not requiring professional skill.

Professional

HES 1700 Introduction to Home Economics (3) Philosophy and current issues relative to areas of specialization and career opportunities in home economics. Overview of individuals and their interaction with the human and physical environment related to human growth and development, society, the economy, and technology. Must be taken first year in human environmental sciences program.

HES 3710 Organization of Vocational Home Economics

Education (2) Preparation to teach vocational home economics. The organization and philosophy of vocational education and related legislation, home economics program planning, lesson planning and resource selection.

Prerequisites: EdCI 2100 and 10 semester hours of human environmental sciences courses including HES 1700.

HES 3750 Coordination of Occupational Home

Economics Programs (2) Development of home economics occupational programs on the secondary level.

Responsibilities of the teacher, student, coordinator, advisory council, school, and employer will be studied. Prerequisite: HES 3710.

HES 4710 Internship in Home Economics (3-6) Provides experience for students in cooperating businesses and agencies/organizations. May be repeated for a maximum of 12 semester hours with no more than 6 semester hours graduate credit. Prerequisites: 20 semester hours of major course offerings; undergraduate grade-point average of C or above; departmental approval.

HES 4720 Demonstration Techniques (2) Objectives and basic techniques in planning and presenting classroom and commercial demonstrations, including television programs. Prerequisite: basic human environmental sciences courses.

HES 4745 Senior Seminar* (3) Philosophy, current issues and trends in human environmental sciences related occupations. Focus on problem-solving styles leading to group and individual research problems. Prerequisite: senior standing and approval of Department Advisor.

*Not available for graduate credit.

HES 4750 Curriculum in Home Economics Education (2) Design of programs and courses for consumer homemaking or occupational home economics education including theory, principles, development and implementation, federal and state guidelines, trends and issues. Prerequisite: EdCI 4740 or equivalent.

HES 5740 Current Topics in Home Economics Education (2) Changes evolving in our society which affect the teaching of home economics. May be repeated for a maximum of 6 semester hours. Prerequisite: B.S. in Ed. degree in home economics.

HES 5760 Seminar in Home Economics (2-3) Studies in specialized area problems in home economics with emphasis on individual investigation. May be repeated for a maximum of 6 semester hours.

Hospitality**HES 3800 Front Office Operation and Management (3)**

Function, procedures, systems and management of the front office within the lodging industry. Delineation of relationships between front office and other hotel department functions.

HES 3844 Dining Room Management (3) Develop knowledge and skills necessary for managing the front-of-house areas of food service operations. Prerequisite: HES 2322.

HES 3850 Plant Operation and Maintenance Management

(2) Problems relating to building and plant maintenance. Maintenance and engineering management, organization problems, physical plant maintenance and mechanical maintenance topics as they relate to institutional management are developed.

HES 3860 Beverage Management and Marketing (3) An historic perspective of alcoholic beverages and operations. Management's rights, obligations and duties to guests, employees and the public. Merchandising techniques, target marketing and point of sale opportunities for the beverage operation.

HES 4800 Hotel and Restaurant Management (3)

Specialized managerial functions involved in operation of hotels, restaurants, and other facilities in the hospitality industry.

HES 4830 Hotel-Restaurant Sanitation and Safety (2)

Sanitation and safety procedures, laws and policies for operations in the hotel-restaurant industry. Prerequisites: HES 2322 and HES 2410.

HES 4840 Legal Aspects of Hotel and Restaurant

Management (3) Examination of federal and state laws, including judicial interpretations relevant to hotel and restaurant operations, as well as tort, negligence and criminal liability. Methods for prevention of legal action will be investigated.

HES 4850 Hotel and Restaurant Equipment and

Furnishings (3) Selection, layout, furnishing and operations of equipment in hotel and restaurant facilities. Design and decor of interiors and exteriors.

Physical Education

In the Department of Physical Education, the second digit in the course number stands for the following: 0--Special Projects, 1--Foundations, 2--Applied Physical Education, 3--Curriculum and Instruction, 4--Elementary and Secondary Physical Education, 5--Coaching, 6--Athletic Training, 7--Administration and Supervision, 8--Professional Physical Education, 9--Individual Study and Research.

PHYSICAL EDUCATION Functional Major, B.S. Degree

(43 000817)

	Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS	48-60
PE 1100 Orientation to Physical Education . . . 1	
PE 2303 Perf. & Teaching of Aerobic Cond. . . 2	
PE 2800 Human Anatomy	3
PE 2850 Found. of Exercise Physiology	3
PE 3610 Care & Prevention of Injuries	2
PE 3800 Kinesiology	3
PE 4110 History & Philosophy of Phys. Ed. . . . 2	
PE 4340 Adapted Physical Education	2
PE 4390 Eval. Procedures in Physical Ed. . . . 3	
PE 4740 Legal Liability in Fitness/Wellness, Physical Education, Recreation, & Sports Settings	2
Departmentally approved electives from one of the following areas (see departmental advisor)	25-37
Area 1 Elementary certification K-9	
Area 2 Secondary certification 9-12	
Area 3 Elementary-Secondary certification K-12	
Area 4 Fitness/Wellness I	
Area 5 Fitness/Wellness II	
MINOR NOT REQUIRED	
UNIVERSITY STUDIES REQUIREMENTS-- 48 s.h. (In the major for Area 1, Area 2, or Area 3, ICap 4468 fulfills 3 s.h. of Div. III B)	45-48
PE 1206 Div. II E (required) or	
PE 1203 Div. II E and	
PE 1204 Div. II E and	
PE 2200 Div. II E (required)	3
FREE ELECTIVES	16-31
MINIMUM TOTAL	124

Students may earn teacher certification through careful choice of electives. See the Director of Clinical Services and Certification (Lov 205) and departmental advisor for specific course work in both University Studies and major requirements.

COACHING Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor.
Certification to coach is not required in the state of Missouri.)
(000731)

	Sem. Hours
MINOR REQUIREMENTS	25
PE 2800 Human Anatomy	3
PE 2850 Foundations of Exercise Physiology . . 3	
PE 3610 Care & Prevention of Injuries	2
PE 3800 Kinesiology	3
PE 4590 Adm. of Interscholastic Athletics . . . 2	
PE 4830 Psychological Aspects of Physical Education	2
PE 4500 Football Officiating, 1 or	
PE 4510 Basketball Officiating, 1	1
Electives from the following	5
PE 2300 Perf. & Teaching of Soccer 1	
PE 2311 Perf. & Teaching of Touch & Flag Football	1
PE 2330 Perf. & Teaching of Track & Field	1
PE 2340 Perf. & Teaching of Softball 1	
Electives (continued)	
PE 2350 Perf. & Tchg. of Gymnastics . . . 1	
PE 3310 Perf. & Tchg. of Basketball . . . 1	
PE 3331 Perf. & Tchg. of Volleyball . . . 1	
PE 3390 Perf. & Tchg. of Wrestling . . . 1	
Electives from the following	4
PE 4520 Theory & Coaching of Basketball	2
PE 4530 Theory & Coaching of Track & Field	2
PE 4541 Theory & Coach. of Football . . . 2	
PE 4550 Theory & Coach. of Volleyball . . . 2	
PE 4551 Theory & Coach. of Wrestling . . . 2	
PE 4560 Theory & Coaching of Softball and Baseball	2
PE 4561 Theory & Coach. of Soccer . . . 2	

FITNESS/WELLNESS Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor.)

(000841)

				Sem. Hours
MINOR REQUIREMENTS				22
PE 1204	Stress Management	1	PE 2850	Foundations of Exercise
PE 1206	Lifetime Fitness	3		Physiology
PE 2303	Perf. & Tchg. of Aerobic Cond.	2	PE 3800	Kinesiology
PE 2320	Perf. & Tchg. of Weight Training	1	PE 4850	Basic Fitness Assessment
PE 3610	Care & Prevention of Injuries	2	PE 4340	Adapted Physical Education, 2 or
PE 2800	Human Anatomy	3	PE 4341	Physical Activity & the Older Adult, 2

UNIVERSITY STUDIES REQUIREMENTS (In the minor, PE 1206 fulfills 3 s.h. of Div. II E)

Special Projects

PE 4000 Special Projects in Coeducational Physical Education (1-5) Individual or group study of problems in special areas of interest. May be repeated for a maximum of 5 semester hours.

PE 5000 Special Projects in Physical Education (1-3) Individual or group study of selected topics. May be repeated for a maximum of 8 semester hours. Prerequisite: department chair consent.

Foundations

PE 1100 Orientation to Physical Education (1) Orients students to the profession of physical education and to the discipline of physical education program at Central.

PE 1120 Microcomputer Applications in Physical Education, Exercise and Sport Science (2) Prepares the undergraduate physical education major to develop and use microcomputer multi-media applications specific to the discipline of physical education, exercise/sport science. Prerequisite: CIS 1610 or IA&T 2000 or LIS 1600.

PE 4110 History and Philosophy of Physical Education* (2) An investigation of the historical and philosophical development of physical education.

*Not available for graduate credit.

PE 5110 Philosophy of Sport (2) The nature, values and ethics of sport in society.

PE 6190 Trends and Issues in Physical Education (3) Directed reading and special investigation of selected problems. Identification, analysis, and discussion of on-the-job problems.

Applied Physical Education

PE 1200 Fitness Through Activity and Sport (1) Develops concepts of personal physical fitness as they relate to optimal healthful living.

PE 1201 Recreational Sports (1) Sidewalk tennis, shuffleboard, aerial darts, deck tennis, table tennis, volley tennis, paddle tennis.

PE 1202 Handball and Racketball (1) Basic and progressive fundamentals of handball and racketball.

PE 1203 Aerobic Conditioning (1) Preventive and corrective cardiovascular activities and programs.

PE 1204 Stress Management (1) Causes, effects and coping techniques vital to living successfully with personal stress and tension.

PE 1205 Aerobic Dance for Fitness (1) Aerobic routines for cardiovascular fitness.

PE 1206 Lifetime Fitness (3) Developing a healthy lifestyle through exercise and diet. Includes assessment of status, planning, and participating in a program based on the student's needs.

PE 1210 Badminton (1)

PE 1220 Beginning Bowling (1) Fundamentals and participation in bowling. (Recommended for the handicapped.)

PE 1230 Beginning Golf (1)

PE 1231 Archery for Women (1) Student must provide minimum of six arrows, arm guard, and finger tab.

PE 1232 Archery for Men (1) Student must provide a minimum of six arrows, arm guard, and finger tab.

PE 1240 Individual Physical Education (1) Designed for the physically disabled student to improve strength, endurance, functioning, and recreational skills. Prerequisite: medical certificate of classification of student disability from the Student Health Center.

PE 1241 Beginning Tennis (1)

PE 1250 Folk Dance (1) Representative folk dances from various countries, with emphasis on the social values of this activity.

PE 1251 Beginning Swimming (1) For nonswimmers only. Includes skills required in the American Red Cross Beginners test.

PE 1255 Jazz Dance (1) Basic jazz dance technique, warm-ups and variety of jazz movement phases.

PE 1260 Modern Dance I (1) Basic modern dance technique and incorporation into dance phrases.

PE 1270 Ballroom Dance I (1) Techniques in leading/following, basic positions and steps in the American waltz, fox trot, Lindy (single, double, triple), polka, and schottische.

PE 1271 Volleyball (1)

PE 1272 Intermediate Volleyball (1) Advanced offensive and defensive skills and strategies. Prerequisite: PE 1271 or consent of instructor.

PE 1273 Ballroom Dance II (1) Techniques in leading/following, basic steps and positions in the cha-cha-cha, rumba, samba, tango, and mambo. Prerequisite: PE 1270 or consent.

PE 1280 Basketball for Women (1)

PE 1281 Basketball for Men (1)

PE 1290 Tap Dance I (1) Fundamental skills, terminology, and history of tap.

PE 1291 Softball for Women (1)

PE 1292 Softball for Men (1)

PE 2200 Weight Training (1)

PE 2210 Wrestling (1)

PE 2220 Weight Control (1) The relationship between diet, exercise, and weight and the planning of weight control programs based on individual needs.

PE 2230 Beginning Fencing (1)

PE 2250 Springboard Diving (1) Includes the five fundamental dives: (1) forward, (2) backward, (3) reverse, (4) inward, (5) forward dive with half twist and optional dives from the various dive groups. Developing techniques and analysis of the approach, spring, and dive. Prerequisite: ability to swim at beginning level or better.

PE 2260 Gymnastics and Tumbling (1) Practice of gymnastic stunts, tumbling, and trampolining.

PE 2270 Water Safety Instructors (2) Students taking this course may complete requirements for the Water Safety Instructor's Certificate. Prerequisite: current Red Cross Senior Lifesaving Certificate.

PE 2280 Recreational Shooting--Rifle and Pistol (1) Provides students with an appreciation of recreational shooting. The fundamentals of the safe and proper handling of firearms will be stressed. A charge is made for expendable materials.

PE 3200 Intermediate Bowling (1) More advanced fundamentals and participation in bowling.

PE 3210 Intermediate Tennis (1) Continuation of PE 1241 with emphasis on advanced strokes, technique, and strategy of singles and doubles. Prerequisite: PE 1241.

PE 3220 Advanced Beginning/Intermediate Swimming (1) Basic skills for advanced beginners and skills required in the American Red Cross Intermediate swimmers test.

PE 3230 Lifeguard Training (1) American Red Cross certification for Advanced Lifesaving and Lifeguard Training. Prerequisites: Standard First Aid certification and 8 hours of C.P.R. training.

PE 3260 Modern Dance II (1) A continuation of PE 1260 at a more advanced dance technique level. Prerequisite: PE 1260 or consent.

PE 3270 Intermediate Golf (1) Advanced skills instruction in putting, approach shots, wood shots and playing experience. Prerequisite: PE 1230.

PE 5200 Analysis of Teaching in Physical Education (3) Present and analyze systems used in evaluating student behavior, teacher behavior, and student-teacher interaction. Study strategies for planning and implementing effective teaching and supervising in physical education.

PE 5210 Technological Application in Physical Education, Exercise and Sport Science (3) Prepares students to utilize specialized technological applications in physical education, exercise and sport science.

Curriculum and Instruction

PE 2300 Performance and Teaching of Soccer (1)

PE 2303 Performance and Teaching of Aerobic Conditioning (2) Basic skills to participate in and instruct in the area of aerobic conditioning.

PE 2310 Ballet I (1) Basic ballet technique: barre' warm-ups, adagio center phrases, and locomotor patterns.

PE 2311 Performance and Teaching of Touch and Flag Football (1)

PE 2314 Performance and Teaching of Recreational Sports (1) Four square, floor table tennis, horseshoes, table tennis, wall paddle tennis, croquet.

PE 2320 Performance & Teaching of Weight Training (1)

PE 2330 Performance & Teaching of Track and Field (1)

PE 2340 Performance and Teaching of Softball (1)

PE 2350 Performance and Teaching of Gymnastics (1)

PE 2360 Basic Dance Skills (1) An introduction to dance through basic steps and rhythmic analysis.

PE 3300 Teaching of Dance (2) Rhythmical analysis of dance forms and methods for teaching them.

PE 3310 Performance and Teaching of Basketball (1)

PE 3315 Performance and Teaching of Outdoor Leisure Skills (1) Introduction to orienteering and angling.

Prerequisite: physical education functional majors only.

PE 3320 Performance and Teaching of Archery and Bowling (1)

PE 3330 Performance and Teaching of Badminton (1)

PE 3331 Performance and Teaching of Volleyball (1)

PE 3340 Performance and Teaching of Modern Dance (1)

A fundamental approach to modern dance integrating movement techniques and classroom teaching experience.

PE 3370 Performance and Teaching of Swimming and Diving (1)

PE 3380 Performance and Teaching of Handball and Racketball (1)

PE 3390 Performance and Teaching of Wrestling (1)

PE 4320 Choreography (2) Basic choreography as to forms, formations, lines, qualities, relationships, choreographic styles, choreographers of renown and their works, constructive criticism, notation. Prerequisite: consent.

PE 4340 Adapted Physical Education (2) A study whereby the full educational services of physical education may be made available to atypical students on all school levels.

PE 4341 Physical Activity and the Older Adult (2) Principles of activity applicable to older adults, including recommended programs and evaluations.

PE 4350 Physical Education for Special Education (2) Activities and program development as an integral tool in the physical education of the mentally retarded, learning disabled, and emotionally disturbed.

PE 4351 Performance and Teaching of Golf* (1)

PE 4360 Performance and Teaching of Tennis* (1)

*Not available for graduate credit.

PE 4390 Evaluation Procedures in Physical Education (3) The theory of measurement in health and physical education, including the selection, administration, and evaluation of appropriate tests and the interpretation of the results.

PE 5370 Advanced Curriculum and Supervision (3) Advanced study of curriculum and techniques of supervision in physical education.

Elementary and Secondary Physical Education

PE 1450 Growth and Development in Elementary Physical Education (3) The sequential and developmental phases of children and the relationship of movement to growth and development.

PE 2410 Movement Skills and Activities for Primary Grades (2) Knowledge, understanding, and applications in teaching motor skills.

PE 3420 Elementary School Physical Education Activities (2) Theory and practice in stunts and tumbling, self-testing activities, rhythms, skills, and games.

PE 3430 Creative Dance and Rhythms for the Elementary School (2) Rhythmical activities in the elementary school, emphasizing basic movement and movement exploration. Prerequisite: 1 semester hour of dance.

PE 3450 Techniques of Teaching Physical Education Activities in the Elementary and Secondary Schools (3)

Effective teaching knowledge, skill and techniques for physical education programs at the elementary and secondary levels. Prerequisite: admission to Teacher Education Program.

PE 5420 Growth and Physical Performance of the Preschool and Elementary School Child (K-6) (3) An in-depth study of the development and characteristic relations of children as they relate to movement and performance.

PE 5430 Theory and Practice for Elementary and Secondary Physical Education (3) Analysis of current theories and practices in elementary and secondary physical education.

Coaching

PE 4500 Football Officiating* (1) Lectures, readings, class discussions, and field experience in the officiating of intramural, school, and college football games.

PE 4510 Basketball Officiating* (1) Lectures, readings, class discussions, and field experience in the officiating of intramural, school, and college basketball games.

*Not available for graduate credit.

PE 4520 Theory and Coaching of Basketball (2) Coaching aids, techniques, strategy, and systems of the activity. Prerequisite: PE 3310.

PE 4530 Theory and Coaching of Track and Field (2) Coaching aids, techniques, strategy, and systems of training.

PE 4541 Theory and Coaching of Football (2) Coaching aids, techniques, strategy, and systems of the activity. Elective.

PE 4550 Theory and Coaching of Volleyball (2) Coaching theory and techniques, aids, strategy, and systems of volleyball. Prerequisite: PE 3331.

PE 4551 Theory and Coaching of Wrestling (2) Squad and practice organization, techniques, budget, equipment, match management, and strategy.

PE 4560 Theory and Coaching of Softball and Baseball (2) Coaching aids, techniques, strategy, and systems of softball and baseball.

PE 4561 Theory and Coaching of Soccer (2) Coaching theory and techniques, aids, strategy, and systems of soccer. Prerequisite: PE 2300.

PE 4590 Administration of Interscholastic Athletics (2) Organization and management of a program of competitive athletics for schools and colleges.

Athletic Training

PE 3610 Care and Prevention of Injuries (2) Accepted athletic training procedure in the care and prevention of athletic injuries. Prerequisite: PE 2800.

PE 5600 Growth and Development and Athletic Injuries (2) Growth and development of children and youth with emphasis on their vulnerability to athletic injury. Prerequisite: PE 2800.

PE 5610 Advanced Athletic Training Techniques (3) Advanced methods of injury prevention, recognition, and treatment of athletic injuries. Prerequisites: PE 3610, PE 3800, and PE 5830. PE 5830 may be taken concurrently.

PE 5620 Modalities and Rehabilitation of Athletic Injuries (2) The use of therapeutic modalities and

exercises in athletic injury rehabilitation. Prerequisite: PE 5610 or concurrently.

PE 5630 Internship in Athletic Training (2) Provides clinical clock hour experience under the supervision of a N.A.T.A. Certified Athletic Trainer. May be repeated for a maximum of 6 semester hours. Prerequisite: PE 5610 or concurrently.

PE 6600 Seminar in Athletic Training (2) Directed readings for the purpose of discussion and evaluation of selected problems in the area of sports medicine.

Administration and Supervision

PE 4740 Legal Liability in Fitness/Wellness, Physical Education, Recreation and Sport Settings (2) Acquaints the student with legal research and basic concepts of negligence in governing the school sport and fitness industries.

PE 4760 Physical Education Curriculum* (2) Problems involved in organization and design of physical education curricula. Prerequisite: admission to Teacher Education Program.

PE 4765 Internship* (2-4) Practical experience in fitness/wellness programs in community centers, corporation settings, or businesses. Prerequisite: PE 4850 and approval of department.

*Not available for graduate credit.

PE 5730 Risk Management for Sport and Fitness Administration (2) Strategies of risk control for sport and fitness industries.

PE 5740 Legal Liability for Sport and Fitness Administration (3) Inspection of case law and legislative acts as they affect the conditions of sport and fitness activities. A major focus is on negligence theory.

PE 5750 Sports Administration and Management (3) Administrative and management functions of the sports administrator. Prerequisite: PE 4590 or concurrently.

Professional Physical Education

PE 2800 Human Anatomy (3) Detailed study of the structure of the human body. Emphasis on gross and microscopic anatomy of the musculoskeletal, cardiovascular-respiratory, and nervous systems.

PE 2850 Foundations of Exercise Physiology (3) The study of cardiovascular, muscle, and nerve physiology. Prerequisite: PE 2800.

PE 3800 Kinesiology (3) Intensive investigation and analysis of human movements. The basic mechanical principles of force, motion, and aerodynamics as related to fundamental physical skills and their application to sports and dance. Prerequisite: PE 2800 and Math 1111 or Math 1620.

PE 3850 Motor Learning and Control (3) Parameters which influence the acquisition and control of movement skills. Conditions of practice as well as those predominant factors which effect motor learning, i.e., feedback, transfer, motivation, memory and attention.

PE 4830 Psychological Aspects of Physical Education (2) An application of psychological principles to physical education.

PE 4840 Social Aspects of Physical Activity (2) The application of sociological concepts and theories to the study of physical education and sport in American society.

PE 4850 Basic Fitness Assessment* (2) The selection, administration, and interpretation of test and protocols for fitness assessment. Prerequisite: PE 2850.

*Not available for graduate credit.

PE 5830 Advanced Exercise Physiology (3) The effects of muscular activity with particular reference to the respiratory, circulatory, and nervous systems. Prerequisites: PE 5900, and Biol 2401 or PE 2850.

PE 5840 Principles of Motor Learning (3) The physical and psychological factors affecting the acquisition of motor skills. Prerequisite: PE 5900.

PE 5850 Fitness Assessment (2) Instruments and protocols used for fitness/wellness assessment; development of fitness programs; interpretation of results. Prerequisite: PE 5830.

PE 5870 Mechanical Analysis of Sport Skills (3) Anatomical and mechanical principles applied toward analyzing and evaluating the efficiency of human motion. Prerequisite: PE 3800.

Individual Study and Research

PE 5900 Introduction to Research in Physical Education, Exercise and Sport Science (3) Overview and planning for graduate school with an introduction and study of the major methods, tools, and laboratory and statistical techniques employed in research in physical education, including the development of a research prospectus.

PE 6900 Readings in Physical Education (1-5) Guided study in the literature of special and related fields in the area of physical education. May be repeated for a maximum of 6 semester hours. Prerequisite: PE 5900.

PE 6960 Research Problems (2) Special investigation of an approved problem in the major field. Prerequisite: PE 5900.

PE 6980 Internship (2-6) Practical experience in sports administration, sports business management, sports communication, fitness/wellness, or pedagogy in a school, business or hospital. May be repeated for a maximum of 6 semester hours. Prerequisites: PE 5850 for Fitness/Wellness specialization; PE 5750 for Athletic and Sports Administration specialization; and department approval.

PE 6990 Thesis (6) Special investigation of an approved problem in physical education resulting in a formal thesis. A prospectus is required. Prerequisite: PE 5900.

Integrative Studies General

IGen 3472 Sport in American Life (3) Provides for an understanding and appreciation of the role of sport in American life.

Psychology and Counselor Education

Psychology

In the section of Psychology, the second digit in the course number stands for the following: 0--Special Projects, 1--General-Experimental Psychology, 2--Educational and Developmental, 3--Personality-Social Psychology, 4--Clinical Psychology, 5--Psychometrics, 6--Industrial Psychology, 7--Rehabilitation, 9--Individual Study and Research.

PSYCHOLOGY Major, B.A. Degree

(42 000746)

		Sem. Hours
MAJOR REQUIREMENTS		32
Psy 1100	General Psychology	3
Psy 2130	Learning	3
Psy 4160	Research Design & Analysis I	4
Psy 4170	Research Design & Analysis II	4
Electives from the following		15
Psy 4110	Systems of Psychology	3
Psy 4130	Sensation & Perception	3
Electives (continued)		
Psy 4140	Physiological Psychology	3
Psy 2220	Child Psychology	3
Psy 3340	Social Psychology	3
Psy 4310	Theories of Personality	3
Psy 4500	Intro. to Psy. Measurement	3
Elective in psychology		3
MINOR REQUIREMENTS		18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, Psy 1100 fulfills 3 s.h. of Div. II B; the Modern Language Requirement fulfills 3 s.h. of Div. II C)		42
MODERN LANGUAGE REQUIREMENT		3-9
(Refer to Bachelor's Degree Requirements section for fulfillment options.)		
FREE ELECTIVES		16-29
MINIMUM TOTAL		124

PSYCHOLOGY Major, B.S. Degree
(43 000747)

		Sem. Hours
MAJOR REQUIREMENTS		41
Psy 1100	General Psychology	3
Psy 2130	Learning	3
Psy 4110	Systems of Psychology	3
Psy 4140	Physiological Psychology	3
Psy 4160	Research Design & Analysis I	4
Psy 4170	Research Design & Analysis II	4
Psy 3340	Social Psychology	3
Psy 4310	Theories of Personality	3
Electives from the following		12
Psy 3110	Motivation	3
Psy 4130	Sensation & Perception	3
Psy 4150	Cognitive Psychology	3
Psy 2220	Child Psychology	3
Psy 4440	Abnormal Psychology	3
Psy 4500	Intro. to Psy. Measurement ..	3
Psy 4600	Industrial Psychology	3
Electives in psychology		3
MINOR REQUIREMENTS		18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, Psy 1100 fulfills 3 s.h. of Div. II B)		45
FREE ELECTIVES		13-20
MINIMUM TOTAL		124

PSYCHOLOGY Minor for a Bachelor's Degree
(Central does not confer teacher certification for this minor)
(000748)

		Sem. Hours
MINOR REQUIREMENTS		21
Psy 1100	General Psychology	3
Psy 2130	Learning	3
Psy 4310	Theories of Personality	3
Electives in psychology		12
UNIVERSITY STUDIES REQUIREMENTS (In the minor, Psy 1100 fulfills 3 s.h. of Div. II B)		

PSYCHOLOGY (REHABILITATION) Functional Major, B.S. Degree
(43 000750)

		Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS		62-67
Psy 1100	General Psychology	3
Psy 2130	Learning	3
Psy 4160	Research Design & Analysis I	4
Psy 4170	Research Design & Analysis II	4
Psy 4440	Abnormal Psychology	3
Psy 4500	Intro. to Psy. Measurement	3
Psy 3710	Interpers. Skills in Hum. Services ..	3
Psy 4701	Intro. to Rehabilitation Psychology ..	3
Psy 4705	Vocational Evaluation	3
Psy 4710	Voc. Adjustment & Placement	2
Psy 4770	Medical Aspects of Disability	3
Psy 4980	Field Experience in Rehabilitation ...	5
Electives from the following		16-17
Psy 3110	Motivation	3
Psy 4110	Systems of Psychology	3
Psy 4130	Sensation & Perception	3
Electives (continued)		
Psy 4140	Physiological Psychology	3
*Psy 4200	Psy. of Exceptional Children ..	2
Psy 3340	Social Psychology	3
Psy 4310	Theories of Personality	3
Psy 4600	Industrial Psychology	3
Psy 4720	Rehab. of the Ment. Retarded & Emotionally Disturbed	3
*Psy 4740	Rehab. of the Law Offender	3
Psy 4750	Rehab: Deaf Comm. I	2
Psy 4760	Rehab: Deaf Comm. II	2
Departmentally approved electives in HES, Nur, ET, Mf&C, IA&T, SpCm, CD, Biol, Soc, SoWk, Mgt, CIS, EdSp, Coun, PE, Rec, HEd, or CJ		7-11
MINOR NOT REQUIRED		
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Psy 1100 fulfills 3 s.h. of Div. II B)		45
FREE ELECTIVES		12-17
MINIMUM TOTAL		124

*Course has prerequisite(s) not listed in the program.

Special Projects

Psy 4000 Special Projects in Psychology (1-5) Individual or group study of problems in special areas of interest. May be repeated for a maximum of 5 semester hours.

Prerequisite: consent of department chair.

Psy 5000 Special Projects in Psychology (1-3) Individual or group study of problems in special areas of need or interest. May be repeated for a maximum of 3 semester hours. Prerequisite: consent of department chair.

General-Experimental Psychology

Psy 1100 General Psychology (3) A general introduction to the science of behavior, surveying the broad field of psychology and the methods of investigation.

Psy 2130 Learning (3) A basic course for students planning to major in psychology. Emphasis on fundamental concepts and theoretical approaches to learning. Prerequisite: Psy 1100.

Psy 3110 Motivation (3) Consideration of the causal factors of human and animal behavior that impel organisms

to persist in goal-seeking behavior. Attention is given to the physiological and psychological motives, and the various theoretical positions. Prerequisite: Psy 2130.

Psy 4110 Systems of Psychology (3) Various systems of psychology as they affect the comprehensive viewpoint of contemporary psychology. Prerequisite: Psy 4310.

Psy 4130 Sensation and Perception (3) Relationship between sensory occurrences and the experiences of the person. Prerequisite: Psy 2130.

Psy 4140 Physiological Psychology (3) A survey of the relationship between physiological mechanisms and behavior. Course includes scheduled laboratory. Prerequisite: Psy 1100.

Psy 4150 Cognitive Psychology (3) An overview of current theories of processes involved in human thinking with emphasis on models of memory, information processing, language and mental representations. Prerequisite: Psy 2130.

Psy 4160 Research Design and Analysis I (4) Rationale and methods for designing, conducting, and analyzing research. Psy 4170 must be taken the following semester. Includes scheduled lab. Prerequisite: Psy 1100.

Psy 4170 Research Design and Analysis II (4) Rationale and methods for designing, conducting, and analyzing research. Continuation of Psy 4160. Includes scheduled lab. Prerequisite: Psy 4160.

Psy 4180 Seminar in Psychology (1-2) Selected issues not covered in theory-practicum courses. May be repeated for a maximum of 6 semester hours. Prerequisite: senior standing and consent of department chair.

Psy 5130 Psychology of Learning (3) The nine traditional theories of learning are emphasized with an introduction to the recent neurological and mathematical theories. For advanced psychology students. Prerequisite: 8 semester hours in psychology.

Psy 5140 Biological Bases of Behavior (3) Survey of recent research in fields of biology, physiology, pharmacology, and medicine that influences the psychological aspects of human behavior. Prerequisite: Psy 4140.

Educational and Developmental

Psy 2220 Child Psychology (3) Interaction of biological and environmental factors in the growth of the child from conception to maturity. Prerequisite: Psy 1100 or Psy 2240.

Psy 2240 Educational Psychology (3) Furnishes the prospective teacher with the psychological concepts, principles, theories, research findings, and techniques that are relevant to guiding the educative process. Prerequisites: should be taken concurrently with EdCI 2100 during the sophomore year. In addition, should be taken concurrently with EdCI 2101 by early childhood, elementary, and middle school majors.

Psy 4200 Psychology of Exceptional Children (2) The identification, care, treatment, and guidance of exceptional children. Prerequisite: Psy 2240.

Psy 4210 Psychology of the Adult Learner (3) The nature of adults as learners with emphasis on psychological, sociological, physiological, and vocational factors of adulthood. Prerequisite: Psy 2240.

Psy 4230 Psychology of Adolescence (3) Developmental factors and problems common to the period from puberty to adulthood with emphasis upon conditions leading to

optimal development. Prerequisite: 3 semester hours of psychology.

Psy 4240 Psychology of Aging (3) Introduces psychological problems of aged population including: physical functioning, age changes in perception, memory, learning, problem solving, personality, environmental influences, death and dying. Prerequisite: 6 semester hours of psychology or consent of instructor.

Psy 5200 Advanced Educational Psychology (3) Provides the graduate student in education with psychological principles, processes, theories, and research from learning, development, motivation, and measurements as they relate to the educative process.

Psy 5210 Advanced Educational Psychology: Classroom Behavior (2) An application of psychological principles and experimental findings to the behavioral problems involved in teaching and learning.

Psy 5220 Advanced Child Psychology (3) Development of the child with emphasis on the scientific viewpoint and theoretical conceptualization of child behavior. Prerequisite: Psy 2240 or Psy 2220.

Personality-Social Psychology

Psy 1320 Psychology of Personal Adjustment (3) A general overview of major theories, concepts, and principles in psychology that can be applied to issues of personal and social adjustment.

Psy 3340 Social Psychology (3) Analysis of individual behavior in the social setting. Prerequisite: Psy 1100.

Psy 4310 Theories of Personality (3) Major theories of personality, past and present. Prerequisite: Psy 1100.

Psy 4320 Psychology of Women (2) An overview of the theories of personality as applied to women, biological determinants of feminine behavior, the dynamics of sex-role development, and the psychological implications of traditional versus modern roles for women.

Psy 5310 Dynamics of Personality (3) Contemporary, theoretical personality structures and their motivational systems. Prerequisite: Psy 4310.

Psy 5320 Advanced Mental Health (3) Introduces students to mental health issues and topics. Historical, philosophical, theoretical issues of mental health and mental illness are discussed along with a survey of mental health topics that represent the myriad of ways in which persons cope with and adjust to life stress and challenges.

Psy 5340 Social Bases of Behavior (3) Includes contemporary theory and research in several areas of social psychology (e.g., social cognition, social influence, aggression, social exchange and systems theory). Application to clinical settings is of special interest. Prerequisite: 15 semester hours of psychology or consent of instructor.

Clinical Psychology

Psy 4440 Abnormal Psychology (3) A descriptive course dealing with the etiology, diagnosis, and treatment of mental disorders of functional and organic origin. Prerequisite: Psy 1100.

Psy 5430 Drugs and Human Behavior (3) Basic mechanism of action of therapeutic drugs and drugs commonly abused. Includes operation and organization of nervous system functions, long and short term effects of drug use, patterns of abuse, and treatment programs.

Psy 5440 Psychopathology of Children and Youth (3)

Attention to diagnostic efforts and therapeutic measures. Prerequisite: Psy 4200 or EdSp 2100.

Psy 5460 Introduction to Psychotherapy (3) Designed to provide the student with an academic background from which to understand the dimensions, systems, and methods.

Prerequisite: Psy 5310.

Psy 5470 Marriage and Family Therapy (3) An overview of the theory and practice of marital and family therapy concentrating on systems theory and interventional strategies. Practical applications are made through the use of role playing and demonstrations. Prerequisite: Psy 5460 or consent of instructor.

Psy 5480 Alcoholism, Its Etiology and Treatment (3)

Addresses the physiological, social, and psychological aspects of alcoholism, specifically focusing on etiology and social sanction. Treatment methods are surveyed with emphasis on directive techniques. Prerequisite: Psy 5460 or consent of instructor.

Psychometrics**Psy 4500 Introduction to Psychological Measurement (3)**

An introduction to the basic psychometric theory, concepts, and procedures; familiarization with the major instruments in the field. Course includes scheduled laboratory.

Prerequisites: Psy 4160 and rehabilitation functional majors must schedule Psy 3710, Psy 4705, Psy 4710 and Psy 4980 concurrently.

Psy 4520 Statistics for the Behavioral Sciences (3) Basic statistical methods. The techniques used to analyze frequency distributions, correlations, and tests of significance. Course includes scheduled laboratory.

Psy 5520 Advanced Statistics for the Behavioral Sciences (3) Inferential statistics, probability, and tests of the significance of difference will be introduced. Course includes scheduled laboratory. Prerequisite: Psy 4520.

Psy 5530 Personality Assessment (3) Making tentative diagnoses based on case histories, interviews, behavior observations and test data, including selecting, administering, scoring, and interpreting tests. Prerequisites: Psy 5310 and Psy 5520.

Psy 5550 Advanced Psychological Test Interpretation (2) Interpreting batteries of psychological tests and other relevant data sources as modality for teaching the clinician to make inferences about personality structure and adaptive function. Prerequisite: Psy 5530.

Psy 5560 Individual Intelligence Testing (3) The techniques of administering, scoring and basic interpretation of the Stanford-Binet and Wechsler Intelligence Scales. Each student will be required to administer a minimum of 25 tests and furnish their own materials. Prerequisite: Coun 5620 or EdCl 4300 or equivalent.

Industrial Psychology

Psy 4600 Industrial Psychology (3) Application of psychological principles and methods to the industrial setting. Prerequisite: Psy 1100.

Rehabilitation

Psy 3710 Interpersonal Skills in Human Services (3) Psychological, social, and vocational characteristics of the human services client with special attention to counseling

theory and effective communication techniques.

Prerequisite: rehabilitation functional majors must schedule Psy 4500, Psy 4705, Psy 4710 and Psy 4980 concurrently.

Psy 4701 Introduction to Rehabilitation Psychology (3) An overview of the technical skills, history, legislation, sources of information, and resources for funding and support necessary to the rehabilitation psychologist.

Psy 4705 Vocational Evaluation (3) Presentation of vocational evaluation theory, specialized psychological tests, work samples, and other evaluation techniques.

Prerequisites: Psy 4500 or Psy 4701 or rehabilitation functional majors must schedule Psy 4500, Psy 3710, Psy 4710 and Psy 4980 concurrently.

Psy 4710 Vocational Adjustment and Placement (2)

Examines theoretical perspectives and training techniques of vocational adjustment including methods of job placement and follow-up. Prerequisite: admission to rehabilitation program or consent of instructor. Rehabilitation functional majors must schedule Psy 4500, Psy 3710, Psy 4705 and Psy 4980 concurrently.

Psy 4720 Rehabilitation of the Mentally Retarded and Emotionally Disturbed (3)

Basic principles and practical approaches to the rehabilitation of mentally retarded or handicapped and emotionally disturbed clients.

Prerequisites: Psy 1100 and 6 semesters hours of psychology.

Psy 4740 Rehabilitation of the Law Offender (3) History and philosophy of penology, theories of criminal personality, and rehabilitation procedures; course will include theory and practical work experience. Prerequisite: Psy 4701, or CJ 1000 or Soc 3890.

Psy 4750 Rehabilitation: Deaf Communication I (2)

Promotes understanding and communication with the deaf. Basic principles, instruction, and practice in American Sign Language will be provided as well as various aspects of the Rochester Method of fingerspelling. Prerequisite: consent of instructor.

Psy 4760 Rehabilitation: Deaf Communication II (2)

Increases the students' skills in deaf communication through the teaching of American Sign Language and the Rochester Method of fingerspelling. Prerequisites: Psy 4750 and consent of instructor.

Psy 4770 Medical Aspects of Disability (3) A basic medical information course which examines various disabling conditions as they relate to vocational placement and the rehabilitation process.

Individual Study and Research

Psy 4900 Readings in Psychology (1-5) For advanced psychology students. Individual research into problems and a written report or reports will be required. May be repeated for a maximum of 5 semester hours. Prerequisite: consent of department chair.

Psy 4980 Field Experience in Rehabilitation* (5)

Placement in a professional field setting to provide 200 clock hours of observation and supervised experience in a rehabilitation agency. Prerequisites: admission to rehabilitation program or consent of instructor. Rehabilitation functional majors must schedule Psy 4500, Psy 3710, Psy 4705 and Psy 4710 concurrently.

*Not available for graduate credit.

Psy 5970 Practicum in Psychology (3) Supervised practice in psychological testing, personality assessment and treatment. May be repeated for a maximum of 6

semester hours. Prerequisite: Psy 5530 and consent of department chair.

Psy 5980 Internship (6) Consists of 500 clock hours in a facility that provides opportunities for practical experience in the student's area of emphasis. Supervised jointly by a member of the University faculty and a member of the facility staff. May be repeated for a maximum of 12

semester hours. Prerequisite: recommendation of Internship Committee and approval by department chair.

Psy 5990 Thesis (6) Special investigation of an approved problem in the area of psychology resulting in a formal thesis. A prospectus is required. Prerequisite: Psy 5520.

Counselor Education

In the section of Counselor Education, the second digit in the course number stands for the following: 0--Special Projects, 1--Foundations, 2--Career Guidance, 3--Group Guidance, 4--School Counseling, 5--Secondary Counseling, 6--Testing, 7--Administration, 8--Techniques and Theories, 9--Individual Study and Research.

NOTE: For information regarding School Counseling certifications and programs, see the Graduate Catalog.

Special Projects

Coun 4000 Special Projects in Guidance and Counseling (1-5) Individual or group study of problems in special areas of interest. May be repeated for a maximum of 5 semester hours. Prerequisite: consent of department chair.

Foundations

Coun 4100 Foundations of Guidance (3) An overview of guidance services in schools, K-12, and in nonschool settings.

Coun 5100 Orientation to the Counseling Profession (3) Includes acquaintance with professional ethics, professional associations and their meetings and publications, areas of specialization and career opportunities, certification and licensure requirements, legal issues and liability, and current and future trends in the field.

Career Guidance

Coun 1200 Career Planning (1) Enables students to learn career decision making based on increased self-awareness and career awareness.

Coun 5200 Parent and Family Counseling (3) Provides knowledge concerning, and practice in, parent and family counseling. Prerequisite: Coun 4100 or concurrently or consent of instructor.

Coun 5210 Educational and Career Information (3) Instructs counselors-in-training and interested teachers in how to integrate career education into a school curriculum and/or how to utilize career information in noneducational work settings. Career development begins prior to kindergarten and is a lifelong process. Prerequisite: Coun 4100 or concurrently.

Group Guidance

Coun 5330 Group Process (3) Provides students with a better understanding of the dynamics of group interaction and the role of the counselor in helping individuals achieve self-direction. The socio-psychological influences on human behavior are emphasized. Prerequisite: Coun 4100 or Coun 5100 or concurrently.

Coun 6320 Advanced Group Procedures in Guidance (3) Provides counselors and counselors-in-training with a more intense experience in the dynamics of group interactions and procedures. Prerequisite: Coun 5450 or Coun 5470 or concurrently.

School Counseling

Coun 5400 Practicum in Counseling (3) Beginning course in the supervised practice of counseling. Prerequisite: Coun 5840.

Coun 5450 Practicum--Elementary School Counseling (3) Supervised practice in counseling. Prerequisite: Coun 5400.

Coun 5470 Practicum--Secondary School Counseling (3) Supervised practice in counseling. Prerequisite: Coun 5400.

Testing

Coun 5620 Group Testing (3) Commonly used standardized tests, including use, administration, scoring, recording, and interpretation. A charge is made for use of testing materials. Prerequisites: Coun 4100 or concurrently, and EdCI 4300.

Coun 5630 Analysis of the Individual (3) Sources, collection, organization, evaluation, and use of data about individuals in counseling. Each student, under supervision, will prepare a minimum of two systematic case studies. One of the case studies will be self-analysis. A charge is made for use of testing materials. Prerequisites: Coun 5620 and Psy 5320.

Administration

Coun 6700 Management of Guidance Services (3) Functions and procedures necessary in administering a guidance program.

Techniques and Theories

Coun 5840 Counseling Theories (3) Counseling theories, techniques and procedures appropriate for counseling school age individuals with regard to educational, vocational and personal planning. Prerequisite: Coun 4100 or Coun 5330 or concurrently.

Coun 6840 Advanced Counseling Theories (3) Advanced counseling and testing theories, practices, and the study of atypical behavior. Prerequisite: Coun 5450 or Coun 5470.

Individual Study and Research

Coun 6900 Readings in Guidance and Counseling (1-5) For advanced graduate students. Individual study and research concerning problems in guidance and counseling. Written report required. May be repeated for a maximum of 5 semester hours. Prerequisite: consent of department chair.

Coun 6990 Thesis (3-6) Special investigation of an approved problem in guidance and counseling resulting in a formal thesis. A prospectus is required.

Sociology and Social Work

In the Department of Sociology and Social Work, the second digit in the course number stands for the following: 6--Social Work, 8--Sociology.

Sociology

SOCIOLOGY Major, B.A. Degree (42 000755)

	Sem. Hours
MAJOR REQUIREMENTS	30
Soc 1800 General Sociology 3	Soc 4890 Sociological Investigations 3
Soc 2805 Introduction to Social Research 3	Anth 1820 Cultural Anthropology 3
Soc 3800 History of Social Thought 3	Electives in sociology 4-6
Soc 3870 Personality & Society 3	Departmentally approved electives in Soc
Soc 4860 Contemporary Sociological Thought . 3	or in <u>one</u> of the following areas: Anth,
	SoWk, Psy, or corrections 3-5
MINOR REQUIREMENTS	18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, Soc 1800 fulfills 3 s.h. of Div. II B; the Modern Language Requirement fulfills 3 s.h. of Div. II C; Anth 1820 fulfills 3 s.h. of Div. II D)	39
MODERN LANGUAGE REQUIREMENT	3-9
(Refer to Bachelor's Degree Requirements section for fulfillment options.)	
FREE ELECTIVES	21-34
MINIMUM TOTAL	124

SOCIOLOGY Major, B.S. Degree (43 000756)

	Sem. Hours
MAJOR REQUIREMENTS	40
Soc 1800 General Sociology 3	Anth 1820 Cultural Anthropology 3
Soc 2805 Introduction to Social Research 3	Electives in sociology 7-10
Soc 3800 History of Social Thought 3	Departmentally approved electives in Soc
Soc 3870 Personality & Society 3	or in <u>one</u> of the following areas: Anth,
Soc 4860 Contemporary Sociological Thought . 3	SoWk, Psy, or corrections 9-12
Soc 4890 Sociological Investigations 3	
MINOR REQUIREMENTS	18-25
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the major, Soc 1800 fulfills 3 s.h. of Div. II B; Anth 1820 fulfills 3 s.h. of Div. II D)	42
FREE ELECTIVES	17-24
MINIMUM TOTAL	124

SOCIOLOGY Functional Major, B.S. Degree
(43 000759)

		Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS		63
Soc 1800	General Sociology	3
Soc 2805	Introduction to Social Research	3
Soc 3800	History of Social Thought	3
Soc 3870	Personality & Society	3
Soc 4860	Contemporary Sociological Thought	3
Soc 4890	Sociological Investigations	3
Anth 1820	Cultural Anthropology	3
Departmentally approved electives in two of the following areas		18-21
Math 1111	College Algebra	3
Math 1112	College Trigonometry	2
Math 3311	Statistics I	3
CS 1010	FORTTRAN Programming	1
*CS 1110	Intro. to Computing II	3
Econ 1010	Principles of Economics	3
Econ 1011	Principles of Economics	3
MINOR NOT REQUIRED		
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Soc 1800 fulfills 3 s.h. of Div. II B; Anth 1820 fulfills 3 s.h. of Div. II D)		42
If elected, Math 1111 fulfills 3 s.h. of Div. I C; if elected, Econ 1010 or Psy 1100 fulfills 3 s.h. of Div. II B.		
FREE ELECTIVES		19
MINIMUM TOTAL		124

*Course has prerequisite(s) not listed in the program.

SOCIOLOGY Minor for a Bachelor's Degree
(Central does not confer teacher certification for this minor)
(000757)

		Sem. Hours
MINOR REQUIREMENTS		20
Soc 1800	General Sociology	3
Soc 3800	Hist. of Soc. Thought, 3 or	
Soc 4860	Contemporary Soc. Thought, 3	3
UNIVERSITY STUDIES REQUIREMENTS (In the minor, Soc 1800 fulfills 3 s.h. of Div. II B; if elected, Anth 1810 fulfills 3 s.h. of Div. II B; if elected, Anth 1820, fulfills 3 s.h. of Div. II D)		
Anth 1810	Human Prehistory, 3 or	
Anth 1820	Cultural Anthropology, 3	3
Electives in sociology		11

Soc 1800 General Sociology (3) Understanding of the behavior of people in their various relations and social settings, attention to basic concepts and subfields in sociology.

Soc 1830 Social Problems (3) The sociology of social problems; background and analysis of selected social problems such as race, crime, population, civil rights, poverty; social changes in light of social controls and democratic values. Prerequisite: Soc 1800.

Soc 2800 The Community (2) The nature and characteristics of the community; variations in community life; emphasis on social process, social systems, and methods of studying communities. Prerequisite: Soc 1800.

Soc 2805 Introduction to Social Research (3) An examination of research designs, sampling techniques, scaling techniques, and nonparametric statistics.

Soc 2825 Marriage and the Family (3) The family, society, and the individual; background to American family patterns; premarital behavior; marriage and variations in family forms; problems of the family today. Prerequisite: Soc 1800.

Soc 2830 Population and Human Ecology (3) Human population patterns examined within an ecological framework, showing how they affect and are affected by

both the environment and the diverse cultural ways human societies adapt to the ecological framework. Prerequisite: Soc 1800.

Soc 3800 History of Social Thought (3) Development of social origins of sociology; analysis and evaluation of social thought patterns as they relate to contemporary social problems. Prerequisite: 5 semester hours of sociology.

Soc 3825 Race and Ethnic Relations (3) Principles of intergroup relations; processes and consequences of interracial and ethnic contacts. Prerequisite: 5 semester hours of sociology.

Soc 3845 Social Inequality (3) A theoretical and methodological examination of the relationships between social class, inequality, and mobility. Prerequisite: 5 or more semester hours of sociology.

Soc 3870 Personality and Society (3) Interaction between the personality and its social environment; determinants of personality with emphasis on social influences. Prerequisite: 5 semester hours of sociology.

Soc 3890 Criminology (3) Crime and criminals; the efforts of society to repress and prevent them; analysis of causation; law enforcement and criminalistics; philosophy and methods of correction.

Soc 4810 Urban Sociology (3) Urbanization, rise and growth of cities; attention to demography, ecology and changes in urban society; social problems such as land utilization, housing, slums, politics, crime, and living standards. Prerequisite: Soc 1800.

Soc 4815 Special Projects in Sociology (1-6) Study, interpretation, and discussion of special topics and problems in sociology. May be repeated for a maximum of 6 semester hours.

Soc 4820 Collective Behavior (3) An application of social-psychological principles to various forms of collective phenomena, including cults, civil disturbances, and social movements.

Soc 4825 Sociology of Education (3) Education as a social institution; its relationship to other institutions and the community. Prerequisite: 5 semester hours of sociology.

Soc 4830 Public Opinion and Communication (3) The social aspects of processes and agencies of mass communication; formation and measurement of public opinion; effects of mass media on society. Prerequisite: 5 semester hours of sociology.

Soc 4840 Sociology of Sport (3) An investigation and analysis of the relationships between sport and society. Focus will be upon the development and changing nature of sport as an institution in modern society.

Soc 4845 Juvenile Delinquency (3) The nature, extent, and causes of juvenile delinquency; types of juvenile offenders and their career patterns; institutional controls and treatment programs. Prerequisite: 5 semester hours of sociology.

Soc 4846 Corrections and Preventions (3) Views and methods of dealing with criminals and juvenile delinquents; types of correctional systems and prevention programs. Prerequisite: 3 semester hours of sociology.

Soc 4850 Industrial Sociology (3) The social aspects of industrial development in historic perspective; analysis of organizations in the fields of industry and labor.

Soc 4860 Contemporary Sociological Thought (3) Assessment of current sociological thought as it is reflected by outstanding scholars in the field. Prerequisite: 5 semester hours of sociology.

Soc 4865 Sociology of the Family (3) The family in its social context. Prerequisite: 5 semester hours of sociology.

Soc 4872 Sociology of Organizations (3) A systematic study of the structural and interactional processes of work related organizations.

Soc 4875 Medical Sociology (3) Social factors and institutional settings for physical and mental health care; public needs and medical services; research in medical sociology. Prerequisite: 5 semester hours of sociology.

Soc 4880 Sociology of Law (3) The development of legal institutions; law as a system of social control; law and social change. Prerequisite: 5 semester hours of sociology.

Soc 4885 Sociology of Religion (3) The structure and function of religion in society; social sources of religions; religion and the individual. Prerequisite: 5 semester hours of sociology.

Soc 4890 Sociological Investigations (3) Examination of scientific methods in sociological research; evaluation of methods and procedures in research. Prerequisite: 5 semester hours of sociology.

Soc 4894 Sociology of Aging (3) The aging process and its consequences for the individual and society; an examination of the problem of aging in terms of

demographic, economic, psychological and sociologic implications; and emphasis on sociological principles and perspectives. Prerequisite: 5 semester hours of sociology or graduate standing.

Soc 5800 Sociological Theory (3) Examination of the principal sociological theoretical schools and systems with emphasis on contemporary theory.

Soc 5810 Methods of Sociological Research (3) Advanced analysis and application of methods of sociological research in the study of selected problems.

Soc 5820 Internship in Sociology (6) The application of theories and principles in the discipline, under the direction of the department and the supervising agency. Prerequisite: 10 semester hours of graduate credit.

Soc 5830 Causation and Prevention of Delinquent Behavior (3) Major theories regarding the causes of delinquent behavior and their implication for the prevention of delinquency.

Soc 5840 Applied Gerontology (3) Interdisciplinary survey of current theoretical and empirical knowledge of aging. Particular focus upon the social, emotional, economic and physical aspects of aging and the societal programs designed to enhance the well-being of the aged. Prerequisite: 5 semester hours of sociology or graduate standing.

Soc 5845 Readings in Social Gerontology (1-3) Directed readings in social gerontology. May be repeated for a maximum of 6 semester hours.

Soc 5850 Internship in Gerontology (6) The application of theories and principles in the field of aging under the direction of the department and the supervising agency. Prerequisite: 10 semester hours of graduate credit.

Soc 5860 Seminar in Deviance and Social Control (2) Directed research in deviant behavior and social control processes.

Soc 5882 Readings in Micro-Sociology (1-3) Directed readings in micro-sociology with emphasis on the small groups and interactional and interrelational processes.

Soc 5884 Readings in Sociological Theory (1-3) Directed readings in the growth and types of theoretical systems.

Soc 6830 Social Change (2) The processes of socio-cultural change; emphasis upon the rate of change, mechanisms of change, and planning change in modern society.

Soc 6890 Thesis (4-6) Research leading to the completion of a thesis.

Integrative Studies General

IGen 3472 Sport in American Life (3) Provides for an understanding and appreciation of the role of sport in American life.

Social Work

Social Work Statement of Policy

Admission Policy

Students entering Central as freshmen should indicate a pre-social work functional major. Transfer students must meet all requirements. Admission to the social work program is conditional upon the successful completion of all necessary requirements.

Requirements for Admission to the Social Work Program

1. Completion of University Studies courses listed as requirements of the social work functional major.
2. Cumulative grade-point average of 2.00.
3. A minimum grade of **C** for courses listed as curriculum requirements of the social work functional major.
4. Completion of SoWk 2611 and SoWk 3600.
5. Submission of:
 - a. Application for Admission to social work program.
 - b. Transcript of all university work.
 - c. A minimum of three references.
 - d. Autobiographical statement.

The necessary Application for Admission Forms and Reference Forms will be available in the student handbook obtained from the social work adviser.
6. Interview with Social Work Admissions Committee.

Criteria for Retention

After admission, students will be permitted to continue in the Social Work functional major program by meeting certain "Criteria for Retention" as established by the department.

1. An earned grade of C or above in all courses listed as requirements of the social work functional major.
2. Adherence to the National Association of Social Workers' Code of Ethics.
3. Maintenance of social functioning that allows for effective beginning level professional social work practice. (Social functioning refers to the students' ability to cope with the demands generated by their interaction with their environment including areas such as school, work, family, and personal relationships.)
4. Demonstration of effective verbal and written communication skills.
5. Continued enrollment as a student in good standing at Central.

Accreditation

The principal educational objective of the Social Work program is to prepare students for beginning social work practice. The Social Work baccalaureate program is accredited by the Council on Social Work Education, a specialized accrediting body recognized by the Council for Higher Education Accreditation (CHEA).

SOCIAL WORK Functional Major, B.S. Degree (43 000761)

	Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS	64
SoWk 2600 Intro. to Soc. Welfare & Social Work 3	
SoWk 2611 Social Work Field Observation & Participation	2
SoWk 3600 Intro. to Social Work Practice	3
SoWk 3605 Methods of Inquiry & Evaluation for Social Workers	3
SoWk 3610 Social Work Practice: Basic Skills ..	3
SoWk 3612 Human Behavior in the Social Environment I	3
SoWk 3625 Populations at Risk	3
SoWk 4610 Special Topics in Social Work	3
SoWk 4612 Human Behavior in the Social Environment II	3
SoWk 4630 Social Work Practice: Intervention with Families & Groups	3
SoWk 4640 Social Work Practice: Intervention with Communities & Organizations	3
SoWk 4650 Social Policy & Economic Justice	3
SoWk 4660 Field Practicum	8
Soc 1800 General Sociology	3
Soc 2805 Introduction to Social Research ..	3
Soc 3825 Race & Ethnic Relations	3
Psy 1100 General Psychology	3
Psy 4440 Abnormal Psychology	3
Biol 2010 Human Biology	3
ICap 4478 Integrative Social Work Practicum Seminar	3
MINOR NOT REQUIRED	
UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, Soc 1800 and Psy 1100 fulfill 6 s.h. of Div. II B; ICap 4478 fulfills 3 s.h. of Div. III B)	39
FREE ELECTIVES	21
MINIMUM TOTAL	124

SoWk 2600 Introduction to Social Welfare and Social Work (3) An overview of income maintenance and services to families, children, adolescents, aged and the mentally and physically challenged. Open to nonmajors.

SoWk 2611 Social Work Field Observation and Participation (2) Observation and participation in the fields of social work practice, under the direction of faculty and agency supervision. For social work majors only. Prerequisites: SoWk 2600.

SoWk 3600 Introduction to Social Work Practice (3) Presents a generalist framework for practice with individuals, families, groups, organizations, and communities. Open to social work majors only. Prerequisite: SoWk 2600.

SoWk 3605 Methods of Inquiry and Evaluation for Social Workers (3) Advanced research methods course for undergraduate social work majors, including quantitative and qualitative methods and data analysis and case/program-level evaluation. Open to social work majors only. Prerequisite: Soc 2805.

SoWk 3610 Social Work Practice: Basic Skills (3) Development of interpersonal skills and interviewing techniques for micro, mezzo, and macro levels of generalist practice. Open to social work majors only. Prerequisite: SoWk 3600.

SoWk 3612 Human Behavior in the Social Environment I (3) Examines theories and concepts related to the biological, psychological, social-structural and cultural dimensions; systems interaction; and diversity aspects of human behavior. Open to social work majors only. Prerequisites: Biol 2010 or concurrently, SoWk 3600, Psy 1100 and Soc 1800.

SoWk 3625 Populations at Risk (3) Prepares the generalist social worker with skills for sensitive practice with oppressed peoples and other vulnerable populations. Open to social work majors only. Prerequisite: Soc 3825.

SoWk 4610 Special Topics in Social Work* (1-6) Selected topics of contemporary interest in social work, or specialized fields of social work; variable content. May be repeated for a maximum of 6 semester hours. Prerequisite: 9 semester hours of social work or consent of instructor.

SoWk 4612 Human Behavior in the Social Environment II* (3) Expands and applies biological, psychological, social-structural and cultural theories and concepts to human behavior and development throughout the life cycle. Open to social work majors only. Prerequisite: SoWk 3612.

*Not available for graduate credit.

SoWk 4620 Social Services and the Elderly (3) Development of public policy and social service programming. Present and potential utility of individual, group and community intervention modalities as they relate to both the private troubles and public issues of aging. Prerequisite: 9 semester hours of social work, graduate standing or consent of instructor.

SoWk 4630 Social Work Practice: Intervention with Families and Groups* (3) Integrates knowledge, theory, values and interviewing skills for practice of primary intervention skills with individuals, families, groups, communities and organizations. Open to social work majors only. Prerequisite: SoWk 3610.

SoWk 4640 Social Work Practice: Intervention with Communities and Organizations* (3) In-depth application of the generalist model of social work practice with an emphasis on macro-level skills. Open to social work majors only. Prerequisite: SoWk 3610.

*Not available for graduate credit.

SoWk 4650 Social Policy and Economic Justice* (3) Develops an operational and critical understanding of the relationships among social welfare policy, social and economic justice issues, and social work practice. Open to social work majors only. Prerequisites: SoWk 2600 and consent of instructor.

SoWk 4660 Field Practicum* (8) Educationally directed 500-hour field experience in a social service agency under qualified agency supervision. Open to social work majors only. Prerequisite: SoWk 4650 or concurrently, SoWk 4630, and must be taken concurrently with ICap 4478.

Integrative Studies Capstone

ICap 4478 Integrative Social Work Practicum Seminar* (3) Integration of classroom knowledge with 500 hours in social service agency practicum. Open to social work majors only. Prerequisites: SoWk 4650 or concurrently, SoWk 4630, SoWk 4640, Psy 4440, and must be taken concurrently with SoWk 4660.

*Not available for graduate credit.

Special Services

School Administration and Higher Education

In the section of School Administration and Higher Education, the second digit in the course number stands for the following: 0--Special Projects, 1--Foundations, 4--Elementary School Administration, 5--Secondary School Administration, 7--School District Administration, 8--Higher Education, 9--Individual Study and Research.

Special Projects

EdAd 4000 Special Projects in Administration, Supervision, and Higher Education (1-5) Individual or group study of problems in special areas of interest. May be repeated for a maximum of 5 semester hours.

EdAd 5000 Special Projects (1-5) Individual or group study of selected problems/issues in special areas of interest. May be repeated for a maximum of 5 semester hours.

Foundations

- EdAd 3120 Legal Problems of Teachers (2)** Identifying for prospective teachers the legal challenges in the Missouri public schools.
- EdAd 4130 The Middle School (3)** An exploratory course which includes an introduction to philosophy, organization, curriculum and instructional strategies appropriate to the middle school learner. Field experience in a middle school is required for initial certification students.
- EdAd 5110 Foundations of Education Administration (3)** An introductory course in school administration. Prerequisite: EdCI 3500 or EdCI 4400.
- EdAd 5120 School Law (3)** An introductory class in school law for teachers and administrators with a special emphasis upon Missouri school law.
- EdAd 5130 School Supervision (3)** An intensive study of the problems, processes and techniques in the evaluation, supervision, and improvement of the institutional programs at the elementary and secondary levels of the school.
- EdAd 5140 The Microcomputer in Education (2)** The application of microcomputer technology to administrative, curricular, and instructional tasks. Prerequisite: basic knowledge of microcomputer use and consent of instructor.
- EdAd 6120 Advanced School Law (3)** School law for teachers and administrators plus a study of function and structure of courts and legal problems involving school finance, school property, and school board policy. Prerequisite: EdAd 5120.
- EdAd 6140 Seminar in Educational Administration (2)** An overview and critical analysis of problems common to educational administration. Prerequisite: 15 semester hours in school administration.

Elementary School Administration

- EdAd 5420 Elementary School Administration (3)** The organization, administration and problems relating to elementary school administration. Prerequisite: EdAd 5110 or consent.

Secondary School Administration

- EdAd 5520 Secondary School Administration (3)** The organization, administration and problems relating to secondary school administration. Prerequisite: EdAd 5110 or consent.

School District Administration

- EdAd 5710 Public School Finance (3)** A basic course in theory and practice of public school finance.
- EdAd 5730 School Personnel Administration (3)** The organization and administration of school personnel activities and related problems.
- EdAd 5750 Organization and Administration of Adult Education (3)** The organization, administration, and supervision of adult education programs. Prerequisite: EdCI 4620.
- EdAd 5760 School and Community Relations (2)** Communication and related problems in education.
- EdAd 6700 School District Administration (3)** The administrative and related functions of the school superintendency. Prerequisite: EdAd 5420 or EdAd 5520.
- EdAd 6710 Advanced School Finance (3)** An advanced course in school finance and business management. Prerequisite: EdAd 5710.
- EdAd 6720 School Facilities (3)** School facilities: planning, construction, operation and maintenance. Prerequisite: EdAd 5420 or EdAd 5520.

Higher Education

- EdAd 5800 Higher Education (3)** The development, administration and current concerns of higher education in the United States.
- EdAd 5810 The College Student (3)** The college student in contemporary society; characteristics, attitudes, values, needs, pressures, and concerns.
- EdAd 5820 College Teaching (3)** Concerns, procedures, techniques, and evaluation in college teaching.
- EdAd 5830 The Junior/Community College (3)** History, development, and current concerns of the junior/community college.
- EdAd 5840 The Law in Higher Education (3)** Sensitizes students to a variety of legal issues in higher education and creates an awareness of areas within the student personnel field where potential litigation could result.
- EdAd 5850 Student Development Theories and Practice (3)** An in-depth examination of major theoretical models and their application. Prerequisite: EdAd 5810 or consent of instructor.
- EdAd 5860 College Student Personnel Administration (3)** Organization and administration of student personnel services in higher education.
- EdAd 5870 Seminar in Higher Education (3)** An overview and critical analysis of issues and concerns common to higher education institutions.
- EdAd 5880 Practica in College Student Personnel (2)** A supervised work experience in college student personnel. May be repeated with no more than 2 semester hours in a single student personnel functional area for a maximum of 8 semester hours. Prerequisite: consent of instructor.
- EdAd 6800 Curriculum in Higher Education (3)** A study of curriculum in the junior and senior college: characteristics, issues, concerns, and trends.

Individual Study and Research

- EdAd 6900 Readings in Higher Education (1-5)** Individual study and research in higher education. May be repeated for a maximum of 5 semester hours.
- EdAd 6960 Research Problems (3)** A research investigation of an approved problem in school administration resulting in a research paper. A prospectus is required. Prerequisite: EdCI 5900.
- EdAd 6969 Fall Internship in School Administration (2)** The fall course of a year-long internship designed to provide practical experience in school administration. May be repeated for additional certification. Prerequisite: advisor or departmental approval.
- EdAd 6970 Internship in School Administration (3)** Practical experience in school administration under the supervision of public school administrator(s) and the student's adviser and/or advisory committee. May be repeated for a maximum of 6 semester hours. Prerequisite: adviser or departmental approval. **To be deleted Summer 1999.**
- EdAd 6971 Spring Internship in School Administration (2)** The spring course of a year long internship designed to provide practical experience in school administration. May be repeated for additional certification. Prerequisite: advisor or departmental approval.
- EdAd 6980 Internship in Higher Education (1-6)** Practical experience in student personnel administration and/or other administrative experience in an institution of higher education. May be repeated for a maximum of 6 semester hours. Prerequisite: EdAd 5800 or EdAd 5830.
- EdAd 6990 Thesis (3-6)** Special investigation of approved problem in school administration resulting in a thesis. A prospectus is required. Prerequisites: EdCI 5900 and Psy 4520.

Health Education

In the section of Health Education, the second digit in the course number stands for the following: 0--Special Projects, 1--Foundations, 3--Curriculum and Instruction, 7--Administration.

HEALTH EDUCATION Minor, B.S. in Ed. Degree

(Certification to teach health education in K-9. Certification for grades 9-12 requires 30 semester hours and certification for grades K-12 requires 32 semester hours including the minor plus HEd 4320, HEd 4390, and additional HEd electives. Elementary Education Functional Majors 1-6 may use this as an area of concentration. See Director of Clinical Services and Certification for current requirements.)
(000804)

MINOR REQUIREMENTS	Sem. Hours
HEd 1100 Personal Health	3
HEd 1350 Std. First Aid & Personal Safety	3
HEd 3360 School Health Education	2
HEd 4300 Nutrition & Human Performance	2
HEd 4310 Drugs & Youth	3
PE 2800 Human Anatomy	3
PE 2850 Found. of Exercise Physiology	3
Psy 4230 Psy. of Adolescence	3
Total	22

Biology majors may substitute Biol 2401 for PE 2850.

UNIVERSITY STUDIES REQUIREMENTS (In the minor, HEd 1100 fulfills 3 s.h. of Div. II E; Psy 4230 fulfills 3 s.h. of Div. II B)

Special Projects

HEd 4000 Special Projects in Health Education (1-5)

Individual or group study of problems in special areas of interest. May be repeated for a maximum of 6 semester hours.

Foundations

HEd 1100 Personal Health (3) Health problems in today's society with special reference and application to the present and future life of the student.

Curriculum and Instruction

HEd 1350 Standard First Aid and Personal Safety (3) The first aid practice and theory for common emergencies. Certification for the American Red Cross Standard First Aid and Personal Safety course may be earned upon completion of all specific requirements.

HEd 3310 Health Education in the Elementary School (2) Curriculum and lesson plan development, basic health concepts, and methodology of teaching elementary health education.

HEd 3360 School Health Education (2) Explores the current trends in curriculum development in health education and the legal aspects of school health. Prerequisite: Psy 2240.

HEd 4300 Nutrition and Human Performance (2) Nutrition as it applies to athletics, physical exercise, and health. Prerequisites: PE 2800 and PE 2850 or equivalent.

HEd 4310 Drugs and Youth (3) Use and abuse of alcohol and drugs; current problems relative to drug use, abuse, and control; programs in education, religion, welfare, law enforcement, and community agencies.

HEd 4320 Teaching Sex Education in the School (3) Prepares the teacher for course development, instruction, and integration of sex education into the school curriculum.

HEd 4330 First Aid and CPR for Educators* (1) Skills and principles of first aid and accident prevention in the schools. Students may receive national first aid and CPR certification.

*Not available for graduate credit.

HEd 4350 Advanced First Aid and Emergency Care (3) Emphasizes the essential knowledge and skills needed to develop the functional first aid capabilities required by policemen, firemen, emergency squad and rescue squad members, ambulance attendants, and other special interest groups. Students taking this course may complete requirements for the American Red Cross Advanced First Aid and Emergency Care Certificate.

HEd 4360 CPR Instructors Training (1) Procedures, theories, and techniques involved in the teaching of the American Red Cross CPR Modular System course. Students may complete requirements for the Red Cross CPR Modular System Instructor Certificate. Prerequisite: current Red Cross CPR Modular System Certificate.

HEd 4370 Human Diseases (3) An overview of the agents of disease, the processes of disease, and the effects of disease on humans. Prerequisites: PE 2850 or Biol 2401 or equivalent.

HEd 4390 School and Community Health Education (2) Various types of health programs conducted by private, volunteer, and official agencies.

Administration

HEd 4760 Organization and Administration of the School Health Program (2) The organization and administration of the school health program emphasizing the areas of healthful school living, health services, and health instruction. Prerequisites: HEd 3310 or HEd 3360.

Instructional Technology

In the section of Instructional Technology, the second digit in the course number stands for the following: 0--Special Projects, 1--Foundations, 3--Instructional Technology, 4--Audiovisual Production, 9--Individual Study and Research.

INSTRUCTIONAL MEDIA TECHNOLOGY Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor.
Preparation for teaching computer/technology literacy in schools.)
(000781)

MINOR REQUIREMENTS				Sem. Hours
				23
InsT	3100	Mediating Instruction	3	EdCI 2310 Computer/Technology in Ed.
InsT	4300	Prin. of Instructional Dev.	3	EdCI 4312 LOGO for Teachers
InsT	4330	Technology Troubleshooting for Educators	2	EdCI 4318 Telecommunications in Education
InsT	4400	Design & Production of Media for Instruction	3	LIS 4230 Sel. & Acquisition of Materials
InsT	4920	Practicum in Instructional Tech.	1	LIS 4740 Adm. of the Library Media Center

Special Projects

InsT 4005 Special Projects in Instructional Technology (1-5) Individual or group study of problems in special areas of interest. May be repeated for a maximum of 5 semester hours.

Foundations

InsT 3100 Mediating Instruction (3) The application of technology to the instructional development and delivery process. The selection, utilization, and evaluation of various media forms are studied. Laboratory experience includes preparation of instructional materials, equipment operation, and field experiences. A charge is made for expendable materials. Prerequisite: EdCI 2310.

InsT 3140 Audiovisual Equipment Proficiency (1) An in-depth study of the utilization of audiovisual equipment for instructional purposes. This course meets the audiovisual proficiency requirement for student teaching.

InsT 5130 Foundations of Educational Technology (3) Provides historical, sociological, philosophical, and research foundations for applying computer-related technologies in educational settings. Prerequisite: admission to Educational Technology, M.S. Degree or consent.

Instructional Technology

InsT 4300 Principles of Instructional Development (3) Analysis and application of systematic approaches to the development of technology-based instruction. Includes the development of knowledge and skill in using hypermedia and multimedia technology. Prerequisite: InsT 3100 or consent of instructor.

InsT 4330 Technology Troubleshooting for Educators (2) Provides pre-service and in-service educators with the knowledge and skill to operate, maintain and troubleshoot (service) the various hardware devices and software found in schools. Prerequisite: EdCI 2310 or consent of the instructor.

InsT 5330 Educational Product Development (3) Evaluation of computer authoring and scripting environments and their application to the design of interactive multimedia educational products. Prerequisite: InsT 5130.

InsT 5340 Teaching with Tele-Learning Technologies (3) Provides technology specialists and teachers with methods and strategies for teaching lessons using tele-learning technologies. Prerequisite: InsT 5130 or consent of instructor.

InsT 5360 Educational Computing Systems (3) Provides knowledge and experience in setting up educational computing systems, implementing software usage, and managing related activities. Prerequisite: InsT 5130.

InsT 5390 Educational Technology Leadership (2) Provides educational technology coordinators with knowledge for managing the change process in schools; leadership in staff development, facilities and resource management. Prerequisite: InsT 5130.

Audiovisual Production

InsT 4400 Design and Production of Media for Instruction (3) Design and production of print-based, computer-based, and video-based instructional materials that are related to subject areas or grade levels. Includes application of hypermedia and multimedia technology to the design and production of educational materials. A charge is made for expendable materials. Prerequisite: InsT 4300 or consent of the instructor.

InsT 5400 Advanced Production of Educational Multimedia (3) Provides advanced techniques for the development of educational multimedia products and the methods and strategies for teaching the use of technology tools. Prerequisite: InsT 5330.

Individual Study and Research

InsT 4920 Practicum in Instructional Technology (1) Participation in field experiences that provide practice with teaching methodology applicable specifically to the problems and procedures encountered when working with instructional technology. May be repeated for a maximum of 4 semester hours. Prerequisites: InsT 4400 and LIS 4740.

InsT 6920 Advanced Practicum in Instructional Technology (2) Practical experience in appropriate areas of instructional technology. May be repeated for a maximum of 6 semester hours. Prerequisite: InsT 4920.

InsT 6930 Internship in Educational Technology (3) Practical experience in the use, management, evaluation, and application of technology resources to support instruction in classroom settings. Prerequisite: consent of instructor.

InsT 6960 Research Problems in Instructional Technology (2) Special investigation of an approved problem in the major field resulting in a research paper. A prospectus is required. May be repeated for a maximum of 6 semester hours. Prerequisite: EdCI 5900 or LIS 5610.

Recreation and Tourism

Recreation

In the section of Recreation and Tourism, the second digit in the course number with a **Rec** prefix stands for the following: 0-Special Projects, 1-Foundations, 2-Leadership, 3-Commercial Recreation, 5-Camping and Outdoor Education, 7-Administration and Supervision, 8-Therapeutic Recreation, 9-Individual Study and Research.

GENERAL RECREATION Major, B.S. Degree*

(43 000814)

		Sem. Hours
MAJOR REQUIREMENTS		41
Rec 1100	Introduction to Recreation	3
Rec 2200	Developing Rec. & Tourism Prog.	3
Rec 3210	Leadership & Group Dynamics in Recreation & Tourism Services ...	3
Rec 3530	Outdoor Rec. Skills & Adventure	3
Rec 4710	Managing Recreation & Tourism Enterprises	3
Rec 4720	Financing Recreation & Tourism Enterprises	3
Rec 4740	Seminar	2
Rec 3830	Implications of Disabling Conditions for Therapeutic Recreation	3
Rec 4850	Leisure Education	3
Rec 4980	Internship	6
Tour 1500	Microcomputer Applications for Tourism & Recreation	3
Tour 4720	Tourism Planning & Development	3
Tour 4730	Tourism Marketing	3
Students should see the Program Coordinator for certification requirements in specific areas of interest. Prior to enrollment in Rec 4980, the student must complete a 500-hour field work experience in an approved setting, have a minimum of 2.50 grade-point average in the major, and a minimum overall grade-point average of 2.25.		
MINOR REQUIREMENTS		18-25
UNIVERSITY STUDIES REQUIREMENTS		48
FREE ELECTIVES		10-17
MINIMUM TOTAL		124

*May lead to Missouri Park and Recreation Association Leader Certification and/or National Council on Therapeutic Recreation Certification as a Certified Therapeutic Recreation Specialist.

GENERAL RECREATION Functional Major, B.S. Degree*

(43 000801)

		Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS		60-66
Rec 1100	Introduction to Recreation	3
Rec 2200	Developing Rec. & Tourism Prog.	3
Rec 3210	Leadership & Group Dynamics in Recreation & Tourism Services	3
Rec 3530	Outdoor Rec. Skills & Adventure	3
Rec 4710	Managing Recreation & Tourism Enterprises	3
Rec 4720	Financing Recreation & Tourism Enterprises	3
Rec 4740	Seminar	2
Rec 3830	Implications of Disabling Conditions for Therapeutic Recreation	3
Rec 4850	Leisure Education	3
Rec 4980	Internship	6
Tour 1500	Microcomputer Applications for Tourism & Recreation	3
Tour 4720	Tourism Planning & Development ...	3
Tour 4730	Tourism Marketing	3
HEd 1350	Std. First Aid & Personal Safety	3
Mus 3301	Music for Elementary Schools	2
Grap 1010	Introduction to Desktop Publishing & Printing, 3 or	3
IA&T 4020	Crafts for Elementary Schools, 3 ...	3
Art 1110	Drawing I, 3 or	2-3
Art 3910	Art for Elementary Schools, 2	2-3
Thea 4210	Creative Dramatics, 2 or	2-3
SpCm 2130	Small Group Communication, 3 ...	2-3
Electives from the following or hold		
Red Cross Intermediate Swim Certificate		0-2
PE 1251	Beginning Swimming	1
PE 3220	Adv. Beginning/ Inter. Swimming	1
Electives from the following		2
PE 1250	Folk Dance	1
PE 1260	Modern Dance I	1
PE 1270	Ballroom Dance I	1
PE 2360	Basic Dance Skills	1
Electives from the following		2-3
PE 1201	Recreational Sports	1
PE 1210	Badminton	1
PE 1220	Beginning Bowling	1
PE 1230	Beginning Golf	1
PE 1231	Archery for Women	1
PE 1232	Archery for Men	1
PE 1241	Beginning Tennis	1
PE 2230	Beginning Fencing	1
PE 1450	Growth & Development in Elementary Phys. Ed.	3
PE 3420	Elem. Sch. Phys. Ed. Act. ...	2
Electives from the following		3-4
**Biol 1011	General Botany	4
**Biol 1012	General Zoology	4
Geog 4291	Conservation of Natural Res. ...	3
Geog 4295	Land & Leisure	3

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Students should see the Program Coordinator for certification requirements in specific areas of interest. Prior to enrollment in Rec 4980, the student must complete a 500-hour field work experience in an approved setting, have a minimum of 2.5 grade-point average in the major, and a minimum overall grade-point average of 2.25.

MINOR NOT REQUIRED

UNIVERSITY STUDIES REQUIREMENT	48
FREE ELECTIVES	10-16
MINIMUM TOTAL	124

*May lead to Missouri Park and Recreation Association Leader Certification and/or National Council on Therapeutic Recreation Certification as a Certified Therapeutic Recreation Specialist.

**Course has prerequisite(s) not listed in the program.

GENERAL RECREATION Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor; Missouri Park and Recreation Association certification is not available with this minor.)
(000802)

MINOR REQUIREMENTS		Sem. Hours
Rec 1100	Introduction to Recreation	3
Rec 2200	Developing Rec. & Tourism Prog.	3
Rec 3210	Leadership & Group Dynamics in Recreation & Tourism Services	3
Rec 3530	Outdoor Rec. Skills & Adventure	3
Rec 3830	Implications of Disabling Conditions for Therapeutic Recreation	3
Rec 4710	Managing Recreation & Tourism Enterprises	3
Rec 4720	Financing Recreation & Tourism Enterprises	3
Tour 1500	Microcomputer Applications for Tourism & Recreation	3

Special Projects

Camping and Outdoor Education

Rec 4000 Special Projects in Recreation and Tourism* (1-5)

Individual or group study of problems in special areas of interest. May be repeated for a maximum of 5 semester hours.

Rec 3530 Outdoor Recreation Skills and Adventure (3)

An introduction to experiential education through outdoor recreation adventure programs.

*Not available for graduate credit.

Administration and Supervision

Foundations

Rec 4710 Managing Recreation and Tourism Enterprises*

(3) Basic functions, management techniques, and operations procedures currently practiced in providing recreation and tourism related services. Prerequisite: Rec 3210.

Rec 1100 Introduction to Recreation (3) Designed to introduce the student of recreation and leisure services to the philosophy, history, and significant social forces inherent in the growth and development of the leisure services field.

Rec 2150 Leisure Enhancement (2) The presentation of theories, concepts, and data from the field of leisure to students with no previous background in this area.

Rec 4100 Selected Topics in Recreation and Tourism* (1) An in-depth investigation of selected topics in leisure services. May be repeated for a maximum of 5 semester hours.

Rec 4720 Financing Recreation and Tourism Enterprises* (3) Covers the basic methods and problems of financing public and private recreation and tourism services. Prerequisite: Rec 4710.

Rec 4740 Seminar (2) Covers new and significant publications in the recreation and tourism industry and provides the student with an opportunity to develop basic research skills. Prerequisite: consent of instructor.

*Not available for graduate credit.

Therapeutic Recreation

Leadership

Rec 3830 Implications of Disabling Conditions for Therapeutic Recreation (3) An overview of disabling conditions and the implications that these conditions have for the field of therapeutic recreation. Prerequisite: Rec 3210.

Rec 2200 Developing Recreation and Tourism Programs (3) Provides an overview and practical experience with the program planning process for recreation and tourism services. Prerequisite: Rec 1100 or Tour 1600.

Rec 3210 Leadership and Group Dynamics in Recreation and Tourism Services (3) The basics of group dynamics and leadership as applied to techniques in recreation tourism environments. Prerequisite: Rec 1100 or Tour 1600.

Rec 4800 Professional Foundations in Therapeutic Recreation* (3) Acquaints student with the philosophy, history, and principles of therapeutic recreation. Prerequisite: Rec 3830.

Rec 4820 Program Design and Evaluation in Therapeutic Recreation* (3) Prepares students to plan and evaluate therapeutic recreation activities. Prerequisite: Rec 3830.

Rec 4850 Leisure Education* (3) Theory, concepts and techniques of leisure education as applied in recreation

services. The examination of leisure education models and instruments applicable to individuals in institutions and community based settings. Prerequisite: Rec 3210.

Rec 4860 Issues and Trends in Therapeutic Recreation* (3)
Provides an overview of the issues and trends in therapeutic recreation. Prerequisite: Rec 3830.

*Not available for graduate credit.

Individual Study and Research

Rec 4980 Internship* (6) Experience in recreation or tourism services while working in an approved agency under qualified and experienced supervision. Prerequisites: Rec 4740 and approval of the internship coordinator.

*Not available for graduate credit.

Tourism

In the section of Recreation and Tourism, the second digit in the course number with a **Tour** prefix stands for the following: 0-Special Projects, 2-Foundations, 3-International, 5-Technology, 7-Administration, 9-Individual Study and Research.

TOURISM Major, B.S. Degree
(43 000843)

						Sem. Hours	
MAJOR REQUIREMENTS						44-50	
Tour	1200	Introduction to Tourism	3	Tour	4730	Tourism Marketing	3
Tour	3300	Tourism Destinations	3	Rec	2200	Developing Rec. & Tourism Prog.	3
Tour	3310	International Tourism	3	Rec	4740	Seminar	2
Tour	1500	Microcomputer Applications for Tourism & Recreation	3	Rec	4980	Internship	6
Tour	3700	Travel Agency Operations	3	Acct	2101	Principles of Financial Acct.	3
Tour	4700	Conf. & Convention Planning	3	HES	4800	Hotel & Restaurant Management	3
Tour	4710	Group Tour Operations	3	Modern language requirement, minimum proficiency of the second college course in a selected language			0-6
Tour	4720	Tourism Planning & Development	3	Prior to enrollment in Rec 4980, the student must complete a 500-hour field work experience in an approved setting, have a minimum of 2.5 grade-point average in the major, and a minimum overall grade-point average of 2.25.			
MINOR REQUIREMENTS						18-25	
UNIVERSITY STUDIES REQUIREMENTS						48	
SpCm	1000	Div. I B (required)	3	Geog	2212	Div. II B (required)	3
Biol	1004	Div. II A (required)	4	Geog	3201	Div. II D (required)	3
Econ	1010	Div. II B (required)	3				
FREE ELECTIVES						1-14	
MINIMUM TOTAL						124	

TOURISM MANAGEMENT Minor for a Bachelor's Degree
(Central does not confer teacher certification for this minor)
(000822)

						Sem. Hours	
MINOR REQUIREMENTS						24	
Tour	1200	Introduction to Tourism	3	HES	4800	Hotel & Restaurant Management	3
Tour	3300	Tourism Destinations	3	Tour	3700	Travel Agency Operations, 3 or	
Tour	3310	International Tourism	3	Tour	4710	Group Tour Operations, 3	3
Tour	1500	Microcomputer Applications for Tourism & Recreation	3	Tour	4700	Conf. & Convention Planning, 3 or	
Rec	2200	Developing Rec. & Tourism Prog.	3	Tour	4730	Tourism Marketing, 3	3

and host communities in the process of attracting and hosting international tourists. Prerequisite: Tour 1200.

Foundations

Tour 1200 Introduction to Tourism (3) The course presents a basic understanding of travel and tourism and provides insight into the development and operations of the various components of the travel industry.

Technology

Tour 1500 Microcomputer Applications for Tourism and Recreation (3) Assists the student in becoming literate in the use of microcomputers in the tourism and recreation field. Prerequisite: consent of instructor.

International

Tour 3300 Tourism Destinations (3) Includes the description of tourism related attributes of various countries.
Tour 3310 International Tourism (3) A presentation of the phenomena and relationships arising from the interaction of international tourists, business suppliers, host governments,

Administration

Tour 3700 Travel Agency Operations (3) Details the technical and managerial requirements for travel agency operations. Prerequisite: Tour 1200.

Tour 4700 Conference and Convention Planning* (3)
 Provides an insight into the planning techniques and management strategies used in conference and convention operations. Prerequisite: Tour 1200 or HES 4800.

Tour 4710 Group Tour Operations* (3) Provides an overview of the group travel industry and the role of group tour operators in providing travel opportunities. Prerequisite: Tour 1200.

Tour 4720 Tourism Planning and Development (3) The processes involved in planning quality recreation and

tourism destination areas. Prerequisite: Tour 1200 or Rec 3210.

Tour 4730 Tourism Marketing (3) An examination of the procedures involved in planning, developing, and implementing a tourism and recreation marketing campaign. prerequisite: Tour 1200 or Rec 3210.

*Not available for graduate credit.

Special Education

In the section of Special Education, the second digit in the course number stands for the following: 0--Special Projects, 1--Foundations, 3--Curriculum and Instruction, 4--Special Methods, 6--Testing, 7--Administration, 9--Individual Study and Research.

SPECIAL EDUCATION Functional Major, B.S. in Ed. Degree

(Certification to teach educable mentally handicapped K-12; behaviorally disordered K-12; severely developmentally disabled K-12; or early childhood special education Preschool-Kindergarten)
 (41 000784)

FUNCTIONAL MAJOR REQUIREMENTS		Sem. Hours
		48-52
EdSp 4140	Coun. Parents of Except. Children . . . 2	EdSp 4460 Teaching the Content Areas to the Mentally Handicapped . . . 3
EdSp 4360	Behavioral Mgt. Techniques 2	EdCl 4215 Tchg. Rdg. in Content Fields . 3
EdSp 4361	Practicum in Behav. Mgt. Tech. 1	EdCl 4220 Anlys. & Corr. of Rdg. Disabil. 2
EdSp 4620	Eval. of Abilities & Achievement 3	EdCl 4250 Practicum in Reading 1
EdSp 4700	IEP Writing & the Law 3	
HEd 3310	Health Ed. in the Elem. School 2	Severely Developmentally Disabled--21
HEd 4330	First Aid & CPR for Educators 1	EdSp 4310 Characteristics of the Severely Developmentally Disabled . . . 2
EdCl 3210	Methods of Reading Instruction 3	EdSp 4330 Ed. & Training of the Severely Developmentally Disabled . . . 3
EdCl 2310	Computer/Technology in Ed. 2	EdSp 4350 Augmentative & Alter. Com. . . 3
ScEd 1110	Physics for Teachers, 3 or	EdSp 4370 Screening, Diagnosing & Prescribing Instructions 3
ScEd 1120	Biology for Teachers, 3 3	EdSp 4450 Methods & Curr. for Tchg. the Severely Dev. Disabled 3
CD 4402	Lang. Dev. for the Handicapped 2	EdSp 4470 Perceptual Motor Training for the Handicapped 2
Art 3910	Art for Elementary Schools 2	HEd 1350 Std. First Aid & Pers. Safety . . 3
Math 3890	Concepts & Methods of Teaching for Special Education 3	PE 4340 Adapted Physical Education . 2
Math 4890	Math. for Special Education 2	Early Childhood Special Education--21
Elect at least one of the following special education certification areas:		EdSp 3150 Community & Fam. Resources 2
Educable Mentally Handicapped--17		EdSp 3151 Community & Fam. Resources Practicum 1
EdSp 4150	Career Dev. for the Handicapped 2	EdSp 4320 Intro. to Early Child. Spec. Ed. 3
EdSp 4300	Mentally Retarded Children 3	EdSp 4370 Screening, Diagnosing & Prescribing Instructions 3
EdSp 4430	Tchg. the Mentally Handicapped . 3	EdSp 4440 Curriculum & Methods in Early Childhood Special Education 3
EdSp 4460	Teaching the Content Areas to the Mentally Handicapped 3	EdSp 4470 Perceptual Motor Training for the Handicapped 2
EdCl 4215	Tchg. Reading in Content Fields . 3	EdCl 3410 Children's Literature 2
EdCl 4220	Analysis & Corr. of Rdg. Disabil. . 2	CD 2000 The Bases of Speech & Lang. 2
EdCl 4250	Practicum in Reading 1	IGen 3468 Community, School & Family Connections 3
Behaviorally Disordered--17		
EdSp 4150	Career Dev. for the Handicapped 2	
EdSp 4340	Behaviorally Disordered and/or Emotionally Disturbed Children . . 3	
EdSp 4410	Tchg. the Child with Behav. and/or Emotional Disorders 3	

MINOR NOT REQUIRED
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UNIVERSITY STUDIES REQUIREMENTS--48 s.h. (In the functional major, ScEd 1110 or ScEd 1120 is allowed to fulfill 3 s.h. of Div. II A; HEd 3310 and HEd 4330 are allowed to fulfill 3 s.h. of Div. II E; in Early Childhood Special Education Area, IGen 3468 fulfills 3 s.h. of Div. III A and in other three areas, ICAP 4468 fulfills 3 s.h. of Div. III B) 39

Students must have one course in a physical or earth science and one course in a biological science in Div. II A, each must have a laboratory.

SpCm 1000	Div. I B (required)	3	PolS 1510	Div. II B (required)	3
Math 1620	Div. I C (required)	3	Geog 2212	Div. II B (required)	3
Hist 1350	Div. II B or				
Hist 1351	Div. II B (required)	3			

PROFESSIONAL EDUCATION REQUIREMENTS 26-30

EdCI 2100	Foundations of Education & Field Experience	3	EdSp 2100	Ed. of the Exceptional Child	2
Psy 2220	Child Psychology	3	EdSp 4395	Student Tchg. in Spec. Ed. I	6-8
Psy 2240	Educational Psychology	3	EdSp 4396	Student Tchg. in Spec. Ed. II, 6-8 or	
Psy 4230	Psychology of Adolescence	3	ICap 4468	Student Tchg. Secondary II, 4	4-8

Early Childhood Special Education majors will enroll in EdSp 4395 and EdSp 4396 for 6-8 s.h. each; all other majors will enroll in EdSp 4395 for 8 s.h. and ICap 4468 for 4 s.h. Students may select certification in elementary education through the Director of Clinical Services and Certification.

FREE ELECTIVES 3-11

MINIMUM TOTAL 124

Special Projects

- EdSp 4000 Special Projects in Special Education (1-5)**
Individual or group study of problems in special areas of interest. May be repeated for maximum of 5 semester hours.
- EdSp 5000 Topics in Special Education (3)** Assists graduate students in researching current issues and trends in special education. May be repeated with a different focus for a maximum of 6 semester hours. Prerequisite: undergraduate major in special education or consent of instructor.
- EdSp 6000 Seminar in Special Education (3)** An in-depth study of topics current to the field of special education for the advanced graduate student. May be repeated for a maximum of 9 semester hours. Prerequisite: graduate degree in special education or consent of instructor.

Foundations

- EdSp 2100 Education of the Exceptional Child (2)**
Identification of exceptional children, methods and techniques for teaching them, as well as possible sources of referral which may be of assistance to teachers and parents of these children.
- EdSp 3150 Community and Family Resources (2)** Early clinical observations and experiences using community and family resources concerned with various kinds of exceptionality. May be repeated for a maximum of 6 semester hours. Prerequisite: EdSp 2100 or Psy 4200 and must be taken concurrently with EdSp 3151.
- EdSp 3151 Community and Family Resources Practicum (1)** Provides opportunities for preservice teachers to evaluate how community and family resources impact directly/indirectly on the lives of children. Prerequisite: EdSp 2100 or Psy 4200 and must be taken concurrently with EdSp 3150.
- EdSp 4140 Counseling Parents of Exceptional Children (2)** A study of counseling and counseling theories, community resource agencies, and the use of the multidisciplinary team applied to counseling exceptional children and their parents. Prerequisite: EdSp 2100 or Psy 4200.

EdSp 4150 Career Development for the Handicapped (2)
Supportive services to special education students within a career development context. Prerequisite: EdSp 2100 or Psy 4200.

Curriculum and Instruction

- EdSp 4300 Mentally Retarded Children (3)** An introduction to and overview of the mentally retarded child of public school age. Prerequisite: EdSp 2100 or Psy 4200.
- EdSp 4310 Characteristics of the Severely Developmentally Disabled (2)** Basic information pertaining to the characteristics and care of the severely developmentally disabled. Prerequisite: EdSp 2100 or Psy 4200.
- EdSp 4320 Introduction to Early Childhood Special Education (3)** Basic information pertaining to the characteristics, care, treatment, and education of young children with special needs. Prerequisite: EdSp 2100 or Psy 4200.
- EdSp 4330 Education and Training of the Severely Developmentally Disabled (3)** The treatment and training strategies used in teaching the severely developmentally disabled. Prerequisites: EdSp 4310 and EdSp 4370.
- EdSp 4340 Behaviorally Disordered and/or Emotionally Disturbed Children (3)** Etiological factors, symptoms, and special problems associated with behaviorally disordered and/or emotionally disturbed children. Prerequisite: EdSp 2100 or Psy 4200 or Psy 4440.
- EdSp 4350 Augmentative and Alternative Communication (3)** Examines augmentative communication approaches and determines how they can best be used for the benefit of individuals with severe handicaps. Prerequisites: EdSp 2100 or Psy 4200; and CD 4402.
- EdSp 4360 Behavioral Management Techniques (2)** Practical approaches to behavior management for the classroom teacher, special educator, or clinician. Prerequisite: EdSp 2100 or Psy 4200.
- EdSp 4361 Practicum in Behavioral Management Techniques (1)** Practical experience in designing behavioral management programs and environments under supervision. Prerequisite: EdSp 4360 or concurrently.

EdSp 4370 Screening, Diagnosing and Prescribing Instructions (3) Case finding, screening, diagnostic and assessment procedures to be utilized in prescriptive educational planning for infants and preschool-aged children. Prerequisite: EdSp 2100 or Psy 4200.

EdSp 4380 Learning Disabilities (3) Characteristics, etiologies, definitions, legislation and issues related to the identification and educational planning for individuals with learning disabilities. Prerequisite: EdSp 2100 or Psy 4200.

EdSp 4390 The Gifted/Talented/Creative Child (3) Definitions, identification procedures, the nature and needs, concepts and issues concerning the gifted, talented, creative child. Not open to those who have had EdSp 4420 (previous catalogs). Prerequisite: EdSp 2100 or Psy 4200.

EdSp 4395 Student Teaching in Special Education I* (5, 6, 8) Application for Student Teaching must be made with the Director of Clinical Services and Certification. Prerequisites: special methods course in special education in one or more certification areas (EdSp 4410, EdSp 4430, EdSp 4440, or EdSp 4450). Should be taken with EdSp 4396 or ICap 4468 or EdCI 4495.

EdSp 4396 Student Teaching in Special Education II* (5, 6, 8) Prerequisite: must be taken concurrently with EdSp 4395.

*Not available for graduate credit.

EdSp 5350 Evaluation of the Handicapped (3) Involves a practicum directed teaching and clinical experience in the computer aided interpretation of individual intelligence tests, formal and informal assessments, and prescriptive teaching with emphasis on the processing of Individual Education Programs. Prerequisite: EdSp 4620 or consent of instructor.

Special Methods

EdSp 4410 Teaching the Child with Behavioral and/or Emotional Disorders (3) Classroom methods and materials used to educate children with behavioral and/or emotional disorders. Prerequisite: Admission to Teacher Education Program and EdSp 4340.

EdSp 4430 Teaching the Mentally Handicapped (3) General problems in teaching mentally handicapped children, including materials and methods to be used. Prerequisite: Admission to Teacher Education Program and EdSp 4300.

EdSp 4440 Curriculum and Methods in Early Childhood Special Education (3) The teaching methodologies and curricular formats used for educating young children with special needs. Prerequisites: Admission to Teacher Education Program, EdSp 4320 and EdSp 4370.

EdSp 4450 Methods and Curriculum for Teaching the Severely Developmentally Disabled (3) Teaching methodologies and curricular formats used in programming for the severely developmentally disabled. Prerequisite: Admission to Teacher Education Program and EdSp 4330.

EdSp 4460 Teaching the Content Areas to the Mentally Handicapped (3) Methods/materials used in teaching functional mathematics, social studies, and functional science to the mentally handicapped. Prerequisite: EdSp 4410 or EdSp 4430.

EdSp 4470 Perceptual Motor Training for the Handicapped (2) Overview of selected theories and assessment procedures for early childhood special education and severely developmentally disabled populations. Instruction in methods, materials, and equipment adaptations for selected populations. Prerequisite: EdSp 2100 or Psy 4200.

EdSp 4480 Teaching the Gifted/Talented/Creative Child (3) Teaching methods and curriculum design for the gifted, talented, creative child. Prerequisite: EdSp 4390 or consent of instructor.

EdSp 5410 Learning Disabilities: Curriculum and Instruction (3) Curriculum and instructional planning and practice for persons with learning disabilities. Prerequisites: EdSp 4380 and EdSp 5350.

Testing

EdSp 4620 Evaluation of Abilities and Achievement (3) Instruction in interpretation of individualized intelligence tests, formal and informal diagnostic procedures, and in prescriptive instruction. A directed clinical experience in the diagnostic assessment process for Individual Education Programs is required. Prerequisite: EdSp 2100 or Psy 4200.

Administration

EdSp 4700 IEP Writing and the Law (3) Administrative procedures and policies needed in establishing a program of special education. Special emphasis is given to compliance with state and federal law. A directed clinical experience in the theory, process, and practice of IEP writing is included. Prerequisite: EdSp 4410 or EdSp 4430 or EdSp 4440 or EdSp 4450 or EdSp 5410 or equivalent.

EdSp 5700 Advanced Organization and Administration of Special Education (3) Provides practicing special educators, special education administrators, and regular division administrators with experience through simulations in dealing with common problems which arise in public school special education programs. Prerequisite: EdSp 4700.

EdSp 5710 Administration and Supervision of Program for the Gifted/Talented/Creative Child (3) Provides research into administration, supervision, organization, program planning and problems related to school administration of programs for the gifted, talented, creative child. Prerequisite: EdSp 4480.

Individual Study and Research

EdSp 6900 Readings in Special Education (1-5) Individual study and research regarding problems or areas of particular interest in special education. A written report or reports will be required. May be repeated for a maximum of 5 semester hours. Prerequisite: permission of graduate adviser.

EdSp 6970 Methods of Research in Special Education (3) Research organization, research instrument selection, methods of data collection, data interpretation, statistical design, and the design of an acceptable thesis prospectus. Prerequisite: EdCI 5900, Psy 4520 and 30 semester hours in special education.

EdSp 6980 Internship in Special Education (1-6) Practical experience in a school, clinic, or institution wherein handicapped children or youth are served in a program that the student proposes to follow. Provides work with administrative and nonadministrative personnel at several levels. A written report of the internship will be required. May be repeated for a maximum of 6 semester hours. Prerequisites: EdSp 4410 or EdSp 4430 or EdSp 4440 or EdSp 4450 or EdSp 5410 or EdSp 5700, and consent.

EdSp 6990 Thesis (2-6) Special investigation of an approved problem in special education resulting in a thesis. A prospectus is required. May be repeated for a maximum of 6 semester hours. Prerequisite: EdCI 5900.

Educational Development Center

Personal Skills Development

In the section of Personal Skills Development, the second digit in the course number stands for the following: 0--College Skills, 1--Student Support Services, 8--Individual Study and Projects.

College Skills

Pers 1000 Introduction to College Writing (3) Classroom and tutorial instruction in the process of developing paragraphs and longer essays with emphasis placed on mechanics, usage, and sentence structure.

Pers 1010 Textbook Reading Techniques (3) Using computer-assisted instruction, the course emphasizes development of vocabulary, comprehension, and speed for reading college textbooks.

Pers 1012 Speed Reading (1) Principles and applications of speed reading to textbooks, research materials, and other types of reading material. Prerequisite: reading test score of 12th grade level or better.

Pers 1020 College Study Skills (2) Principles of time management, note taking, memory, and test taking techniques applied to studying for college courses.

Pers 1030 Introductory Algebra (3) Designed to review or improve basic algebra skills. Includes integers, equations, inequalities, polynomials, factoring, quadratic equations, graphic linear equations and work with word problems.

Pers 1035 Review of Introductory Algebra (1.5) Designed for students who have a mathematical weakness but may not need an entire semester of introductory algebra. Includes word problems, graphing, polynomials, factoring, and quadratic equations. Prerequisite: high school credit in basic algebra.

Student Support Services

Pers 0101 Fundamentals of Writing I SSS (3) Review and application of English grammar and basic writing techniques. Prerequisite: acceptance into Student Support Services. Not applicable to graduation requirements.

Pers 0111 Fundamentals of Reading I SSS (3) Review and application of methods for vocabulary, comprehension, and reading rate development. Prerequisite: acceptance into Student Support Services. Not applicable to graduation requirements.

Pers 0131 Fundamentals of Math I SSS (3) Review of fractions and decimals with an introduction to negative numbers and linear equations. Prerequisite: acceptance into Student Support Services. Not applicable to graduation requirements.

Pers 1102 Fundamentals of Writing II SSS (3) Continuation and further application of grammar and writing techniques through paragraph and essay development. Prerequisite: acceptance into Student Support Services and Pers 0101 or demonstrated skill level. This course substitutes for Pers 1000.

Pers 1112 Fundamentals of Reading II SSS (3) Continuation and further application of vocabulary, comprehension, and reading rate development, in addition to flexibility and methods for reading college textbooks. Prerequisite: acceptance into Student Support Services and Pers 0111 or demonstrated skill level. This course substitutes for Pers 1010.

Pers 1125 College Success Strategies SSS (1) Focus on personal responsibility to enhance academic achievement. Prerequisite: acceptance into Student Support Services; Univ 1000 or consent.

Pers 1132 Fundamentals of Math II SSS (3) Continuation and further application of math skills through an introduction to algebra, including properties of numbers, linear equations, graphing, polynomials, factoring, and quadratic equations. Prerequisite: acceptance into Student Support Services and Pers 0131 or demonstrated skill level. This course substitutes for Pers 1030.

Individual Study and Projects

Pers 1800 Special Projects (0.5, 1, 1.5, 2, 3) Individual or group study of material in special areas of interest. May be repeated for a maximum of 6 semester hours.

University Orientation

In the section of University Orientation, the second digit in the course number stands for the following: 0--General, 8--Individual Study and Projects.

General

Univ 1000 Student Development Seminar (1) An introduction to university academics and university life. Intended for all new students at Central. Course topics include an introduction to university services, study skills, meeting people, time management, health issues, money management and goal setting. Open only to students with fewer than 25 Central Missouri State University credits.

Univ 1050 Valuing Differences: Discovering Common Ground (1) Explores personal, experiential, and interactive

issues relating to race, gender, class, and culture including ways that culturally diverse populations enrich society through differences and similarities.

Univ 1800 Special Projects in University Orientation (1-3) Individual or group study of extended topics related to Univ 1000 and orientation to the University. May be repeated for a maximum of 6 semester hours.

Interdisciplinary Studies

Interdisciplinary Studies at Central Missouri State University enable students to interrelate various bodies of knowledge, encouraging integration of thought by combining expertise across disciplines. By exposure to varying perspectives, a deliberate attempt is made to fuse bodies of knowledge, allowing students to synthesize knowledge in a multifaceted manner.

In the area of Interdisciplinary Studies, the second and/or third digits in the course number stand for the following: 0--General, 1--Music/Art, 2--Literature/Language/Theatre/Philosophy, 3--History/Anthropology/Sociology, 4--Political Science/Criminal Justice/Safety, 5--Speech Communication/Mass Communication, 6--Psychology/Education/Physical Education, 7--Mathematics/Science, 8--Business/Economics/Home Economics, 9--Special Projects/Individual Study/Research.

IndS 3340 Modern East Asia (3) A survey of the cultures, histories, societies, economies, and political systems of the major countries of Asia. Specific focus is on the events

and resulting changes within the region during the past century.

International Studies

In the area of International Studies, the second digit in the course number stands for the following: 0--General.

ISP 4000 Study Abroad (3-4) This course allows students to enroll at Central Missouri State University while attending classes in a sponsored study abroad program. The variable credits are based on the number of credit hours the student plans to complete at the foreign institutions. The actual credit recorded represent those credits completed by the student and transferred back to Central. May be repeated for a total of 12-16 semester hours in

one semester. Prerequisite: approval of the Director of International Programs.

Integrative Studies General

IGen 3896 Assessing Global Change for the Information Age (3) Challenges students to assess present and future trends, evaluate what is desirable, and reflect on their responsibility for the quality of life in the information age.

Integrative Studies

Integrative Studies General

In the section of Integrative Studies, the second digit identifies the college or area as follows: 1-Applied Sciences and Technology, 2-Arts and Sciences, 3-Harmon College of Business Administration, 4-Education and Human Services, 5-Library Science & Information Services, 6-Educational Development Center, 7-Honors Program, and 8-International Studies.

The third and fourth digits represent the discipline: 01-Agriculture, 09-Manufacturing, 10-Construction, 11-Nursing, 12-Automotive Technology, 13-Aviation Technology Management, 15-Safety Science & Technology, 16-Graphics, 21-Art, 22-Biology, 24-Communication, 31-History, 32-Mass Communication, 34-Music, 35-Philosophy, 36-Physics, 44-College of Arts & Sciences, 57-Management, 68-Curriculum and Instruction, 72-Physical Education, 78-Social Work, 96-International Studies.

IGen 3116 Creative Problem Solving (3) A broad approach to formal techniques in creative problem solving applicable to any field of endeavor and interest.

IGen 3224 Critical Thinking (3) Provides insight into and application of the skills needed to think critically about interpersonal and media messages, as well as analyze information.

IGen 3232 Media Literacy (3) Explores the relationships between media, its consumers, and producers. Integrates cultural, technological, and economic perspectives on mass media and visual communication.

IGen 4224 Communication, Science and Technology (3) Students will focus on the interactions among science, technology and society by examining scientific communication and scientific and technological controversies. Prerequisite: completion of University Studies Div. II A.

IGen 4235 Cognitive Science* (3) Studies the nature and structure of the human mind from the interdisciplinary perspective derived of philosophy, psychology, computer science, linguistics, and neurobiology.

IGen 4236 Science and Religion: From Conflict to Dialogue* (3) A clarification of the historical and philosophical issues that arise in the relationship between science and religion. The course emphasizes a variety of interpretive viewpoints.

IGen 4231 Myth, Memory and American Realities* (3) Examines a selected topic in American history and literature to understand how Americans have constructed interpretations of the past to explain the present.

IGen 4234 Arts: An Integrated Approach* (3) An exploration of the integrative elements and commonalities among music, theatre, and the visual arts.

IGen 4244 Comparative Cross-Cultural Cinema* (3) Comparison of films with various sub-themes relating to cross-cultural topics such as internationalism, racism and gender.

IGen 3468 Community, School and Family Connections (3) Focuses on the interactions among community, school and family systems relative to existing and emerging paradigms.

IGen 3472 Sport in American Life (3) Provides for an understanding and appreciation of the role of sport in American life.

IGen 3896 Assessing Global Change for the Information Age (3) Challenges students to assess present and future trends, evaluate what is desirable, and reflect on their responsibility for the quality of life in the information age.

*Not available for graduate credit.

Integrative Studies Capstone

ICap 4101 Agricultural Capstone Experience* (3)

Integration of agricultural knowledge and problem solving skills using case studies in a seminar forum. Prerequisites: 24 semester hours of agriculture courses and senior standing.

ICap 4109 Construction Operations* (3) A detailed study of the knowledge, processes and operational procedures involved in a commercial construction project. Prerequisites: Mf&C 2310, Mf&C 2325, Mf&C 3320 and Mf&C 3355 and senior standing.

ICap 4110 Industrial Problem Solving* (3) Designed for students preparing for careers in manufacturing management. Student teams will analyze manufacturing problems, propose solutions, and present recommendations. Prerequisite: senior standing.

ICap 4111 Socio-Economic Factors Impacting Health* (3) Examines selected socio-economic issues and their impact on health.

ICap 4112 Automotive Systems for Contemporary Society* (3) Integration of communication, technology, sociology, economics, and ecology with automotive engineering, management and service, emphasizing their reciprocal effects on each other. Prerequisite: senior standing in automotive technology.

ICap 4113 Air Operations Management* (3) Challenges the student to perform as an effective member of an air operations management team using critical thinking, decision making and ethics. Prerequisite: senior standing in aviation technology.

ICap 4115 Safety and Health Management* (3) Integration of safety information using conceptual and technical data to resolve safety and health issues. The case study approach will be emphasized. Prerequisites: admission to program, 27 semester hours of SS&T courses and senior standing.

ICap 4221 Artists in Contemporary Society* (3) Art majors examine their careers as impacted by regional, national and global issues pertaining particularly to cultural and personal interaction. Prerequisites: 20 semester hours of art.

ICap 4222 The Biological Perspective* (3) An examination of current issues from a biological perspective including the impact of biology on history and culture. For biology majors. Prerequisite: 22 semester hours of biology.

ICap 4357 Business Policy* (3) Capstone course requiring integration of business functional knowledge using conceptual, communication, interpersonal, and technical skills applied to environmental analysis and strategic management. Case method is used. Prerequisites: all preadmission courses, Mgt 3315, Mgt 3325, Mkt 3405, Fin 3850, and senior standing.

ICap 4468 Student Teaching Secondary II* (4) To be taken in the Professional Semester. For all secondary majors, all K-12 majors, and K-9 majors in elementary physical education. Prerequisites: admission to Teacher Education Program; must be taken concurrently with EdCI 4495 or EdCI 4595 or EdSp 4395. **To be effective Fall Semester 1999-2000.**

ICap 4478 Integrative Social Work Practicum Seminar* (3) Integration of classroom knowledge with 500 hours in social service agency practicum. Open to social work majors only. Prerequisites: SoWk 4650 or concurrently, SoWk 4630, SoWk 4640, Psy 4440, and must be taken concurrently with SoWk 4660.

*Not available for graduate credit.

Library Services

Library Science and Information Services

In the Department of Library Science and Information Services, the second digit in the course number stands for the following: 0--Special Projects, 1--Foundations, 2--Librarianship, 6--Library Literature, 7--Administration, 8--Technical Processes, 9--Individual Study and Research.

NOTE: For information regarding Library Science and Information Services certifications and programs, see the Graduate Catalog.

Special Projects

LIS 4000 Special Projects in Library Science (1-5)

Individual or group study of problems in special areas of interest. May be repeated for a maximum of 5 semester hours.

LIS 5000 Special Projects in Learning Resources (1-5)

Directed individual study to address current issues in and/or special interests of the student. May be repeated for a maximum of 5 semester hours.

Librarianship

LIS 4200 Libraries and Librarianship (2) Introduces the student to the development of the library as an institution and to the role of the library and the librarian in today's society.

LIS 4230 Selection and Acquisition of Materials (3) Critical analysis of selection tools in developing a comprehensive media collection with emphasis on selection for small to medium sized libraries and media centers.

LIS 5220 Introduction to Reference (3) The selection, evaluation and use of traditional and electronic reference sources for school library media centers.

LIS 5230 History of Books and Libraries (3) The development of books and libraries from the ancient world to the present and the effects of printed information on communication and cultural development in societies.

LIS 5250 Advanced Bibliography (2) Reference concepts related to learning resource centers and specialized materials in various subject matter fields. Prerequisite: LIS 5220.

Library Literature

LIS 1600 Information Resources (2) An overview of the tools and processes that pervade the effective evaluation and use of general information resources and those in subject-discipline areas. Students will use a broad range of traditional and electronic information resources.

LIS 2600 Introduction to Legal Research (2) Legal reference materials with emphasis on manual searching techniques and on introduction to automated legal databases.

LIS 5610 Research Theory and Practice (2) Research methodology applicable to librarianship and instructional media technology.

LIS 5640 Library Materials for Children and Youth (3) An examination and evaluation of books and nonbook materials with emphasis on informational materials.

LIS 5660 Government Publications (2) Sources, classifications, and utilization of government documents. Prerequisite: LIS 5220.

Administration

LIS 4740 Administration of the Library Media Center (3)

Principles of organization and administration of the library and media center and its relationship to its many publics.

LIS 5712 Integration and Utilization (3) The integration of information literacy skills and current technologies into K-12 instructional strategies. Prerequisites: InsT 4400 and LIS 4230.

LIS 5760 Information Technologies for Library Media Centers (3) Investigation, manipulation, and evaluation of current technologies that affect the production, storage, dissemination, retrieval, and use of information. Prerequisite: LIS 5840 or equivalent.

LIS 6730 Seminar (2) A seminar designed to address various current topics in libraries and information services. Topics will be announced annually. May be repeated for a maximum of 6 semester hours.

Technical Processes

LIS 5829 Cataloging and Classification I (3) Principles and practices of organizing information and creating bibliographic records including MARC formats.

LIS 5830 Cataloging and Classification II (2) Complex problems of organizing school library media collections. Emphasis on cataloging and classification of nonbook media. Prerequisite: LIS 5829.

LIS 5840 Microcomputers in Libraries (3) The application of small computers in the collection, organization, and dissemination of information including the evaluation of hardware and software applicable to library functions.

LIS 5850 Online Information Retrieval (2) Exploration of data storage and retrieval systems with emphasis on the characteristics of bibliographic databases most useful in school library media centers. Experience in the use of remote database systems. Prerequisite: LIS 5220.

Individual Study and Research

LIS 5920 Practicum in Library Media Centers (1-4)

Involves practical experience in processes of library media centers. May be repeated for a maximum of 4 semester hours. Prerequisites: LIS 4230, LIS 5220, LIS 4740 and LIS 5829.

LIS 6920 Advanced Practicum in Library Media Centers (2) Practical experience in an appropriate library or information agency. May be repeated for a maximum of 4 semester hours. Prerequisite: LIS 5920.

LIS 6960 Research Problem (2) Special investigation of an approved problem in the field resulting in a research paper. A prospectus is required. May be repeated for a maximum of 4 semester hours. Prerequisite: LIS 5610.

LIS 6990 Thesis (3-6) Investigation of an approved topic in library or information service resulting in a formal thesis. A prospectus is required. Prerequisite: LIS 5610 and consent.

SECTION III

POLICIES AND REGULATIONS

ACCIDENT AND ILLNESS PROVISIONS

The following benefits accrue to every student at Central with a validated ID while on campus from the first day through the last day of a semester in which he/she is duly enrolled. **Any financial benefits stated under (1) and (2) below will accrue to the benefit of the student concerned only after family or personal health and accident insurance has been applied.**

1. **Illness.** The University does not pay the non-college physician's fees of those hospitalized nor does it assume responsibility for the student's hospital charges.
2. **Accident.** Limited health care costs will be paid for students injured in a University credit-based program, intercollegiate athletics or an organized intramural activity which is under the direction of a member of the University staff. Under no circumstances will the total coverage under this agreement exceed \$250 for each injury. Injury occurring on the campus but not in credit-bearing programs, intercollegiate athletics, or organized and supervised intramural activities will be regarded as an illness.
3. In the case of either accident or illness, the University will not be responsible for expenses incurred for any type of non-University medical services unless the student has prior referral by the University physician. The University reserves the right to adjust benefits to the students within the limits of the funds made available for the accident and illness program through fees paid by students.

The University does not assume responsibility for:

1. Expenses due to medical conditions existing before enrollment in the University.
2. Expenses incurred with hospitals, physicians, or pharmacies other than those participating in the regular University program.
3. Expenses incurred for illness or injury resulting from the student's misconduct or irresponsible behavior.
4. Expenses incurred for injuries in accidents off campus.
5. Expenses incurred while the student is not actually enrolled.
6. Expenses incurred because of pregnancy, childbirth, or miscarriage.
7. Expenses incurred with hospitals, physicians, or pharmacies without prior referral by the University physician.

In the event of a severe accident of an emergency nature call 911 for assistance in all areas of Johnson County.

ALCOHOL AND OTHER SUBSTANCES

The University has established and enforces clear policies that promote an educational environment free from the abuse of alcohol and other substances. Federal regulations which require alcohol and drug testing programs for certain safety-sensitive functions will be enforced. The University expects students, employees, visitors, and organizations to adhere to state statutes prohibiting individuals under the age of 21 from drinking or having alcohol in their possession. Drinking or possession of alcoholic beverages is prohibited in University buildings, on University grounds, and in University residence halls except in those places where an explicit exception has been granted. The University also expects students, employees, and visitors to adhere to federal, state, and local statutes prohibiting or limiting the use, possession, or sale of legal and illegal substances on the campus. Individuals found in violation of these policies and laws will be subject to appropriate action through established procedures. Anyone wanting information or help concerning alcohol- or drug-related problems is encouraged to seek confidential assistance as provided by the University Health Center or Counseling and Psychological Services.

ASSESSMENT

Periodic measurements of student perceptions and intellectual growth are obtained as one means for the University to assess and to improve its academic programs and student learning. Every student is required to participate in the University's assessment program. This program may include examinations in general education, intellectual skills, and the major field of study, as well as opinion surveys regarding the total University experience. The information obtained through the assessment program is used to measure student competency and to improve the quality of the educational experience for future students in the aforementioned areas.

DEGREE REVOCATION POLICY

Purpose

The purpose of the degree revocation policy is to describe the conditions under which a degree granted by Central may be revoked.

Definition

It is the policy of Central Missouri State University that degrees may be revoked when:

1. Evidence is presented which verifies that a degree had been erroneously conferred when all requirements had not been satisfied at the time the degree was granted.
2. Evidence is presented which verifies that a degree had been erroneously conferred as a result of a act of academic dishonesty.

Guidelines and Responsibility

Upon the receipt of evidence suggesting the erroneous conferral of a degree, the Associate Vice President for Academic Affairs will convene the Degree Review Committee to investigate the circumstances and to make initial recommendations. The committee membership will consist of the following: the Registrar, the Associate Provost, the Dean(s) of the college(s) responsible for the major program(s), and the Dean of the Graduate School, if a graduate degree is involved. The committee will be augmented by the department chair(s), faculty, and graduate advisor when the requirements of a specific major, minor, or course were not met. The committee chair will be elected from the assembled membership.

If the Degree Review Committee finds the charge unfounded and, therefore, decides not to recommend revocation of the degree, the matter will be closed.

If the Degree Review Committee concludes that the degree was improperly granted and recommends that the degree be revoked, the chair of the committee will forward this recommendation to the Provost.

The Provost shall ensure that the appropriate levels of procedural due process be extended to the degree recipient. If, upon the conclusion of this investigation, the Provost concurs that the degree be revoked, this recommendation will be forwarded to the President for consideration. If the President deems the evidence warrants degree revocation, that recommendation will be forwarded to the Board of Governors for action.

**DEPARTMENT OF HIGHER EDUCATION POLICY
FOR HIGHER EDUCATION STUDENT
RESIDENCY STATUS DETERMINATION
EFFECTIVE MARCH 1, 1989**

PURPOSE: This rule sets forth the criteria and requirements for decisions by institutions of higher education relating to the residency status of students, including the determination of student fee charges and of student eligibility for financial aid administered by the Coordinating Board for Higher Education.

1. DEFINITIONS

- a. "Coordinating Board" or "Board" shall mean the Coordinating Board for Higher Education created by section 173.005, RSMo.
- b. "Domicile" shall mean presence within a state with an intent of making said state a permanent home for an indefinite period.
- c. "Residency" or "Resident Status" shall mean that status which is achieved when sufficient proof of a domicile within a state is presented.
- d. "Adult Student" shall mean any student having attained the age of twenty-one (21) years.
- e. "Unemancipated Minor Student" shall mean any student not having attained the age of twenty-one (21) years, and under the care, custody, or support of the individual or individuals having legal custody of said students.
- f. "Emancipated Minor Student" shall mean any student not having attained the age of twenty-one (21) years and who is not under the care, custody, and support of an individual or individuals having legal custody.

2. ADULT STUDENTS

If an adult student, not a resident, shall present sufficient proof of the establishment of a domicile

within the State of Missouri, such student shall be granted resident status at the first enrollment following establishment of said domicile.

3. UNEMANCIPATED MINOR STUDENTS

The domicile of an unemancipated minor is presumed to be that of the individual or individuals having legal custody of said student. If those having legal custody of the student establish a Missouri domicile, that student shall be granted resident status at the first enrollment following the establishment of the Missouri domicile. Once an unemancipated minor student has established resident status under this rule, he/she may continue to qualify for resident status so long as he/she remains continuously enrolled, excluding summer terms, in a Missouri institution of higher education, even if the individual or individuals having legal custody of the unemancipated minor student cease to hold Missouri resident status.

4. EMANCIPATED MINOR STUDENTS

The domicile of emancipated minor students shall be determined as if they were adults. A minor may become emancipated through marriage, formal court action, abandonment, or positive action of alienation on the part of the minor. In all instances, alienation from care, custody, and support shall be complete, and the burden of satisfactory proof of emancipation shall be that of the minor student. Mere absence of the student from the domicile of the individual or individuals having legal custody of that minor student shall not constitute proof of emancipation. In no instance shall a minor student be eligible for emancipation when that student is taken as an income tax deduction by a second party other than a spouse.

5. MEMBERS OF THE MILITARY FORCES

Students shall neither gain nor lose residency status solely as a consequence of military service. For the purposes of student resident status, military personnel, when stationed within the State of Missouri pursuant to military orders, their spouses, and unemancipated minor children shall be regarded as holding Missouri resident status. However, a member of the military forces who is specifically assigned, under orders, to attend a Missouri institution of higher education as a full-time student, shall be classified, along with his/her spouse and unemancipated minor children, as if he/she had no connection with the military forces.

6. NONCITIZENS OF THE UNITED STATES

Students who are not citizens of the United States must possess resident alien status, as determined by federal authority, prior to consideration for resident status. Aliens present within Missouri as representatives of a foreign government or at the convenience of the United States or Missouri governments and holding G visas shall be entitled to resident status, except for those who are government-funded students. Aliens and their dependents holding A or L visas may be granted resident status if determined to be individually designated as representatives of their governments and whose education is not government funded.

7. PUBLIC COMMUNITY JUNIOR COLLEGE RESIDENCY

Missouri public community junior college districts have legal geographic boundaries within the State, and only residents of each district are eligible for the in-district student fee charge. For purposes of establishing district residency, a Missouri resident who resides out-of-district shall meet the same criteria as set forth in this administrative rule for establishing Missouri residency by a person not a resident of Missouri.

However, Missouri residency is the only residency requirement germane to student eligibility for financial aid programs restricted to Missouri residents.

8. **FACTUAL CRITERIA IN DETERMINATION OF RESIDENT STATUS**
 - a. Attendance at an institution of higher education shall be regarded as a temporary presence within the State of Missouri; therefore, a student neither gains nor loses resident status solely by such attendance.
 - b. The burden of proof of establishing eligibility for Missouri resident status shall rest with the student.
 - c. In determining the resident status for the State of Missouri, either of the following shall be sufficient proof of domicile of a person and his/her dependents within the State of Missouri:
 - (1) Presence within the State of Missouri for a minimum period of the twelve (12) immediate past consecutive months coupled with proof of intent to make the State of Missouri a permanent home for an indefinite period; or
 - (2) Presence within the State of Missouri for the purposes of retirement, full-time employment, full-time professional practice, or to conduct a full-time business.
 - d. In determining whether a student holds an intent to make the State of Missouri a permanent home for an indefinite period, the following factors, although not conclusive, shall be given heavy weight: continuous presence in the State of Missouri during those periods not enrolled as a student; presence within the State of Missouri upon marriage to a Missouri resident and the maintenance of a common domicile with the resident spouse; substantial reliance on sources within the State of Missouri for financial support; former domicile within the state and maintenance of significant connections while absent; and ownership of a home within the State of Missouri. The twelve-month period of presence within the state, as stipulated in paragraph 8(c.1) of this rule, does not, in and of itself, establish status in the absence of the required proof of intent.
 - e. The following factors indicating an intent to make the State of Missouri a permanent home for an indefinite period shall be given less weight than those in subsection 8(d) above and include: voting or registration for voting; part-time employment; lease of living quarters; a statement of intention to establish a domicile in Missouri; automobile registration or operator's license obtained in Missouri; and payment of income, personal, and property taxes in Missouri. The factors listed in this subsection have applicability only as they support the intent to make the state of Missouri a permanent home for an indefinite period.
 - f. Resident status is one criterion of eligibility for student grant awards administered by the Coordinating Board. There are additional criteria of eligibility, and the establishment of resident status by a student does not guarantee that the student will be awarded a student grant.
 - g. The waiver of forgiveness of a nonresident student fee, in full or in part, shall have no bearing on the residency status of a student and shall not be a basis for classification of a nonresident student as a resident.

- h. For those nonresidents who pay Missouri income tax, the nonresident student shall receive a credit against the nonresident student fee in an amount equal to the actual Missouri income tax paid for the previous calendar year except that the remaining obligation shall not be less than the amount of the resident student fee. Unemancipated minor students are eligible by reason of payment of Missouri income tax by the nonresident individual or individuals having legal custody of said students. Students entering in January shall be regarded as entering in the immediately preceding fall for purposes of determining previous calendar year. For students entering after January, previous year means immediate past calendar year.
9. **ADMINISTRATIVE AND COMPLIANCE**
 - a. Each institution shall establish procedures for the determination of institutional decisions in accordance with this rule. Such procedures shall adhere to the guidelines set forth in this rule and to the concepts of procedural fairness and reasonableness to the students, to the institution, and to the taxpaying public of the state. The procedures shall provide for at least two levels of institutional appeal review, and the last stage of the procedure shall be considered final by the institution.
 - b. Compliance with the guidelines set forth in this rule is required of institutions of higher education in order to be determined as eligible institutions under student financial aid programs administered by the Coordinating Board and for which student eligibility is restricted to residents. Institutions must be in compliance by August 1, 1986, and earlier compliance is encouraged.
 - c. On complaint of any student or other indication of possible institutional noncompliance with the guidelines set forth in this rule, the Coordinating Board may review the eligibility of an institution for student financial aid programs, or any other funds administered by the Board, and may take such actions or make such recommendations relating to the institution's eligibility as the Coordinating Board deems appropriate. Such actions shall be consistent with any other administrative rules the Board has established pertaining to the review of institutional eligibility.

Petitions for changing from a non-resident status to that of a Missouri Resident may be obtained at the Office of the Director of Admissions. Completed petitions must be returned to this Office for approval prior to the first day of instruction of the semester for which reclassification is requested.

MISSION AND GOALS

Central Missouri State is a comprehensive, public university dedicated to providing personalized higher education experiences for a diverse body of students. Through its commitment to service and excellence, Central seeks to meet the educational needs of its 21-county region, with extended responsibility to meet state, national and international needs through selected programs. In fulfilling its responsibilities, the University:

- 1) admits graduates of accredited high schools based on selective admission criteria, actively recruits traditionally under-represented students, and offers a strong merit-based scholarship program to attract highly capable students.

- a) broaden the geographic base for the recruitment of students who possess special academic talents
- b) improve the academic preparation of incoming students through cooperative efforts with elementary and secondary schools and community colleges
- c) address the special needs of physically challenged and economically and culturally disadvantaged students
- d) provide an opportunity for learners returning to further their education for career enhancement and/or career change
- e) increase scholarships and awards aimed at attracting and retaining academically talented students
- f) expand the scope and quality of the Honors Program
- g) strengthen programs to retain students and increase degree completions
- 2) demands excellence in teaching at all levels while expecting faculty members to continually enhance their teaching through scholarship, research, creative activities, and public service, with particular emphasis on faculty-student interaction.
 - a) attract and retain a quality and diverse faculty
 - b) provide an active and effective, well-funded professional development program to keep faculty competitive and current in their respective disciplines, constantly expanding their knowledge and abilities
 - c) advance excellence in teaching by supporting peer collaboration, research, scholarship, creative activity, and public service
 - d) foster collaborative investigations by faculty from different disciplines and institutions
 - e) provide opportunities and financial support for the continuing education of faculty
 - f) encourage student/faculty interactive research
 - g) promote participatory learning strategies in the classroom by incorporating and supporting new instructional resources
 - h) expand the use of mainframe and micro-computer equipment and related software to enhance classroom instruction
 - i) support the implementation of outcome-based education to improve teaching and learning
 - j) provide positive role models and mentors to assist students in their personal and educational development
- 3) provides an undergraduate liberal arts and sciences foundation with an emphasis on integrating critical thinking, communication skills, and technological applications into the curriculum across all disciplines.
 - a) establish a University Studies curriculum based upon research and practice
 - b) offer instruction that includes the following emphases throughout the curricula: (1) international contexts, influences, and applications; (2) ethical dimensions of decision-making and behavior; (3) communication skills, analytical ability, and critical reflection; (4) computer literacy; and (5) cross-cultural and diversity (women, minority, handicapped, international, and nontraditional students)
 - c) create educational programs that bridge the gap between theory and practice by incorporating the social, affective, economic, and intellectual ramifications of technology into the curricula
 - d) integrate the computer, along with other technological systems and concepts, through such non-classroom activities as residence hall programs, library services, and other similar projects
 - e) enhance information technology capabilities, including better accessibility and coordination of all resources and services
- 4) meets the needs of a changing workforce in its region through responsive pre-professional, professional, and career-oriented education, e.g., through traditionally strong programs in business and the arts.
 - a) provide a responsive curricular process that facilitates and expedites changes to meet current educational needs
 - b) develop and maintain quality course offerings, academic programs, and extra-curricular activities in high demand academic areas
 - c) improve existing and develop innovative academic programs to the status of regional or national prominence
 - d) seek and support national accreditation for appropriate programs
 - e) provide and maintain current technology needed for quality course content and pedagogy throughout all academic programs
 - f) develop areas of prominence and excellence and a reputation for leadership in business, the arts, and other professional programs
- 5) fulfills particular state, national, and international workforce needs through its distinctive programs in applied technology, safety, and selected human services professions.
 - a) strengthen high demand applied technology and human resources programs such as aviation, safety, graphics, criminal justice, speech pathology and audiology, social work, and nursing and identify specific programs for development/expansion
 - b) insure that the many nationally accredited/potentially accredited programs in applied technology and human services are aggressively supported
 - c) expand the physical facilities and resource materials vital to a growing university and citizens in the Information Age, integrating modern technological advancements into all areas of the University
 - d) continue to implement leading edge technology with equipment and facilities dedicated to the distinctive programs
 - e) encourage the development and submission of grants to conduct applied research
- 6) prepares elementary, secondary, and post-secondary educators for Missouri.
 - a) recruit talented students, with a special emphasis on minorities and under-represented groups, for careers as educators
 - b) refine procedures which will identify the behaviors, teaching strategies, and personality profiles of successful teachers
 - c) develop innovative, technology-sensitive curricula for the preparation of educators
 - d) evaluate teacher education curricula systematically throughout the University to ensure high standards and coherence
 - e) increase the number of educators prepared in fields of critical shortage
 - f) prepare professional educators who are academically and technically proficient, reflective in practice, committed to the intellectual empowerment of others, and knowledgeable

- about the role of education in a democratic and global society
- 7) provides advanced graduate studies and research in areas of particular strength and need.
 - a) provide graduate programs in selected disciplines and high demand professional fields to meet existing and anticipated needs for leadership and expertise in society and the economy
 - b) promote scholarship that enhances knowledge, effective teaching and curricular development, demonstrates critical and creative thinking, and is of national significance
 - c) identify and initiate development in areas in which the University should offer doctoral degrees
 - d) promote graduate programs nationally through appropriate and effective marketing to educational and professional constituencies
 - e) provide funding and the organizational infrastructure for research and for scholarships, awards, leaves, and assistantships to support faculty and graduate students
 - 8) promotes and cultivates global awareness and an appreciation for human diversity through the study of other cultures, international exchanges, and a campus environment sensitive to individual needs and cultural backgrounds.
 - a) develop and maintain student, faculty, and staff populations characterized by gender, ethnic, and cultural diversity
 - b) provide a social and physical environment conducive to learning, overall personal development, and a sense of community
 - c) support and/or create centers and institutes which are responsive to the cultural and educational needs of the region
 - d) develop collaborative efforts with the broader community to increase the educational attainment of cultural/ethnic minorities and to identify and address demographic changes
 - e) integrate contributions of minorities and women into existing curricula as well as into special programs and courses
 - f) promote global awareness by expanding international opportunities for students and faculty
 - 9) assesses institutional programs and student academic achievement in order to improve teaching and learning.
 - a) implement an assessment system that validates the relevancy, effectiveness, and efficiency of all academic programs, to include adequacy of personnel, facilities, and equipment
 - b) establish policies and procedures to insure that faculty demonstrate excellence in teaching
 - c) provide continuous assessment of the management structure and student-support systems in achieving the institutional mission and goals
 - d) identify student outcomes for all undergraduate and graduate programs
 - e) integrate total quality effectiveness and continuous process improvement throughout all academic and management functions
 - f) solicit input from businesses, industry, government, and non-profit agencies for program assessment through appropriate advisory committees and practicing professional alumni
 - g) implement an assessment procedure for documenting the capabilities of incoming

- 10) students that provides a relevant base for placement shares its expertise with schools, businesses, and public agencies through cooperative and outreach efforts, and serves as the informational, cultural, and artistic center for the citizens of the region.
 - a) expand public relations efforts through various media to inform the public about opportunities that are provided through higher education
 - b) encourage Central's constituents to provide feedback through various advisory boards and assessment projects
 - c) provide quality graduates who demonstrate competence in technical, communication, and interpersonal skills
 - d) provide educational opportunities that assist constituents in lifelong learning activities
 - e) develop and maintain extensive and high quality extended campus offerings in degree-granting academic programs, certification programs, and programs specifically designed for workforce improvement needs
 - f) advance and support centers of excellence which will contribute to the needs of our constituents
 - g) sponsor cultural events for faculty, staff, students, and the community
 - h) share unique faculty expertise and talents with constituents outside the University

NONDISCRIMINATION / EQUAL OPPORTUNITY STATEMENT

Central Missouri State University actively follows a policy of nondiscrimination in regard to age, race, color, religion, sex, national origin, Vietnam Era veterans, and persons with handicaps and disabilities. This policy applies to all employment practices, the awarding of student financial aid, and the recruitment, admission, housing, placement, and retention of students, faculty and staff. The University is in compliance with the regulations implementing Title VI and Title VII of the Civil Rights Act of 1964 regarding race, color, national origin, religion and sex discrimination; Title IX of the Education Amendments Act of 1972 regarding sex discrimination; the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973 regarding discrimination based on disabilities and handicaps; the Age Discrimination in Employment Act; and other state and federal laws and regulations. Persons having inquiries concerning the University's compliance with the regulations implementing any of the above are directed to contact Bettie J. Rusher, the AA/EEO Officer and ADA Coordinator, Administration 201, Central Missouri State University, Warrensburg MO 64093, 660-543-4730. The Relay Missouri number for TDD callers is 800-735-2966 and 800-735-2466 for voice callers.

RESEARCH

RESEARCH INVOLVING ANIMALS. Federal law requires that all research projects involving the use of warm-blooded animals be conducted to ensure humane treatment of the animals. To ensure proper care and treatment, all such projects, regardless of the funding source, must be approved in advance by the Institutional Animal Care and Use Committee, administered by the Director of Sponsored Research and Projects, Humphreys 410.

RESEARCH INVOLVING HUMAN SUBJECTS.

Federal law, requires that research projects involving the use of human subjects be approved by the Human Subjects Committee before the research is undertaken. All human subjects research, including questionnaires, must be approved by the chair of the department and the dean of the college, and where appropriate, the Human Subjects Committee. The dean of the college will determine when human subjects research will be referred to the Human Subjects Committee.

STANDARDS AND REGULATIONS CONCERNING UNDERGRADUATE STUDENTS**Philosophy of Academic Standards**

To maintain standards which foster an atmosphere of academic excellence:

Central admits individuals who have demonstrated a potential for successful academic achievement in a university community. Admission is without regard to age, race, creed, color, religion, sex, national origin, or handicap status.

Central retains students who, through periodic University administered assessment and evaluation, meet or exceed established University academic standards.

Central grants degrees to students who fulfill prescribed program requirements and meet or exceed the minimum academic standards established by the University and the State of Missouri.

Central assesses former students to determine to what extent the university experience has helped them attain an intellectual orientation by which they can develop, throughout their lifetimes, the capacity for self improvement, career achievement, and responsible living in a free society.

Student Responsibility

Central, through action of the faculty, administration, and Board of Governors, establishes and maintains requirements for its various degrees. These requirements must be completed before a degree is granted. The staff of the University will assist students in understanding and meeting these requirements, but the individual student ultimately is responsible for fulfilling them. Therefore, it is important for each student to be familiar with the requirements pertaining to the degree being sought and to remain currently informed throughout the period of enrollment. The Academic Advisors, Registrar and faculty can be of assistance in this process.

Academic Load

Following admission, each student will be granted an appointment with an advisor in the Office of Academic Advisement and will be assisted in building an academic program of study and making a schedule of courses.

The normal load per semester for an undergraduate student is fifteen or sixteen semester hours. A full-time undergraduate student is one pursuing twelve or more semester hours of work per semester. The maximum academic load is eighteen semester hours; however, upperclass students in good academic standing may enroll for as many as nineteen semester hours without special permission. Freshmen and sophomores desiring to exceed eighteen semester hours must have an application for overload approved. Such application should be initiated with an academic advisor. Requests to carry overloads will

not be considered by the University Committee on Undergraduate Exceptions unless the student has the recommendation of an academic advisor. Students on academic probation may not enroll in more than fifteen semester hours during any semester of academic probation.

If students are enrolled for course work at other institutions of higher education while concurrently enrolled at Central, the total number of semester hours taken in any enrollment period may not exceed the maximum specified for a full-time, resident student at Central.

Students will not be admitted after the last dates for enrollment as listed in the official University calendar except by written approval of the appropriate Department Chair and College Dean. If approved, late enrollees may register for credit not to exceed one semester hour for each full week remaining in the semester.

Academic Standards

GRADING SYSTEM. The marking system used in evaluating a student's work is as follows:

- A** - Work of marked excellence.
- B** - Work of superior quality.
- C** - Work of average quality.
- D** - Work of inferior quality.
- F** - Failure to do work of passing quality.
- NC** - No credit granted for course.
- P** - Work of passing quality in a Pass/Fail Course.
- U** - Course not completed for justifiable reasons.
- W** - Course dropped during withdrawal period.*
- WP** - Work was of passing quality at time of approved withdrawal.*
- WF** - Work was of failing quality at time of approved withdrawal.*

*Refer to the section Changes in Schedules, and either the Calendar in this catalog or the Student Calendar/Handbook.

UNFINISHED WORK. Any student receiving a **U** grade in a course must complete the requirements during the first semester (or summer session) of re-enrollment in the University or an **F** is automatically recorded. A student having more than one **U** grade is expected to reduce his/her course load accordingly in order to complete the unfinished work. It is the student's responsibility to contact his/her instructor concerning the removal of the **U** grade.

Re-enrollment in a course for the purpose of removing a **U** grade is not considered appropriate. Permission to do so may be granted only by the University Committee on Undergraduate Exceptions.

QUALITATIVE GRADE STANDARDS. Each student who is a candidate for teacher certification or a degree must maintain a specified qualitative grade average on all work for which he/she has enrolled. (Check the grade average requirements under REGULATIONS APPLYING TO UNDERGRADUATE DEGREES AND CERTIFICATES.)

Grade Requirements for Acceptance Into Programs.

In addition to the general requirements applicable to all areas, several academic programs specify special qualitative grade standards. For example, a cumulative average of 2.50 is necessary after taking specified courses in order to be admitted to the Teacher Education Program and the Nursing Program, and a cumulative average of 2.25 is necessary after taking

specified courses to be admitted to B.S. in Business Administration degree programs in the Harmon College of Business Administration. Such special standards are listed under the major programs.

The Pass-Fail Program. Courses taken for Pass-Fail must satisfy one of the following three criteria and procedures:

1. An undergraduate student may choose to take any free elective for Pass/Fail credit. A free elective is a course which is not a requirement or elective for the student's major or minor and is not used to satisfy University Studies requirements. A student must designate the course or courses to be taken Pass/Fail by the end of the fifth week of classes. A course designated as Pass/Fail may not be changed to a graded course after that date. Instructors will not be informed that a student is taking course for Pass/Fail credit. Students who earn an A, B, C or D will have a P (pass) recorded on their transcript and the grade will not be calculated in the student's grade-point average. Students who fail will have an F (fail) recorded on their transcript and the F will be calculated in their grade-point average. In cases of academic dishonesty, an academic F may be recorded at the discretion of the instructor. A student may elect to count a maximum of nine (9) such Pass/Fail semester credits toward graduation requirements.

2. A department may elect to offer an internship or practicum for Pass/Fail credit only. A student will either have a P (pass) or an F (fail) recorded on the transcript. A P (pass) will not be calculated in the student's grade-point average while an F (fail) will. Courses that are offered only for Pass/Fail credit must be so designated in this catalog.

3. Students who plan to study at an institution outside the U.S. may elect to have all or none of the courses completed abroad count as Pass/Fail credit. If they elect to take these courses for Pass/Fail credit, they must provide written notification to the Director of International Studies before beginning study abroad. A student who earns an A, B, C or D will have a P (pass) recorded on the transcript and the grade will not be calculated in the student's grade-point average. A student who fails will have an F (fail) grade recorded on the transcript, and the F will be calculated in the grade-point average. This policy does not apply to study tours sponsored or recognized by Central.

Audit Courses. A student may audit a class for no grade and no credit. Acceptable performance, attitude and attendance as determined by the instructor in charge are expected. Regular fees and enrollment procedures are required. Courses taken as an audit must be so designated prior to the final date for changing class schedules as announced in the official calendar. Audited classes generally do not fulfill requirements for load consideration, nor do they count when determining a student's enrollment status for disbursing Federal financial aid or V.A. educational benefits.

Computation of Grade Average. In order to compute the cumulative grade-point average, total honor points earned are divided by total hours attempted. Each semester hour is assigned a grade-point value as indicated below:

1. Each semester hour of **A** is assigned 4 honor points.
2. Each semester hour of **B** is assigned 3 honor points.
3. Each semester hour of **C** is assigned 2 honor points.
4. Each semester hour of **D** is assigned 1 honor point.

5. Each semester hour of **F** or **WF** is assigned 0 honor points.
6. Each semester hour of **P**, **W**, **WP**, or **NC** is not considered.
7. Each semester hour of **U** is not considered until complete.

Repeat Enrollment in Courses. A student receiving a grade lower than **C** in an undergraduate course may repeat the course at Central. The higher of the two grades will be utilized in computing the cumulative grade-point average; however, the lower grade will remain as a matter of transcript record. THIS PROCESS IS NOT AUTOMATIC AND WILL BE INITIATED ONLY UPON A STUDENT'S REQUEST WHICH SHOULD BE FILED WITH AN ACADEMIC ADVISOR.

The following specific stipulations apply to the above policy:

1. Courses taken at another institution and subsequently repeated at the same institution are transferred using the same rules applicable for Central courses which have been repeated. Courses taken at another institution and repeated at Central use the same rules applicable for Central courses which have been repeated. Courses taken at Central and repeated at another institution will have the grades averaged.
2. A course may be taken more than twice only if a grade of **F** has been earned both times unless departmental requirements stipulate otherwise.
3. If two consecutive grades of **D** are earned, or if two consecutive grades of **F** are earned, only the second will be used in computing the cumulative grade average.
4. If it becomes necessary for a course to be taken a third time, the second **F** will not be discounted but will be averaged into the cumulative grade average.
5. A course may not be repeated for the purpose of raising a grade average if a more advanced course in a sequence has been completed.
6. Repeating a course under the Pass-Fail option will not negate the initial grade received.
7. Credit hours for repeated courses will be counted only once in the number of course hours earned toward a degree.

Dean's List. To be eligible for the Dean's List, a student must be an undergraduate who earns twelve or more semester hours of residence credit with a grade-point average for the semester of 3.50 or above.

Students in Good Standing. Central students are in good standing if eligible to enroll for classes.

Academic Probation. A student whose Central or cumulative GPA or total Central GPA drops below 2.00 will be **placed on academic probation**. A transfer student will be placed on academic probation at the time of admission if his/her cumulative GPA is less than 2.00. Students placed on academic probation may continue to enroll in classes. However, students are encouraged to seek advice from the Office of Academic Advisement and/or Counseling and Psychological Services about future enrollments. Students on academic probation may not enroll in more than 15 semester hours during any semester of academic probation.

Removal From Probation. A student placed on academic probation will be **continued on probation** until both his/her total Central GPA and his/her cumulative GPA are 2.00 or higher, unless for academic reasons he/she is suspended or dismissed. When students on academic probation raise both their total Central GPA's and cumulative GPA's to 2.00 or above, they are removed from probation. Transfer credit may not be used to raise a total Central GPA.

Academic Suspension. A student who has been placed or continued on academic probation will be **suspended** from Central at the conclusion of his/her next semester/enrollment period if his/her semester/enrollment period GPA is less than 2.00. A transfer student who was admitted on probation will be **suspended** from Central at the conclusion of his/her first semester/enrollment period if his/her semester/enrollment period GPA is less than 2.00. Academic suspension is for a period of one full semester, after which, students may apply for readmission.

Academic Dismissal. A student who has been suspended and later readmitted and continued on probation but does not achieve a semester GPA of 2.00 or higher in a subsequent semester/enrollment period will be **dismissed**. Academic dismissal is for a period of one calendar year, after which, a student may apply for readmission.

Readmission. The readmission of students who have been suspended or dismissed from Central is not automatic. Such students may apply for **readmission** as follows:

1. Students who have been **suspended** may apply for readmission after one semester excluding Summer Session. Students who have been **dismissed** may apply for readmission after one calendar year. Requests for readmission should be sent to the Director of Admissions.
2. A student with extenuating circumstances who has been suspended or dismissed may apply for immediate (or early) readmission. A letter should be written to the University Committee on Undergraduate Exceptions, c/o Director of Admissions. This letter should include (1) a request for readmission, (2) an explanation of any extenuating circumstances for earlier poor performance, and (3) an explanation of activities and plans which may lead to improved scholastic performance at Central. Other substantiating evidence may also be submitted. The Committee does not normally readmit students until after one full semester following suspension or one calendar year following dismissal.

COURSE PREREQUISITES. A student is expected to have satisfied prerequisites required of any course in which he/she is enrolled. Students without prerequisites should not enroll in these classes and may be dropped from the class rolls if they do enroll. A student will not be allowed to enroll in a course that is a prerequisite to a course he/she has already successfully completed with a grade of C or better, except as an audit enrollment.

CLASS ATTENDANCE. Students are expected to attend all lectures, seminars, laboratories, and field work for each registered class and to complete all work assigned by the instructor for the course. Advance arrangements for

unavoidable absences should be made with the instructor whenever possible. Neither absence nor notification of absence relieves the student of the responsibility for meeting all course requirements.

The only arrangements at Central whereby a student may enroll and receive credit while not actively in class attendance are those under the direct and regular supervision of a Central faculty member assigned to a student who has enrolled for a readings, thesis, special problems or a similar arranged course.

Make-up of course requirements missed because of extenuating circumstances shall be worked out between the instructor and the student upon the student's initiative. Instructors are required to allow for such make-up when a student is absent because of participation in approved University activities, University programs (that the student is required to attend) or when absence is required by order of a qualified physician. A student must contact his/her instructor on the first day the student returns to class. The instructor may have special attendance/requirement policies for particular classes, whenever those policies are not in conflict with the student's right to make up missed requirements as described above.

When absent for three days or more, a student may ask the Office of Student Affairs to send an informational note to his/her instructors; however, excused absences may only be granted by the instructor of the class.

The Student Health Center does not provide medical excuses to students for the purpose of being excused from class. The only medical excuse provided will be for those students who have a physical disability and cannot participate in a class activity. This excuse will be for the activity only and not from attending the class.

CHANGES IN SCHEDULES. Changes in class schedule should be made during the Drop and Add period (first five class days of the semester). Such changes will not be entered on the permanent record. Courses may not be added after the initial Drop and Add period.

During the Withdrawal period (second week through the tenth week), a student may withdraw from any class following consultation with an Academic Advisor. Consultation with the course instructor is also recommended. A grade of **W** is recorded on the final grade sheet. Exception to this will be effected in the event that a failing grade is given for cause such as academic dishonesty. In this instance, a **WF** will be recorded.

After the tenth week of the semester, withdrawal from a class is normally not allowed. In enrollment periods other than semester, withdrawal from classes is not permitted during the last one-third of the period. With unusual and extenuating circumstances, a student may submit a written petition to the University Committee on Undergraduate Exceptions (signed by an Academic Advisor) for a late withdrawal from a course. If the Committee approves, the instructor will be asked to assign a **WP** (Withdrawal Passing) or a **WF** (Withdrawal Failing) for the course being dropped.

REGULATIONS APPLYING TO UNDERGRADUATE DEGREES

COURSE NUMBERS. The courses offered on the undergraduate level are divided into five categories.

In general the following may be considered as guidelines:

1. 0000 level courses are primarily used for skills development and are not used to satisfy degree requirements.
2. 1000 level courses are primarily for freshman students.
3. 2000 level courses are primarily for sophomore students and those students with essential prerequisites or backgrounds.
4. 3000 level courses are primarily for junior students and those students with essential prerequisites or backgrounds.
5. 4000 level courses are primarily for senior students and those students with essential prerequisites or backgrounds.

CLASSIFICATION OF STUDENTS. Freshmen are defined as those students who have completed zero through 29.5 semester hours of college credit. Sophomores are those who have completed 30 through 59.5 semester hours. Juniors must have completed 60 through 89.5 semester hours. Seniors are defined as all students who have completed more than 89.5 semester hours.

UPPER-LEVEL CREDIT. Candidates for bachelor's degrees must satisfactorily complete a minimum of 35 semester hours of upper-level work (3000 and 4000 level courses), of which 12 hours must be in the major subject.

DEGREE AUDITS. Each student should file an application for an official degree program audit during the semester in which his/her total hours of credit exceed 30 semester hours. The year of the catalog (See Date of Catalog for Checking Degree Requirements) under which the student expects to qualify for graduation, as well as, the student's degree, major and minor must be indicated on the degree audit. Applications may be obtained in the Office of Academic Advisement and must be signed by the Chair of the department in which the student is majoring.

A student who plans to obtain a Bachelor of Science in Education or a Bachelor of Music Education must have his/her application approved by the Director of Clinical Services and Certification before a degree audit will be made. A student planning to obtain a B.S. in Business Administration degree must have been accepted into the B.S. in Business Administration degree program before a degree audit application will be approved by his/her department.

The application, after completion, will be returned to an academic advisor, who will prepare a degree audit showing the requirements previously met and the courses remaining for completion of the program.

Any deviation from the major or minor requirements listed must be approved by the Department Chair and the Dean of the College concerned. The changes become part of the student's program requirements.

GRADE AVERAGE. In order to receive a degree, a student must earn a minimum grade-point average of 2.00 (C) in each of the following areas:

1. All work attempted at Central and on all work attempted.
2. All work taken to satisfy major requirements at Central and on all major work attempted at all colleges and universities attended.
3. All work taken to satisfy minor requirements at Central and on all minor work attempted at all colleges and universities attended.

4. All courses bearing the prefix of the major attempted at Central and at all colleges and universities attended.
5. All courses bearing the prefix of the minor attempted at Central and at all colleges and universities attended.

For B.M.E. and B.S. in Ed. degree programs, a minimum cumulative grade-point average of 2.50 based upon total hours attempted is required.

GRADUATION WITH HONORS. To be eligible for graduation with honors a student must have earned both cumulative and Central grade averages of 3.50 and must have completed a minimum of 30 semester hours of credit at Central. Those with a cumulative and Central grade average of 3.50 to 3.74 graduate Cum Laude; 3.75 to 3.84, Magna Cum Laude; and 3.85 and above, Summa Cum Laude. Should the Central and cumulative GPAs be in different categories, the lower designation of honors will be recognized.

RESIDENCE. A candidate for any bachelor's degree must have earned a minimum of 30 semester hours with Central. Candidates for the degrees must have earned at least 20 semester hours with Central during the junior and senior years, including upper-level courses in both the major and minor areas.

The last ten semester hours required for the degree must have been earned from this institution.

For an associate degree, the student must earn at least 20 semester hours with Central.

STATE LEGISLATION REQUIREMENT. Section 170.011 RSMo prescribes that all candidates for a degree issued by the colleges and universities in Missouri must have completed courses of instruction in and "satisfactorily passed an examination on the provisions and principles of the Constitution of the United States and of the State of Missouri, and in American history, including the study of American institutions."

Students may comply with the law (1) by completing courses embracing the subject matter specified by the law and receiving credit therein, preferably before admission to upper-level work, or (2) by certification of the completion of such requirements in another collegiate institution.

Students in the following categories will have fulfilled the requirements of this law.

1. All Central majors in the social studies.
2. All Central minors in the social studies and all transfer students who have completed an American history course covering and including the constitutional period and one of the following:
 - a. State Government (from a Missouri college) or
 - b. Missouri History.
3. All students who have taken Hist 1350, Hist 1351, or PolS 1510 in Division II, Area B, of the University Studies.

CORRESPONDENCE AND EXTENSION. Not more than one-fourth of the total number of semester hours required for a degree may be earned by correspondence and extension.

CREDIT FROM MISSOURI INSTITUTIONS. Central follows guidelines of the Council on Public Higher Education as described in Policies and Procedures for the

Review of Academic Program Proposals: New Academic Programs, Off-Site Delivery of Existing Programs and Program Changes (Missouri CBHE, April 1997).

CONCURRENT CREDIT FROM OTHER INSTITUTIONS. Students desiring extension, correspondence, examination, and/or residence credit earned from another institution while concurrently enrolled at Central should receive prior approval from the Registrar. The University reserves the right to evaluate and accept or not accept academic credits from any institution.

EDUCATIONAL TOURS. Credit for not more than nine semester hours earned as part of tours will be acceptable toward an undergraduate degree.

SPECIAL CREDIT ASSESSMENTS. The total credit earned by way of Advanced Placement Examinations (AP), College-Level Examination Program (CLEP), official certification, military service, Defense Activity for Non-Traditional Education Support (DANTES), and similar assessments will not exceed 30 semester hours for a bachelor's degree or 15 semester hours for an associate degree.

Advanced Placement Examinations. Credit may be granted for successful performance on Advanced Placement Examinations. These are available in a number of subject areas and are of two types: (1) those given by the College Entrance Examination Board which must be taken prior to or during a student's first semester at Central; and (2) those prepared and administered by departments of the University. Upon notification of eligibility for credit, a fee of \$5 per semester hour granted must be paid. Additional information may be obtained from the Office of Admissions.

College-Level Examination Program (CLEP). All CLEP examinations must be taken prior to the earning of college course credit in the subject. General examinations must be taken prior to the completion of 30 semester hours of college credit; subject examinations may be taken at any time prior to graduation.

Credit obtained by successfully taking the general examinations or subject examinations of the College-Level Examination Program may be used to satisfy electives or requirements on some programs. To receive and apply such credit, it is necessary for scaled scores or scaled subscores to be at or above the level set by the University. A recording fee of \$5 per semester hour is required for CLEP credit awarded by Central.

For further information on evaluation and acceptance of CLEP credit and procedures for obtaining such credit, contact the Director of Admissions. For information regarding taking the tests at Central, contact the Coordinator of Assessment and Testing Services.

Credit for Official Certifications. In certain instances, academic departments will evaluate official certifications, licenses, and diplomas granted by fully accredited national and state boards and officially recognized professional organizations to determine whether or not undergraduate credit may be assigned by the Provost and Vice President for Academic Affairs toward the fulfillment of degree requirements in specific major or minor related areas. Appropriate departments of the University reserve the right to test competencies and performances in these areas and to determine the hours and the nature of

the credit to be assigned, if any. All requirements as stated in the General Catalog must be met before a degree is conferred.

Military Service Related Credit. Credits earned by service personnel through correspondence under the United States Armed Forces Institute or in specialized training programs of the United States armed services under certain circumstances may be accepted. The guidebook published by the American Council on Education and DANTES is used to determine the credit value of the latter programs. The applied physical education requirement of Group I, General Education Program, may be met by veterans upon presentation of evidence of 12 months or more active military training in a U.S. service. Students who have completed six months of active military service, although not considered veterans, may meet two semester hours of the physical education requirement through presentation of appropriate evidence of their service experience.

DATE OF CATALOG FOR CHECKING DEGREE REQUIREMENTS. Students are always subject to current administrative, academic and general policies and regulations. The 1998-2000 General Catalog becomes effective Summer 1998.

In most instances a candidate may use as a basis for degree requirements the General Catalog issued for any year following the date of his/her first enrollment in the University so long as it is dated not more than five years prior to the date the degree is conferred. A student must earn academic credit at Central during the year of the catalog chosen. Central follows the catalog agreement described in Policies and Procedures for the Review of Academic Program Proposals: New Academic Programs, Off-Site Delivery of Existing Programs and Program Changes (Missouri CBHE, April 1997). However, the University reserves the right to add, change, delete, and interpret policies at any time and to require these be met by those seeking degree candidacy and/or conferral.

CHOICE OF DEGREES. Upon application and approval of an official degree audit for a degree program, a student may pursue a second degree different from that of the initial degree granted. Two identical degrees are not available for students completing double majors. The second degree requires a minimum of 30 additional semester hours beyond the requirements of the first degree.

The University Committee on Undergraduate Exceptions interprets policies relative to degrees.

APPLICATION FOR DEGREES. An application for each undergraduate degree to be awarded must be made in the Registrar's Office. Such applications **must be received by the Registrar not fewer than 30 days** before the date the degree is to be conferred. Reports showing satisfactory completion of all degree requirements must have been received by the Registrar **not fewer than 48 hours** before the commencement exercises are scheduled to begin.

FINAL EXAMINATIONS. Final examinations are given at the end of each semester according to an announced schedule. Permission for an examination out of scheduled hours is granted only in special cases, with the approval of the instructor of the class and the Vice President for Student Affairs. A fee of \$10 per final is charged for

rescheduling of final examinations. Any student who has three final examinations scheduled on any one day may request permission to move one of the examinations to another day during the final examination period. There is no charge for this, but approvals must be secured as described above. Resolution of conflicting examination schedules, as well as arranging make-up examinations, must be made with class instructors.

GRADE REPORTS AND TRANSCRIPTS. A grade report is prepared for each student at the close of each semester (or summer session). Transcripts in a reasonable number may be furnished to a student without charge.

FIELD TRIPS. At times, field trips are planned in conjunction with course assignments. Students in classes for which such trips are planned are to be given sufficient advance notice to make necessary arrangements for absence from the campus. Field trips are not scheduled during final examination periods nor can they be required by an instructor. Work missed in other classes may be made up, although instructors are not required to provide tutoring. All arrangements are subject to the limitations of University liability coverage.

WITHDRAWAL FROM THE UNIVERSITY. Students who leave the University must officially withdraw through the Office of Student Affairs. In the event that a student fails to initiate this process, his/her withdrawal is not considered complete and grades of **F** will be recorded for failure to attend classes. Withdrawal during the last five weeks of a semester while receiving a failing grade in a course will result in the recording of a **WF** on the permanent record. Regulations governing credit for room and board payments are found in the housing contract. (See Credit Policy for information on the credit of fees.)

FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT. Central adheres to the federal Family Educational Rights and Privacy Act (FERPA). Copies of the full policy implementing the FERPA may be obtained from the Office of the Director of Academic Advisement, the Registrar's Office or the Office of the Vice President for Student Affairs.

SECTION IV

FACULTY AND STAFF

Listing as of January 1, 1998

PRESIDENT

ED M. ELLIOTT--President and Professor of Higher Education and Professor of Physical Education. B.A., William Jewell College; M.A., Columbia University; Ed.D., University of Northern Colorado.

VICE PRESIDENTS

KYLE R. CARTER--Provost and Vice President for Academic Affairs and Professor of Psychology. B.A., Mercer University; M.A., Ph.D., University of Georgia.

TOM D. EDMUNDS--Vice President for Information Services and Technology, Senior Vice President--Business Affairs and Professor of Administration, Supervision and Higher Education. B.S. in Ed., M.S. in Ed., Central Missouri State University; Ed.D., University of Kansas.

JOHN P. MEES--Vice President for Planning and Policy/Executive Assistant to the President and Professor of Curriculum and Instruction. B.S. in Ed., M.S. in Ed., Southern Illinois University; Ed.D., Indiana University.

STEPHEN H. PETERSEN--Vice President for Student Affairs and Adjunct Associate Professor of Higher Education. B.A., M.S. in Ed., Ed.D., Indiana University.

JUDY VICKREY--Vice President for Finance and Administration and Professor of Administration and Higher Education. B.S., Southwest Missouri State University; M.E., Ph.D., University of Missouri-Columbia.

ADMINISTRATIVE STAFF

Academic Affairs

JIM R. BOWMAN--Dean of the College of Education and Human Services and Professor of Curriculum and Instruction. B.S. in B.A., M.S., Pittsburg State University; Ph.D., University of Oklahoma-Norman.

DARRELL R. BRAMMER--Technology Coordinator, Center for Technology and Small Business Development. B.S., Central Missouri State University; M.B.A., Rockhurst.

DONNA A. BURDEN--Assistant to the Provost and Vice President for Academic Affairs. B.S. in Ed., Central Missouri State University.

KELLY S. BURNLEY--Admissions Representative. B.S. in Ed., Central Missouri State University.

DAVID CARD--Airport Director and Chief Flight Instructor. B.S., M.S., Central Missouri State University.

R. DALE CARDER--Interim Director of Enrollment Services and Marketing. B.S. in Ed., Central Missouri State University; M.A., Pepperdine University.

GLENN A. CARRIKER--Coordinator of Instruction, Missouri Safety Center. B.S., M.S., Ed. Specialist, Central Missouri State University.

SEAN M. CHRISTY--Admissions Representative. B.S. in Ed., Central Missouri State University.

ROBYN CRISWELL-BLOOM--Coordinator of Distance Learning. B.S., University of North Dakota; M.S., Central Missouri State University.

DONALD L. DAVIS--Coordinator of Small Business Development Center. B.S., Northwest Missouri State University.

LEANNA R. DEPUE--Director of the Missouri Safety Center. B.S., M.S. in Ed., Ph.D., Southern Illinois University-Carbondale.

KELLY A. EDMONDSON--Coordinator of Extended Campus. B.F.A., M.B.A., Central Missouri State University.

DAVID H. EWING--Farm Facilitator. B.S., M.S., Central Missouri State University.

C. SUE FELDMAN--Director of Academic Advising. B.S. in Ed., M.S. in Ed., Central Missouri State University.

RICHARD D. FOSTER--Assistant Vice President for Academic Affairs/Support Services and Interim Academic and Enrollment Services and Associate Professor of Business Administration. B.S., Southern Illinois University; M.S. in Ed., Central Missouri State University; Ed.D., University of Missouri-Columbia.

TERI A. FOX--Assistant Director of Student Records. B.S. in Ed., M.S. in Ed., Northwest Missouri State University.

MICHAEL GIOVANNINI--Admissions Representative. B.S., M.S., Central Missouri State University.

MALLOY C. GOULD--Director of Academic Professional Development and Special Programs, Research and Publication Specialist, Missouri Safety Center, and Assistant Professor of Speech Communication. B.S. in Ed., M.A., University of Texas-Austin; Ph.D., Ohio State University.

MARY E. GRIFFIS--Coordinator of University Media Services. B.F.A., M.S., Central Missouri State University.

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DORIS HUBER--Transfer Coordinator/Academic Advisor. B.S., University of South Dakota.

DENTON D. HUMPHREY--Academic Advisor. B.A., Alderson Broaddus College; M.S., West Virginia University.

OCIE B. JOHNSON--Admissions Representative. B.S., Central Missouri State University.

LARRY M. KEISKER--Director of Clinical Services and Certification. B.M.E., M.S. in Ed., Ed. Specialist, Central Missouri State University; Ed.D., Oklahoma State University.

MARY ALICE LYON--Director, TRIO Programs. B.A., B.S. in Ed., M.A., Ed. Specialist, Central Missouri State University.

SUSAN K. MAIER--Academic Advisor. B.S. in Ed., Central Methodist College; M.Ed., University of Missouri-Columbia.

LAURA E. MILLER--Administrative Assistant to the Registrar. B.S. in B.A., Central Missouri State University.

BRIAN D. NASH--Coordinator of Extended Campus. B.S. in B.A., Park College; M.H.S., University of Great Falls-Montana.

RUDOLFO "RUDY" ORTIZ--Academic Advisor. B.S., Fort Hays State University; M.S., Emporia State University.

NOVELLA PERRIN--Assistant Vice President for Academic Affairs/Dean of Graduate Studies and Professor of

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CHARLES W. PETENTLER--Assistant Director of Admissions for Application and Processing. B.S., M.A., Central Missouri State University.

DONALD W. PETERSON--Director of Broadcasting Services. B.S., Wayne State College; M.S., Indiana State University; Ph.D., University of Nebraska-Lincoln.

PALADUGU V. RAO--Dean of Library Services and Professor. B.A., Andhra University-India; M.S., Southern Illinois University; M.S.L.S., University of Illinois; Ph.D., Southern Illinois University.

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ARTHUR J. ROSSER--Dean of the College of Applied Sciences and Technology and Professor of Manufacturing and Construction. B.S., Wilmington College; M.A., Kent State University; Ph.D., Ohio State University.

CAROLINE R. ROSSER--Director, Workshop on Wheels. B.A., Wilmington College-Ohio; M.A. in Ed., Southeast Missouri State University.

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WESLEY A. SAVAGE--Assistant Director for Technology/ Small Business Development Center. B.S., University of Missouri-Rolla; M.B.A., Butler University.

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PAUL L. SHAFFER--Dean of the Adrian and Margaret Harmon College of Business Administration and Professor of Management. B.A., University of Kansas; M.S., Wichita State University; Ph.D., University of Oklahoma.

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A. JOY STEVENSON--International Student Advisor. B.A., University of Texas; M.A., Ph.D., University of Colorado.

MARGARET E. STONE--McCAP Academic Coordinator, Educational Development Center. B.A., University of Kansas; M.S.W., University of Connecticut; M.H.A., University of Minnesota; Ph.D., University of Missouri-Columbia.

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PATRICIA D. WIEGERS--Academic Advisor. B.S. in Ed., M.S., Central Missouri State University.

Athletics

SCOTT L. BALLARD--Head Women's Basketball Coach. B.S., Southwest Missouri State University; M.P.E., Drury College.

DAVID K. BASSORE--Assistant Football Coach and Defensive Coordinator. B.S., William Jewell College; M.S., Pittsburg State University.

SCOTT M. BAUMGARTNER--Assistant Football Coach. B.A., Pacific University.

RUSSEL A. BLOOM--Assistant Athletics Director for Facilities and Events Management. B.S., University of Wisconsin-La Crosse; M.S., University of North Dakota.

RICHARD M. DeLAP--Supervisor, Athletics, Sports and Recreation Complex. B.A., Central Missouri State University.

DONALD D. DOUCETTE--Head Men's Basketball Coach. B.S., University of Massachusetts-Boston.

ROBIN H. ERSLAND--Head Wrestling Coach. B.A., Luther College; M.A., University of Iowa.

WILLIAM E. FRITZ--Head Football Coach. B.S., Pittsburg State University; M.S., Sam Houston State University.

SCOTT J. GRINDE--Assistant Football Coach and Offensive Coordinator. B.S., University of Wyoming; M.S., University of Texas-EI Paso.

BRADLEY L. HILL--Head Baseball Coach and Coordinator of Spectator Support. B.S. in Ed., Emporia State University.

JERRY M. HUGHES--Director of Intercollegiate Athletics. B.S. in Ed., M.S. in Ed., Central Missouri State University.

KIP B. JANVRIN--Co-Head Track and Field Coach. B.S., Simpson College-Iowa; M.S., Central Missouri State University.

PEGGY E. MARTIN--Head Volleyball Coach and Assistant Professor of Physical Education. B.S., Indiana University; M.S.P.E., University of North Carolina-Greensboro; P.E.D., Indiana University.

CYNTHIA N. PARKS--Assistant Athletics Director for Student Athlete Services. B.S. in B.A., M.B.A., Central Missouri State University.

KIRK A. PEDERSEN--Head Cross Country Coach and Co-Head Track and Field Coach. B.S., Simpson College; M.S., Central Missouri State University.

KEVIN P. PEOPLES--Assistant Football Coach. B.S. Carroll College-Montana.

TIMOTHY B. POE--Pertle Springs Manager/Golf Professional and Head Golf Coach. B.S., Central Missouri State University.

RHESA S. SUMRELL--Head Softball Coach and Assistant Volleyball Coach. B.S., M.S., Middle Tennessee State University.

BILL TURNAGE--Assistant Athletics Director for Communications and Public Relations. B.S., Southern Illinois University-Carbondale.

WILLIAM F. WALKER--Assistant Men's Basketball Coach. B.S., University of Missouri-Rolla; M.S., University of Alabama-Birmingham.

234 Faculty and Staff

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Development

J. BRADFORD HODSON--Coordinator of Annual Fund. B.S.
in B.A., Missouri Southern State College; M.B.A.,
Pittsburg State University.

MARILYN I. LANDERS--University Director of Development.
B.A., Eastern Illinois University.

JANELLE E. O'DELL--Assistant Director of Development.
B.S., M.B.A., San Diego State University-California.

Finance and Administration

W. FRANCES BEHM--Support Services Manager, Public
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DIANNA F. CARTER--Manager of Operations and General
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TENA R. DUNCAN--Manager of Payroll.

BENNIE W. EDMONDSON--Director of Accounting Services.
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JERRY D. ELLIOTT--Business Manager for Revenue and
Assistant Professor of Administration, Supervision and
Higher Education. B.S. in Ed., M.S. in Ed., Specialist,
Central Missouri State University; Ed.D., University of
Missouri-Columbia.

H. TOM FAUBION--Assistant Support Manager, Physical
Plant. B.S., Central Missouri State University.

RICHARD G. GILLESPIE--Police Operations Commander.
B.S. in B.A., University of Missouri-Columbia.

SHARON K. GOBBER--Director of Purchasing.

JAMES A. HUFF--Director of Public Safety and Instructor in
Criminal Justice. B.S., Northeast Missouri State
University; M.S., Ed. Specialist, Central Missouri State
University.

DOROTHY KRAUSE--Manager, Ancillary Accounting. B.S.,
Northwestern State University of Louisiana.

JAMES D. MATTHEWS--Manager of Capital Development.

JUDY K. MEIER--Classification and Compensation
Specialist. B.S., Southern Illinois University-
Carbondale; M.S., Baker University.

NICOLE A. NORIAN--Director of Human Resources. B.S.,
Iowa State University; M.S., Drake University.

BETTIE J. RUSHER--Affirmative Action/Equal Employment
Opportunity Officer and ADA Coordinator. B.S., Central
Missouri State University.

JOHN T. SARANTAKOS--Director of Printing Services. B.S.
in Ed., M.S., Illinois State University.

DOROTHY M. SCHMIDT--Budget Analyst. B.S. in B.A.,
Central Missouri State University.

ROBERT P. SHOWERS--Assistant to the
Treasurer/Assistant to the Controller. B.S. in B.A.,
Morningside College; M.B.A., University of South
Dakota.

COREY J. WEDEL--Employment Specialist. B.S., M.S.,
Emporia State University.

JANICE L. WOOD--Employee Benefits/Risk Management
Manager.

Planning and Policy

CAROLE E. NIMMER--Senior Planning Associate. B.S.,
M.B.A., Ed. Specialist, Central Missouri State University.

DONALD N. NIMMER--Director of Institutional Research.
B.A., University of Northern Iowa; M.N.S., Ed.D.,
University of South Dakota.

Information Services

FREDERICK E. BRAUER--Assistant Director, Computer
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University.

JAMES E. CRAIN--Assistant Director, Telecommunications.

DALE L. DIECKHOFF--Assistant Director, Management
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F. RUSSELL HELM--Director of Information Services. B.S.,
University of Arkansas-Fayetteville, Ph.D., University of
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LINDA J. HUTCHISON--Assistant Director, User Services.
B.S. in B.A., Iowa State University.

Presidential Services

ROSEMARY FLEHARTY--Assistant Secretary to Board of
Governors.

MICHAEL W. GANT--Presidential Aide. B.S. in B.A.,
Rockhurst College; M.S., Central Missouri State
University.

MICHELLE D. KNIGHT--Coordinator of Presidential Events.

ANNE ZEMEK de DOMINGUEZ--General Counsel. A.B.,
University of Chicago; J.D., DePaul University College of
Law.

Public Relations

ANTHONY J. BROWN--Editor/Designer. B.S. in Ed., Truman
State University-Missouri.

JOHN M. INGLISH--University Director of Public Relations.
B.A., M.A., Central Missouri State University.

THOMAS M. MITCHELL--Photography Manager. B.A.,
University of Missouri-Kansas City.

JEFFREY K. MURPHY--News Bureau Manager. B.S., M.A.,
Central Missouri State University.

ANN M. PEARCE--Assistant Director of Public Relations.
B.S., Central Missouri State University.

CHRISTOPHER SHAEFFER--Electronic Media Editor. B.A.,
Central Missouri State University.

Student Affairs

TERESA FINE ALEWEL--Director of Career Services.
B.E.S., University of Missouri-Columbia; M.S., Central
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LUCY BLACKBURN--Director of Counseling and
Psychological Services, Counseling Psychologist and
Assistant Professor of Counseling Psychology. B.S. in
Ed., M.A., Northeast Missouri State University; Ph.D.,
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COREY L. BOWMAN--Coordinator of Conference
Housing/Area Coordinator. B.A., M.S., Miami University.

PATRICK J. BRADLEY--Director of University Housing. B.S.,
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M.B.A., Eastern Illinois University.

WENDELL BRANDES--Assistant Director of Campus
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- JESUS "SONNY" CASTRO**--Assistant Vice President for Student Affairs and Director of Student Life. B.A., M.A., University of Texas-EI Paso.
- C. RUSSELL CHILDRESS**--Coordinator of Retention. B.S. in Ed., M.S. in Ed., Central Missouri State University.
- EDGAR L. CURTIS**--Manager, University Union. B.S. in B.A., M.B.A., Central Missouri State University.
- CHARLES J. DAHLSTROM**--Counseling Psychologist. B.P.A., M.A., Ph.D., University of North Dakota.
- MICHAEL G. DeVRIES**--Senior Director of Food Services. B.A., Luther College.
- SUSAN B. DUGGINS**--Assistant Director of Campus Activities for Involvement and Organizational Leadership. B.S., Northeast Louisiana University; M.S., Central Missouri State University.
- NORENE GILL**--Counseling Psychologist. B.S. in Ed., Bowling Green State University; M.Ed., University of Toledo.
- MICHELLE M. HENDRICKS**--Director, University Health Services. B.S.N., South Dakota State University.
- WALTER R. HICKLIN**--Assistant Vice President for Student Affairs and Assistant Professor of Mathematics. B.S., Missouri Valley College; M.S. in Ed., Ed. Specialist, Central Missouri State University.
- DEBORAH L. HOBSON**--Director, University Union. B.S., Evangel College; M.S., Central Missouri State University.
- ALFRED IANTORNO**--Coordinator of Non-Traditional Students and Women's Soccer Coach. B.S., State University of New York College-Potsdam; M.S. in Ed., State University of New York-Oneonta; Ed.D., University of Virginia.
- MICHELE C. IRBY**--Coordinator of Greek Life. B.S., Southeast Missouri State University; M.S., Central Missouri State University.
- DARLENE LAUBENSTEIN**--Assistant Director of University Housing for University Apartments, and Assistant Professor of Administration, Supervision and Higher Education. B.S. in Ed., M.S. in Ed., Ed. Specialist, Central Missouri State University.
- FRANCESCA "CHECKA" LEINWALL**--Director of Campus Activities. B.A., Western Maryland College; M.Ed., Pennsylvania State University-University Park.
- MICHELLE MERRITT-GILBERT**--Area Coordinator for University Housing. B.A., Monmouth College; M.S. in Ed., University of Wisconsin-La Crosse.
- BRENDA S. MOEDER**--Area Coordinator for University Housing. B.S., M.S., Kansas State University.
- PAULA MURDOCK**--Career Counselor. B.S. in Ed., Central Missouri State University.
- CHRISTINA M. NIEMEIER**--Assistant Director of Alumni Relations. B.S. in Ed., Central Missouri State University.
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- CHARLES D. RUTT**--Manager, University Store and Textbook Department. B.S. in B.A., M.S., Central Missouri State University.
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INSTRUCTIONAL AND LIBRARY STAFF

Listing as of January 1, 1998

- DAVID E. AABERG**--Professor of Music (25). B.A., M.M., Central Washington University; D.M.A., University of Texas-Austin.
- ERNESTINE ADAMS**--Coordinator of the Educational Development Center Learning Lab and Associate Professor (12). B.A., Arizona State University; M.S., Ed. Specialist, Central Missouri State University.
- L. JEROLD ADAMS**--Professor of Political Science (28). B.S., Arizona State University; M.A., Ph.D., University of Washington.
- W. CLIFTON ADAMS**--Professor of Speech Communication (6). B.A., University of Alabama; M.S., Ph.D., The Florida State University.
- JOSETTE M. AHLERING**--Associate Professor of Mathematics in the Educational Development Center (12). B.S. in Ed., Loyola University of Chicago; M.S. in Ed., Ed. Specialist, Central Missouri State University.
- ROBERT F. AHLERING**--Professor of Psychology and Interim Chair of the Department of Psychology and Counselor Education (30). B.S., Loyola University of Chicago; M.A., Ph.D., Northern Illinois University.
- JAMIE L. AIKEN**--Instructor in Physical Education (27). B.A., Kansas State University; B.A., M.A., University of Oregon.
- M. SAEED AKHTAR**--Associate Professor of Industrial Technology (20). B.A., DeMontmorancy College, Pakistan; M.Ed., The University of Punjab, Pakistan; Ph.D., Purdue University.
- M. LYNN ALKIRE**--Assistant Professor of Fashion and Apparel Merchandising (15). B.S. in Ed., M.S. in Ed.; Ph.D., University of Missouri-Columbia.
- DENSIL E. ALLEN**--Professor of Agriculture (2). B.S., D.V.M., University of Missouri.
- RONALD D. ALLEN**--Assistant Professor of Psychology (30). B.A., Tennessee Temple University-Chattanooga; M.A., Liberty University-Virginia; Ed.D., University of Sarasota-Florida.
- DARIO J. ALMARZA**--Assistant Professor of Social Studies and Multicultural Education (10). B.A., Universidad del Zulia, Maracaibo, Venezuela; M.A., University of Florida-Gainesville; M.A., Ph.D., University of Iowa-Iowa City.
- PATRICK A. AMENT**--Assistant Professor of Psychology (30). B.A., University of Nevada-Las Vegas; M.A., Ph.D., University of Nevada-Reno.
- KIM A. ANDREWS**--Associate Professor of Economics (11). B.S. in B.A., Central Missouri State University; M.S., Ph.D., Oklahoma State University.
- PATRICIA A. ANTRIM**--Instructor in Library Services. B.A., Calvin College; M.L.S., Emporia State University.
- TINA K. ASHFORD**--Instructor in Computer Information Systems (8). B.S., Drury College; M.A., Webster University.
- PATRICIA S. ASHMAN**--Professor of History (16). B.A., Webster College; M.A., Ph.D., Saint Louis University.
- CAROL A. ATKINSON**--Associate Professor of Mass Communication (6). B.G.E., M.S., University of Kansas; Ph.D., Bowling Green State University.
- NOORULLAH BABRAKZAI**--Professor of Biology (4). B.S., M.S., University of Peshawar, Pakistan; Ph.D., The University of Arizona, Tucson.
- DUANE P. BACHMANN**--Professor of Marketing (21). B.S. in Ed., Northeast Missouri State University; M.A., Central Missouri State University; Ph.D., Kansas State University.
- GORDON S. BACHUS**--Professor of Education Administration and Adult Education (33). B.A., M.A., Ouachita Baptist University; Ed.D., University of Arkansas.
- KEVIN J. BACON**--Associate Professor of Agriculture (2). B.S., M.S. in Ed., University of Missouri-Columbia; Ph.D., Oklahoma State University.
- B. JOYCE BAILEY**--Professor of Physical Education (27). B.S. in Ed., M.S. in Ed., Central Missouri State University; Ph.D., University of Iowa.
- BARBARA L. BAKER**--Associate Professor of Speech Communication (6). B.S., M.S., North Texas State University; Ph.D., University of Southern California.
- DONNA T. "CANDEE" BAKER**--Assistant Professor of Nursing (26). B.S.N., Montana State University; M.S.N., University of Missouri-Columbia; R.N.
- ROCHELLE R. BARABAS**--Assistant Professor of Graphics (15). B.S., M.S., Indiana State University-Terre Haute.
- SHARLENE G. BAX**--Assistant Professor of Political Science (28). B.A., University of the South-Sewanee, Tennessee; M.A., Ph.D., University of Tennessee-Knoxville.
- D. CHRISTOPHER BELCHER**--Associate Professor of Secondary Education (10). B.S. in Ed., M.S. in Ed., Ed. Specialist, Central Missouri State University; Ed.D., University of Missouri-Columbia.
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- ROBERT H. BENNETT**--Assistant Professor of Psychology (30). B.S., M.S., Brigham Young University-Utah; Ph.D., Auburn University-Alabama.
- EDWARD G. BENSON**--Professor of Modern Languages (24). A.B., Princeton University; M.A., Ph.D., Brown University.
- CAROL L. BENTON**--Associate Professor of Speech Communication (6). B.A., M.A., Eastern Michigan University; Ph.D., Southern Illinois University.
- TODD M. BERAN**--Instructor in English (14). B.A., M.A., Central Missouri State University.
- TERRILL R. BERKLAND**--Professor of Earth Science Education (4). B.S., Loras College; M.A., Drake University; Ph.D., University of Iowa.
- ADRIAN J. BERNAGOZZI**--Professor of Applied Sciences and Technology (15). B.S., M.S., Rochester Institute of Technology; Ed.D., Rutgers University.
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- 1--Accounting
- 2--Agriculture
- 3--Art
- 4--Biology and Earth Science
- 5--Chemistry and Physics
- 6--Communication
- 7--Communication Disorders
- 8--Computer and Office Information Systems
- 9--Criminal Justice
- 10--Curriculum and Instruction
- 11--Economics and Finance
- 12--Educational Development Center
- 13--Electronics Technology
- 14--English and Philosophy
- 15--Graphics
- 16--History and Anthropology
- 17--Human Environmental Sciences
- 18--Library Science and Information Services
- 19--Management
- 20--Manufacturing and Construction
- 21--Marketing and Legal Studies
- 22--Mathematics and Computer Science
- 23--Military Science
- 24--Modern Languages
- 25--Music
- 26--Nursing
- 27--Physical Education
- 28--Political Science and Geography
- 29--Power and Transportation
- 30--Psychology and Counselor Education
- 31--Safety Science and Technology
- 32--Sociology and Social Work
- 33--Special Services
- 34--Theatre

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