
Central Missouri State University

2003 Undergraduate Catalog

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PRINTED WITH AGRI-BASED INK ON RECYCLED PAPER

Greetings

Welcome to Central Missouri State University. We hope the information provided in this catalog will help you become better acquainted with our institution, its nationally and internationally known academic programs, and the advantages of studying on our campus.

As a major comprehensive university with a statewide mission in professional technology, Central offers more than 150 areas of study. More important than numbers, however, is the high quality of our programs. Central is a state leader in discipline-specific accreditations and program assessment. Small class sizes, opportunities for hands-on experience from the beginning, outstanding facilities, and personalized attention from a dedicated faculty are Central hallmarks.

Students from all over the state, nation and world help to make our learning environment positive and friendly. Central focuses on strong baccalaureate programs designed to help all students obtain the skills necessary for lifelong success. Additionally, we offer an extensive array of graduate programs for people who seek greater expertise in a discipline or who are pursuing career advancement.

Central has an excellent reputation as a teacher education institution, and we are also widely known for our prominence in human services and applied sciences. Our statewide mission in professional technology allows us to provide one of the most comprehensive applications of discipline-specific technology in higher education.

One of our most exciting educational experiences is the opportunity to spend time abroad studying, working as an intern, or student teaching. Please consider taking advantage of our outstanding, affordable international programs.

We hope you will enjoy your time at Central Missouri State University, and we are delighted to serve you.

BOBBY R. PATTON
President

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CALENDAR 2003-2004

SUMMER SESSIONS 2003, MAY 12--AUGUST 1*

May 11	Housing Facilities Open at 1 p.m. for 1 st session students.
May 12	Monday, 1 st Session begins.
May 26	Monday, Memorial Day Holiday, CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
May 30	Friday, 1 st Session ends and Final Exams.
May 30	Housing Facilities Close, 6 p.m.
June 1	Housing Facilities Open at 1 p.m. for 2 nd session students.
June 2	Monday, 2 nd Session begins.
June 20	Friday, 2 nd Session ends and Final Exams.
June 20	Housing Facilities Close, 6 p.m.
June 22	Housing Facilities Open at 1 p.m. for 3 rd session students.
June 23	Monday, 3 rd Session begins.
July 4	Tuesday, Independence Day Holiday, CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
July 11	Friday, 3 rd Session ends and Final Exams.
July 11	Housing Facilities Close, 6 p.m.
July 13	Housing Facilities Open at 1 p.m. for 4 th session students.
July 14	Monday, 4 th Session begins.
August 1	Friday, 4 th Session ends and Final Exams.
August 1	Housing Facilities Close, 6 p.m.

FALL SEMESTER 2003, AUGUST 20--DECEMBER 5*

August 15	University Apartments open, 8 am.
August 17	Residence halls open, 8 am.
August 18, 19	Monday, Tuesday, Faculty Planning.
August 20	Wednesday, 8 am, classes begin.
August 26	Last day for Fall Semester enrollment and changing classes.
September 1	Monday, Labor Day Holiday, CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
September 23	Last day to drop first half semester classes with a W recorded.
October 9	Thursday, Final Exams for first half semester classes and end of first half semester.
October 10	CLASSES DISMISSED.
October 13	Monday, second half semester classes begin.
October 29	Last day to drop semester classes with a W recorded.
November 13	Last day to drop second half semester classes with a W recorded.
November 25	Residence halls close, 6 p.m.
November 26	Wednesday, Thanksgiving Holiday, CLASSES DISMISSED.
November 27, 28	Thursday, Friday, Thanksgiving Holidays, CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
November 30	Residence halls open, noon.
December 8 - 12	Monday through Friday, Fall Semester Final Exams (includes second half semester classes).
December 12	Residence halls close, 6 p.m.
December 13	Saturday, Commencement.
Dec. 24 - January 2	Winter Holidays, UNIVERSITY OFFICES CLOSED.

SPRING SEMESTER 2004 JANUARY 12--APRIL 30*

January 5	Offices open.
January 9	Residence halls open, 8 am.
January 12	Monday, 8 am, classes begin.
January 16	Last day for Spring Semester enrollment and changing classes.
January 19	Monday, Martin Luther King, Jr. Holiday, CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
February 13	Last day to drop first half semester classes with a W recorded.
April 1	Priority date for students to submit the 2004-2005 federal financial aid application (FAFSA) to the national processing agency (www.fafsa.ed.gov).
March 3	Wednesday, Final Exams for first half semester classes and end of first half semester.
March 4	Thursday, second half semester classes begin.
March 12	Residence halls close, 6 p.m.
March 15 - 19	Monday through Friday, Spring Break, CLASSES DISMISSED.
March 21	Residence halls open, noon.

*Subject to change.

March 26	Last day to drop semester classes with a W recorded.
April 13	Last day to drop second half semester classes with a W recorded.
May 3 - 7	Monday through Friday, Spring Semester Final Exams (includes second half semester classes).
May 7	Housing Facilities Close, 6 p.m.
May 8	Saturday, Commencement.

*Subject to change.

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SUMMER SESSIONS 2004 MAY 10–JULY 30*

May 9	Housing Facilities Open at 1 p.m for 1 st session students.
May 10	Monday, 1 st Session begins.
May 28	Friday, 1 st Session ends and Final Exams.
May 28	Housing Facilities Close, 6 p.m.
May 30	Housing Facilities Open at 1 p.m. for 2 nd session students.
May 31	Monday, Memorial Day Holiday, CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
June 1	Monday, 2 nd Session begins.
June 18	Friday, 2 nd Session ends and Final Exams.
June 18	Housing Facilities Close, 6 p.m.
June 20	Housing Facilities Open at 1 p.m. for 3 rd session students.
June 21	Monday, 3 rd Session begins.
July 5	Monday, Independence Day Holiday, CLASSES DISMISSED and UNIVERSITY OFFICES CLOSED.
July 9	Friday, 3 rd Session ends and Final Exams.
July 9	Housing Facilities Close, 6 p.m.
July 11	Housing Facilities Open at 1 p.m. for 4 th session students.
July 12	Monday, 4 th Session begins.
July 30	Friday, 4 th Session ends and Final Exams.
July 30	Housing Facilities Close, 6 p.m.

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 three main sections: I, General Information, Policies and Regulations, Services and Facilities; II, Academic Programs and Courses; and III, 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 an eight-year period. (See Section I, 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 16,350, fifty miles southeast of Kansas City at the junction of Highways 50 and 13. It is easily reached by automobile, Greyhound 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. Central is an Affirmative Action EEO/ADA institution.

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.

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.

Mission Statement

Central Missouri State University is a comprehensive, public university committed to service and excellence and dedicated to providing personalized higher education experiences for a diverse body of students. Through a foundation in the liberal arts, professional degree programs, and use of current academic technologies, Central prepares students to be lifelong learners who are proficient in their fields of study, able to adapt to a changing world and contribute to the betterment of society. Central serves as Missouri's lead professional technology institution, and is committed to acquiring, disseminating, and utilizing technology to enhance the University's comprehensive educational mission and to enrich the lives of all Missourians.

In fulfilling its mission, Central Missouri State University:

- ! **admits** graduates of accredited high schools based on specific admission criteria, actively recruits traditionally under-represented students, and offers a strong merit-based scholarship program to attract highly capable students.
- ! **provides** a learner-centered academic environment which challenges individuals to participate actively in the educational process and empowers the faculty to excel in teaching while engaging in scholarship, research, creative activities and public service.
- ! **offers** an undergraduate foundation in the liberal arts, with an emphasis on integrating critical thinking, interaction, valuing,

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communication skills and technological applications into the curriculum across all disciplines.

- ! **provides** pre-professional, professional, academic and career-oriented undergraduate and graduate programs to meet the changing and technological needs of the workforce.
- ! **provides** inservice instruction for technical educators and other professionals needed to make Missouri competitive in a national and world market.
- ! **continues** its historical emphasis in preparing educators for Missouri.
- ! **provides** advanced graduate studies and research in areas of particular strength and need.
- ! **uses** assessment to enhance teaching, learning, research and all university operations.
- ! **fosters** a campus community responsive to the needs of a diverse student population, provides opportunities for global awareness, and promotes an appreciation for human diversity.
- ! **shares** human and academic resources with schools, businesses, industries, and public agencies through partnerships and outreach activities.
- ! **serves** as a cultural, artistic and information center for the citizens of Missouri.

Approved by the Board of Governors, March 25, 1998.

Accreditations

Central is accredited by the North Central Association of Colleges and Schools*. In addition, it has the following specialized accreditations: Actuarial Science baccalaureate, Society of Actuaries; Art baccalaureates, National Association of Schools of Art and Design; Aviation Technology baccalaureate, Council on Aviation Accreditation; Business baccalaureates and graduate programs, AACSB - International; Chemistry baccalaureate, American Chemical Society; Drafting baccalaureates, American Design Drafting Association; Dietetics baccalaureate, American Dietetic Association; Industrial Hygiene graduate and Occupational Safety and Health baccalaureate, Applied Science Accreditation Commission (ASAC) of the Accreditation Board for Engineering and Technology; Manufacturing and Construction baccalaureates, Electronics

baccalaureate, National Association for Industrial Technology and American Council for Construction Education; Music baccalaureate and graduate programs, National Association of Schools of Music; Nursing baccalaureate, Commission on Collegiate Nursing Education and the Missouri State Board of Nursing; Physical Education baccalaureate and graduate programs, National Association for Sport and Physical Education; Social Work baccalaureate, Council on Social Work Education; Speech Pathology and Audiology master's program, American Speech-Language-Hearing Association; Teacher Education baccalaureate and graduate programs, National Council for Accreditation of Teacher Education and the Missouri Department of Elementary and Secondary Education; Technology and Occupational Education baccalaureate, Council for Technical Teacher 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
- ! Council for Public Higher Education for Missouri
- ! Council on Undergraduate Research
- ! Council on Social Work Education
- ! Institute of International Education Membership Services
- ! Mid-America Intercollegiate Athletics Association
- ! Missouri Academy of Science
- ! Missouri Campus Compact
- ! National Collegiate Athletic Association
- ! National Collegiate Honors Council
- ! National Council for Accreditation of Teacher Education
- ! National Council of Educational Opportunity Associations
- ! North Central Association of Colleges and Schools

*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. [phone 800-621-7440; fax 312-263-7462]

! The Renaissance Group

Enrollment Management

Admissions

High School Students. Students admitted to Central Missouri State University are expected to have completed a 16-unit college-preparatory curriculum requirement and have an admissions index score equal to or exceeding 100. The index score is obtained by combining the percentile rank from high school rank in class and the ACT College Entrance Examination or an equivalent score on the Scholastic Aptitude Test. 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.

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.

University Health Policies. Students must 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.)

Academic Preparation

Students who meet the following criteria are considered academically prepared and better able to take advantage of the opportunities available at Central: at least 16 units of college preparatory work, including these courses:

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- 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 must be 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

The Office of Admissions must receive all admission applications prior to the first day of class. Mid-semester course offerings are available for late applicants.

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.
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. Transfer students with less than 24 hours of college credit must submit a high school transcript.

Admission requires students to be in good standing and to have a grade-point average of C (2.00). With a GPA of less than 2.00, students may be considered on an individual basis. Central's Office of Admissions will make an

admission decision upon receipt of unofficial university transcript(s) and will permit enrollment for one semester. However, transfer students must provide the Office of Admissions with official transcript(s) from each university attended before being permitted to enroll in subsequent semesters.

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.

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 and readmission to the University, they may proceed with enrollment.

Current High School Students

Seniors. High school seniors who can meet their 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.

NOTE: High school students are not eligible to receive federal or state financial aid for university classes taken at Central. All high school graduation requirements must be met and the student must be fully accepted for admission to Central, before any federal financial aid can be authorized.

Visiting College Students

A student currently attending another college or university is permitted to enroll at Central as a visiting college student. Enrollment under this status is limited to one semester per academic year. In order to apply, students must submit the application for admission along with a \$25.00 application fee.

At the completion of the course or courses at Central, the visiting student should request that Central's Registrar's Office send an official transcript to the certifying institution. Courses taken at Central for the purpose of transfer will apply toward a degree at Central should regular admission status to Central be desired.

NOTE: Visiting students are not eligible to receive federal or state financial aid from Central. In accordance with federal regulations, all financial assistance for which a visiting student may be eligible must be processed by the student's home school.

Senior Citizens

Missouri residents who are sixty-five years of age on or before August 1 of our school year may enroll for courses without tuition payment. Persons seeking this scholarship shall provide documentation of age to Central and satisfy all other necessary entrance requirements to include a completed application. This enrollment is for non-credit (audit) purposes and may only be used for classes located on the **Warrensburg campus**. This scholarship may not be utilized for any Extended Campus class offerings.

Enrollment will be allowed no sooner than 5 days prior to classes beginning and on a space available basis only. Contact the Office of Admissions for further information.

Midwest Student Exchange Program

The Midwest Student Exchange Program (MSEP) is an interstate initiative established by the Midwestern Higher Education Commission to increase the educational opportunities for students in its member states. Central is an active participant and welcomes applicants. MSEP enables residents from Kansas, Michigan, Minnesota, Nebraska and North Dakota to enroll in designated academic programs available at Central at one-half the cost of the non-resident portion of fees. MSEP applications are available from the Office of Student Financial Assistance, Administration 104.

Non-Resident Fee Credit

If a Central student is being claimed as a dependent for tax purposes by a parent or legal guardian residing outside Missouri but is employed full-time within the state of Missouri, that student may be eligible for a non-resident fee credit. This fee credit will reduce the cost of fees to that of an in-state student. In order to apply for Central's Non-Resident Fee Credit, the parent or legal guardian must file state taxes in Missouri and have an income tax liability in Missouri of at least \$50. A copy of the previous tax year's federal and state tax returns along with supporting W-2s must be attached to the Non-Resident Fee Credit Application available from the Enrollment Management Office. Central students who are not being claimed as a dependent by a parent or legal guardian may qualify if they are at least 21 years of age, are employed in the state of Missouri, have filed state taxes in Missouri and have a tax liability of at least \$50. International students attending Central on an F-1 or J-1 visa are not eligible to participate in this program.

International Student Admission

The Application Process. To apply for admission, international students file the following credentials with the Office of International Admissions. Applicants sending applications from another country should submit credentials at least three months before enrollment; those transferring from another institution in the United States, should 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 the availability of sufficient financial support to cover all university expenses for at least one full academic year.
4. A brief statement describing educational objectives and career plans.
5. \$50 application fee.

Demonstration of English Proficiency. To provide the best opportunity for academic success and appropriate course placement, international students must submit evidence of English proficiency. Prior to enrolling in regular university courses, a satisfactory score on the TOEFL is required of all international students whose native language is not English. The acceptable TOEFL

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score for undergraduate placement in regular university courses is 500 paper-based or 173 computer-based. The TOEFL requirement is waived for applicants who have completed a minimum of 60 semester hours at an accredited college or university in the United States or who are citizens of a country whose native language is English. International students who do not meet the minimum English proficiency requirement are not permitted to enroll in regular university classes and must participate in Central's Intensive English Program until the minimum TOEFL requirement is satisfied or they have successfully completed level six of the Intensive English Program. Institutional TOEFL results earned at other institutions are not valid at Central.

During the orientation session, any international student whose native language is not English will undergo further evaluation for oral and written proficiency and, depending upon evaluation results, may be required to enroll in special classes designed to improve communication skills. The departmental initiated oral and written evaluations are waived, however, for students who either present a minimum TOEFL score of 580 paper-based (237 computer-based) or have earned a baccalaureate degree from an accredited United States college or university.

Orientation. All international students admitted to Central for the first time are required to arrive on campus on a set date (typically ten 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 or provide proof of adequate health insurance from their native country.

NOTE: International students are not eligible to receive federal financial aid unless the student has been classified by the U.S. Immigration and Naturalization Service as an eligible non-citizen or permanent resident. Documentation must be provided to Central's Office of Student Financial Assistance, Administration 104, to verify the student's eligibility.

Housing

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. Our 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 agreement 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.

Students with requests due to disability will need to provide Housing or Accessibility Services with appropriate professional verification supporting the request. Six to eight weeks notice is recommended.

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

First-year students are required to live on campus. First-year students are also required to have a meal plan. Freshmen (under 21 years) are assigned to First-Year floors. These environments are carefully designed to help acclimate the new student to the Central campus. Special staffing, educational and social activities, faculty involvement, student government, and access to a variety of campus resources create an environment where student success is emphasized.

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. Residence hall agreements are for a full academic year. Single rooms are available at an additional cost. 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, cable television capability and internet access. 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 home-like. Residents have ready access to coin-operated washers and dryers, but they must 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.

Family Housing. Apartments are available for married couples with or without children and single parents with children 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. Housing agreements for students who do not check in are canceled after 5 p.m. on the first day of classes, unless students have made arrangements to arrive late.

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 are available for students seeking year-round housing.

Insurance and Safety

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 Conference Center

Located on Anderson Street, east of the main campus, the University Conference Center accommodates over 300 guests in 152 air-conditioned rooms. A variety of suites and rooms are available for guests of the University. For reservations, call the Facilities Coordinator at 660-543-4342.

Nondiscrimination/Equal Opportunity Statement

Central Missouri State University actively follows a policy of nondiscrimination in regard to age, race, color, religion, sex, national origin, sexual orientation, marital status, Vietnam Era veterans, and persons with handicaps and disabilities. This policy applies to the awarding of student financial aid, and the recruitment, admission, housing, placement, and retention of students, faculty and staff. The University complies 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 the General Counsel, Administration 208, 660-543-4730, or the Director of Human Resources, Administration 101, 660-543-4255, Central Missouri State University, Warrensburg, Missouri 64093.

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Toll free numbers for Relay Missouri are 711 or 800-735-2966 for TTY, and 866-735-2460 for voice callers.

Costs and Financial Aid

Fees and Expenses

Housing, food service, and instructional fees are assessed for payment prior to the beginning of the semester. Rates are set by action of the Board of Governors and are subject to change. Information regarding rate changes is available from the Revenue Office or by visiting www.cmsu.edu/revenue. The following rates were in effect for the fall 2002 semester.

Housing and Food Service Fees, 2002-2003

Residence Halls

Basic Rate	\$1450/semester
Single Room	\$2010/semester
Fraternity/Sorority Housing	\$1450/semester

Apartments

Foster/Knox*	\$533/month
Hawkins Hall	
One Bedroom	\$516/month
Two Bedrooms	\$539/month
Nickerson*	\$533/month
Central Village**	
One Bedroom	\$439/month
Two Bedrooms	\$484/month
Three Bedrooms	\$545/month
Greenwood Park	\$540/month

*all utilities included

**resident pays gas and electricity

Meal Plans \$865/semester

Instructional Fees, 2002-2003

On Campus

Undergraduate	
Missouri Resident	\$137 per hour
Out-of-State Resident	\$262.30 per hour
Graduate	
Missouri Resident	\$185 per hour
Out-of-State Resident	\$358.30 per hour
OnLine PHD	\$212 per hour
Doctorate of Education (UM-C current fee)	
Missouri Resident	\$194.10 per hour
Out-of-State Resident	\$589 per hour
Doctorate of Philosophy in Technology	\$195 per hour

Off Campus

General	
Undergraduate	\$157 per hour
Graduate	\$194 per hour
St. Louis-based programs	\$224 per hour
Albuquerque	\$266 per Graduate hour
Joplin	\$205 per Graduate hour
St. Joseph ITV	Onsite-\$205 per Graduate hour
High School Dual Credit	\$70 per hour

**Textbook Rental Fees
(as of May, 2002)**

The textbook rental system supplies students with required texts in many undergraduate courses. Students enrolled in off-campus courses do not receive rental books from the textbook rental system. Textbook fees are assessed as follows:

1. Student rental charge per semester per textbook . \$20.00
2. Textbook late fee per book
(assessed following last day of finals) \$20.00
3. Textbook damage fees assessed by University Store according to damage.

Note: Failure to return a book after dropping a class will result in the late fee being assessed.

Special Fees, 2002

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)	
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	\$ 45
Transcript Review for Teacher Certification	\$ 35

Supplemental Course Costs

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

Institutional & Financial Information

Federal law requires institutions of higher education, including Central Missouri State University, to inform prospective students, faculty and staff of institutional and financial information. This information is available at www.cmsu.edu/rsearch/ir/toc.htm.

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

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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

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which reclassification is requested.

Financial Responsibility

Students are responsible for paying all charges incurred by their class enrollment, room and board choices, departmental charges and fines. Payment for a semester's cost is due in full approximately ten (10) days before the semester begins. Full payment dates are published in the Student Planner/Handbook, on the Revenue Office web-site and on the student billing statement. Non-payment of charges or failure to make payment arrangements by the due date will result in classes being dropped. Late payment fees are added to the student bill each month that payment is not made when due. Collection costs are assessed if collection action becomes necessary. Visit www.cmsu.edu/revenue for additional information regarding the payment of student accounts.

Refund Policy

Reduced Load. Refunds of instructional fees for 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:

First week of classes: full refund.

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 refund for that class will be made.

NOTE: A federal financial aid recipient who drops to less than half-time enrollment status should be aware that any credit of fees will normally be refunded to the federal program(s) from which the aid was disbursed, rather than to the student.

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

Withdrawal prior to the announced deadline for full payment of all charges for the current semester: full refund.

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.

NOTE: The policy for the repayment of unearned federal financial aid for recipients who officially or unofficially withdraw from Central is dictated by federal regulations. A copy of this policy is available from Central's Office of Student Financial Assistance, Administration 104.

Refund Appeal. A student who believes that a refund greater than the established schedule should be issued may submit a written request to the Office of Student Affairs for complete withdrawals and to the Office of Academic Advisement for reduced load appeals. The reasons and unusual circumstances believed to justify a larger refund must be outlined in the written request. All requests for refunds must be submitted within two weeks of the end of the semester for which the fees were paid.

Student Financial Assistance

To help an individual reach his or her educational goals, Central Missouri State University offers a variety of federal and state grant, loan, and employment assistance, most of which is awarded on the basis of a student's calculated "financial need."

The Office of Student Financial Assistance annually processes over \$36 million in assistance to nearly two-thirds of 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 basis. The number of applications for financial aid, however, almost always exceeds the total amount of assistance available. Therefore, it is very important for each applicant to:

- ! apply on-time (by April 1st) each year
- ! comply with all financial aid instructions, policies, and requests for "follow-up" information and documents
- ! contact the Office of Student Financial Assistance if there are any questions or concerns:

In person - Administration 104

Telephone - 660-543-4040

Fax - 660-543-8080

E-mail - FinAid@cmsu1.cmsu.edu

Federal and state financial assistance may 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 related to attending Central. In accordance with federal and state regulations, the responsibility for meeting these costs lies primarily with the student and his or her family. However, financial aid from one or more of the following programs can be awarded to supplement the family's financial contribution.

Types of Financial Aid

Grants (Federal Pell Grant, Supplemental Educational Opportunity Grant, and several state programs) are types of gift assistance that do not have to be repaid.

Loans (Federal Stafford Loan, Perkins Loan and several state programs) are types of aid that must be repaid, but normally not until 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 Federal Work-Study positions, as well as University-funded student employee positions, are posted in the lobby of Central's Office of Career Services, Union 302.

How to Apply

To apply for the above types of federal and state financial aid, a student must submit a **Free Application for Federal Student Aid (FAFSA)**.

A student files the FAFSA electronically, using **FAFSA-on-the-Web**, an internet site supported by the U.S. Department of Education at www.fafsa.ed.gov. There is no charge to apply.

After submitting the FAFSA, a financial aid applicant may be required to provide supporting documents or clarifying information to Central's Office of Student Financial Assistance. If required to do so, the applicant will be contacted by Central, and should then respond promptly.

Financial Need

A student's calculated need for federal and state financial assistance is determined by a careful analysis of the results of the applicant's FAFSA data. Once the calculation has been completed, one or more types of financial aid are awarded to help meet the individual's level of

need. The student is then notified of his/her 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.

Scholarships

More than \$4 million in annual merit-based scholarships are awarded each year to students who demonstrate academic excellence, leadership, special talents or potential in a specific field of study. Central also offers scholarships to children of Central alumni.

To be eligible to receive an undergraduate scholarship or award from Central, a student must:

1. be admitted to the University,
2. submit a Scholarships and Awards Application,
3. meet minimal criteria for each scholarship or award as stated on the application,
4. maintain regular student status. If a scholarship recipient is placed on academic probation, the award is no longer valid and will not be credited to the student's University account.
5. be a full-time enrolled undergraduate student (twelve or more semester hours). A scholarship recipient may be enrolled in less than twelve hours and receive a proportional amount of the award value under the following conditions:
 - be enrolled in a University-approved internship or student teaching position
 - be a last semester senior completing a bachelors degree program
6. earn a minimum of 12 undergraduate hours per semester at Central.

If a student is the recipient of more than one Central Missouri State University or State of Missouri scholarship, the combined total may not exceed the cost of education at Central. Scholarships may be adjusted or canceled if the recipient fraudulently misrepresents any information on their application or engages in serious misconduct which warrants substantial disciplinary penalty.

For information about scholarships for students pursuing specific majors, students should contact the academic department which offers that major. For general undergraduate

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University-funded scholarship information, visit www.cmsu.edu/scholarships or the Office of Student Financial Assistance.

Other Assistance

Financial assistance other than federal aid is also available from Central Missouri State University. Many scholarships from a wide variety of sources are awarded each year to undergraduate and graduate students. Information and applications may be obtained from the Office of Student Financial Assistance, Administration 104. The State of Missouri also offers grant and loan programs to eligible undergraduate students. Students initiate the application process for these opportunities by submitting the FAFSA (www.fafsa.ed.gov). Financial aid recipients should be aware, however, that receiving other types of financial aid or benefits can result in an adjustment to the federal aid that may have already been awarded and/or disbursed.

Satisfactory Academic Progress

Federal law requires that every student who wishes to **continue** receiving federal financial aid (after having completed at least one semester at Central) must maintain satisfactory academic progress toward the completion of his or her degree or certification program. Satisfactory academic progress for federal financial aid purposes is defined as successfully completing at least two-thirds of the credit hours attempted during a school year. In addition, undergraduate students with 60 or more credit hours must maintain at least a 2.00 cumulative grade-point average to remain eligible for federal assistance. Please be aware that certain state financial assistance programs require a recipient to maintain different standards of satisfactory academic progress.

Short-Term Loans

Central Missouri State University realizes that many students are dependent upon federal financial assistance to satisfy the costs of attending Central. However, it is very important to have some money on hand when starting classes to help pay incidental costs during the first few weeks of the semester. If an emergency arises, however, a student can apply for short-term loan funds at the Office of Student Financial Assistance. This assistance must normally be

repaid within 60 days. A service charge of \$10 is levied to borrow from Central's short-term loan fund.

Veteran Services

Central's Veteran Services Office assists over 450 students annually. This office is located in Administration 104 and is 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 in person, by telephone 660-543-4983, Fax 660-543-8080 or e-mail FinAid@cmsu1.cmsu.edu.

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 or nine semester hours in the summer session. 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 the Director of Academic Advisement if there is not a declared major and with the appropriate department chair if a major has been declared. 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.

Academic Standards

Grading System. The grading 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. An instructor may report a semester grade of **U** when, for justifiable reasons, the student has not completed the work of the course. During the next semester the **U** becomes an **F** unless the requirements of the course have been satisfactorily completed or the course is of an individualized nature, e.g., thesis, research report, or similar investigation. 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.

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

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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 General Education 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 a course for Pass/Fail credit. Students who earn an A, B, C or D will have a P (Pass) recorded on their transcripts and the grade will not be calculated in the grade-point averages. Students who fail will have an F (Fail) recorded on their transcripts and the F will be calculated in their grade-point averages. 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 Executive Director of International Programs 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 do not fulfill requirements for load consideration, nor do they count as part of a student's enrollment status for receiving 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** and a subsequent review by the Registrar's Office.

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 with a passing grade use the same rules applicable for Central courses which have been repeated. Courses taken at Central and then 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. Students are encouraged to seek advice from the Office of Academic Advisement 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 the total Central GPA and the cumulative GPA are 2.00 or higher, unless for academic reasons he/she is suspended or dismissed. When a student on academic probation raises both their Central GPA and their cumulative GPA to 2.00 or above,

the student is removed from probation. Transfer credit may not be used to raise a total Central GPA.

Academic Suspension. A student 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 Central's Office 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 Central's Office 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.

COURSE PREREQUISITES. A student is

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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 full-semester class using the self-enrollment system. Students may wish to consult with an Academic Advisor and/or the course instructor prior to withdrawal. A grade of **W** is recorded as the final grade. 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 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.

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 Refund Policy for information on the credit of fees.)

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.

Graduate level courses cannot be applied to the undergraduate degree programs.

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 degrees must satisfactorily complete a minimum of 40 semester hours of upper-level work (3000 and 4000 level courses) excluding special credit. 12 upper-level hours must be in the major subject. Each baccalaureate degree candidate must have earned upper-level course work at Central in their major and their minor.

DEGREE AUDIT REPORTING SYSTEM

(DARS). The Degree Audit Reporting System (DARS) produces a report form that reflects a student's degree requirements in a given catalog year, applicable transfer credit and progress toward graduation. This report also designates the number of credit hours earned, both cumulative and Central's grade point average, and a listing of courses completed. Deviations from the major or minor requirements must be approved in writing by the department chair and submitted to the Office of the Registrar to be reflected on the DARS. A student may request this report at any time from the Office of Academic Advisement.

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 unless otherwise noted for the major/certification:

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.

Each student must review the degree program for all minimum GPA requirements. For example, for teacher certification degree programs minimum cumulative grade-point averages of 2.50 are required. For B.S.B.A. degree programs, a minimum cumulative grade-point average of 2.25 based upon total hours attempted is required.

GRADE APPEALS. Students appealing a grade have one calendar year from the time the grade was issued to appeal any grade changes. These appeals should be directed to the instructor that taught the course in question.

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 at least 40 semester hours of junior/senior level coursework at an accredited senior institution of which at least 30 of those hours must be completed at Central. Fifty percent of the major and minor coursework

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must be completed through Central. The last 12 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, with the last 12 semester hours completed at 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 Missouri 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 students who have taken Hist 1350, Hist 1351, or PoIS 1510 in Division II, Area B, of the General Education.

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. No more than nine semester hours of credit 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. Special credit can not be applied to any upper-level hour requirements. All special credit is subject to a \$5.00 per hour recording fee.

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. 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.

For further information on evaluation and acceptance of CLEP credit and procedures for obtaining such credit, contact the Office 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 *Undergraduate Catalog* must be met before a degree is conferred.

Military Service Related Credit. Credits earned by service personnel 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 is used to determine the credit value. The Division III Personal Interaction requirement of the 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. U.S. Armed Forces Military Credit is reviewed by the Registrar's Office.

DATE OF CATALOG FOR CHECKING DEGREE REQUIREMENTS. Students are always subject to current administrative, academic and general policies and regulations. The *2003 Undergraduate Catalog* becomes effective Summer 2003.

In most instances a candidate may use as a basis for degree requirements the Undergraduate 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 eight years prior to the date the degree is conferred. A student must earn academic credit at Central during the year of the catalog chosen or have attended consecutive semesters at another institution of higher education. 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 for a degree program, a student may pursue a second degree different from that of the initial degree granted. Two identical degrees are not permitted. A second degree requires a minimum of 30 additional semester hours beyond the requirements of the first degree. Each degree must meet all degree requirements including:

1. a functional major
2. a major and minor
3. multiple majors.

Majors and minors must be unique to each degree.

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 to take 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.

FINAL GRADES AND TRANSCRIPTS. Final grades can be reviewed online via Central's webpage, www.cmsu.edu, and by calling 660-543-8888. A student number and pin number is required. Transcripts are furnished by the Registrar's Office.

FIELD TRIPS. At times, field trips are

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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.

When transportation is provided for the class, faculty may arrange for wheelchair accessible transportation by contacting Accessibility Services.

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 Vice President for Student Affairs.

ASSESSMENT. All students are required to participate in the University's assessment program.

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 an 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.

Alcohol and Other Substances

The University has established and is committed to enforcing clear policies that promote an educational environment free from the abuse of alcohol and other substances. The University complies with federal regulations that require alcohol and drug testing program for safety sensitive positions. 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 and residence halls except in those places where an explicit exception has been granted. University grounds are subject to local ordinances that limit or prohibit the possession and use of alcohol. The university also expects students, employees and visitors to comply with local, state and federal laws that prohibit the unlawful possession, use, distribution and sale of alcohol and illicit drugs. Anyone found to be in violation of such laws shall be subject to all applicable criminal penalties, as

well as disciplinary action in accordance with applicable policies of Central Missouri State University.

Students under the age of 21 are reminded it is unlawful to use fictitious identification for purchasing alcohol. Health risks associated with the use of illicit drugs and alcohol include, but are not limited to, addiction, accidents as a result of impaired judgment and ability, overdose, damage to internal organs or a developing fetus and unpredictable or violent behavior. Resources for assistance with alcohol or drug-related problems include Counseling and Psychological Services, University Health Services, Employee Assistance Program and a variety of community and regional referral services. For more information call 660-543-4060 or 660-543-4770.

Vehicles on Campus

Because parking space is limited, the University asks that students who can arrange other transportation not bring vehicles to campus. Old Drum Transportation, handicap accessible community transportation, services campus at no fee for Central students and employees.

To park in student lots, students may buy parking permits at Parking Services (306 Broad Street). However, parking permits are limited by the number of parking spaces and may not be available for purchase.

Handicap parking permits are available at the standard student rate when medical verification is presented to Parking Services or Accessibility Services, Union 220.

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 or www.cmsu.edu/ps.

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.

Campus Activities

From participating in Campus Activities Board 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 180 registered student organizations exist at Central. Students are able to affiliate with academic honoraries, departmental organizations, religious organizations, sports teams, 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. To see a list of organizations and descriptions go to the Office of Campus Activities web page www.cmsu.edu/saffairs/ocal.

Greek Life

Fraternities and sororities are a special type of student organization that many students choose to join while at Central. Students join fraternities and sororities through a process called recruitment which typically occurs at the beginning of each semester. Greek Life offers students the opportunity to develop leadership and organizational skills, participate in community service, and make life-long friends. Friendship, fun, scholarship, community service,

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and school spirit...Greek life has it all! For more information visit the Office of Greek Life located in Union 217 or call 660-543-4007.

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 ten-member Mid-America Intercollegiate Athletics Association (MIAA) and the National Collegiate Athletic Association (NCAA), Div. II.

Varsity sports for women are basketball, bowling, 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 badminton, basketball, billiards, bowling, golf, racketball, rifle and pistol shooting, soccer, softball, swimming, table tennis, tennis, touch football, track, volleyball, wrestling, and many others. (See the Office of Campus Activities, Union 217, 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 funds club sports but assumes no liability for them. (See the Office of Campus Activities, Union 217, 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 eight 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.

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. Freshens is located here providing drinks, fruit smoothies, yogurt, popcorn, and pretzels.

Recreational Programs. At Central, we work hard and play hard. Our recreational programs have something to meet everyone's needs. Intramural sports offers a wide range of individual and team activities including flag football, softball, volleyball, basketball, and soccer. We also have an indoor rifle and pistol range (located in the Humphreys Building) where students can experience the challenges of recreational shooting. Contact the Intramural Office at 660-543-4007 or visit us in Union 217.

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, a play field southeast of Diemer Hall and South Recreational Complex. 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.

Services for Students

Academic Advisement

The Office of Academic Advisement assumes primary responsibility for undergraduate student

advisement. Academic advisors, specializing by college, help undergraduates plan career opportunities, determine degree programs, select courses, and coordinate their academic progress. Students are required to see an advisor during freshman/transfer student orientation, prior to enrollment of their second semester on campus and again when they have achieved junior status. A degree audit is available on-line to students at any point in the semester. Students have access to enrollment using the on-campus mainframe system, or via Central's website at www.cmsu.edu. Transfer course equivalencies are established by the academic departments and are available to students on the degree audit and Central's website. Students may schedule an advisement appointment on Central's website or by calling 660-543-4721.

Self-Enrollment System. Central is pleased to provide students with access to their enrollment using the Student Self-Enrollment System (MULE). Following admission and advisement, students will have the opportunity to complete their own enrollment. Enrollment terminals are located in the Union, in the Office of Academic Advisement, and in the Library. Students may enroll using Central's website, www.cmsu.edu.

The MULE is designed to provide students maximum control of their enrollment, ease of choosing their classes and the opportunity to add and drop courses at their discretion.

If a class is full, you will be given the option to be placed on a waiting list for the class if you meet the course prerequisites. You will remain on the waiting list until (1) you reach the top of the waiting list and a seat becomes available in the class, (2) you delete yourself from the list, or (3) the waiting list expires (5 days prior to the beginning of the semester). If a seat in the class becomes available and you are at the top of the list, MULE will automatically enroll you in the class (overnight). The appropriate billing adjustment will be made and you will be notified that you have been placed in the class. The waiting list blocks out the time period just as if you had actually enrolled in that class, and the class counts toward your total hours enrolled.

The system utilizes prerequisite checking to notify students when they are attempting to enroll in a class for which they have not satisfied the prerequisites. The enrollment system also notifies students whenever they require department consent or override action to enter a

course when they do not meet specific requirements stated in the university catalog.

To enroll using the MULE, students must know their student identification number and personal identification number (PIN). Additional information concerning student self-enrollment can be obtained at the Office of Academic Advisement (Ward Edwards 1100) or call 660-543-4721.

Planned Placement. All new students and transfer students with fewer than 24 semester hours must be placed according to University policy. Criteria used to make decisions include ACT scores (sub-scores and composite), class rank and courses previously completed. Placement decisions are made to facilitate student success. Three core components are considered: reading, writing, and mathematics. A free testing option is available if a student wishes to have a placement score reconsidered.

Placement options are listed as follows: (Note: Students may be considered on an individual basis.)

AE 1000: (Intro to Coll. Writing) ACT English score 17 or below, class rank 50% or below

Engl 1020: (Comp. I) ACT English score 18 or above and class rank 50% or above

Engl 1080: (Advanced Comp) ACT English score 26 or above and class rank 50% or above

AE 1010: (Textbook Reading Techniques) ACT Composite score 18 or below

AE 1030: (Intro to Algebra) ACT Math score 16 or above and class rank 49% or below

Math 1101: (Intermediate Algebra) ACT Math score 17 or above and class rank 50% or above

Math 1111: (College Algebra) ACT Math score 20 or above and class rank 70% or above

Math 1620: (Contemporary Math) ACT Math score 20 or above and class rank 70% or above

Math 1131: (Calculus for Bus) ACT Math score 21 or above and class rank 75% or above, High school advanced algebra and geometry or Math 1111

Math 1150: (Pre-Calc) ACT Math score 21 or above and class rank 75% or above, High school advanced geometry and trigonometry

Math 1151: (Calc/Anal Geom) ACT Math score 24 or above

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and class rank 80% or above, High school advanced algebra, geometry and trig, or Math 1112 or Math 1150.

Validated Credit. Validated credit is also an option within the oral communication area of General Education (Public Speaking or Oral Interpretation), through the Modern Language Department (French, German or Spanish) and through the Mathematics Department. A student is able to earn transcribed college credit by demonstrating specific competencies. These tests or measurements vary by department and are free to the student.

Transfer Credit. Transfer credit is evaluated on the same basis used for Central students. Applicants who hold an Associate of Arts degree from an accredited Missouri two-year institution or have met the Missouri 42-hour General Education Core requirements are considered to have met Central requirements in General Education, Divisions I and II. Transfer students who have completed the Missouri AA or the 42-hour General Education Core must also complete additional institutional requirements in Divisions III and IV and any major specific General Education courses. Note that the State of Missouri requires certain education courses for teacher certification. For those with degrees other than the AA or degrees from an institution outside the State of Missouri, the University reviews transcripts and accepts applicable credit toward Central graduation on a course-by-course basis. Courses taken at a two-year college will not be applicable toward upper-level-hour requirements.

For current course equivalencies as provided by academic departments, visit Central's web site www.cmsu.edu/corequiv/.

Appeal of Transfer Credit. A student may request special consideration of transfer course work to meet degree requirements. For General Education requirements, students may submit a written appeal to the General Education Exceptions Committee in the Office of Academic Advisement (WDE 1100). For major or minor requirements, the student should visit with the respective department chair to discuss possible course equivalencies or substitutions.

If 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.

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.)

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.

NOTE: A financial aid applicant who is classified as a senior should be aware that only those classes taken for **undergraduate** credit can normally be considered when determining the enrollment status (full-time, half-time, etc.) for qualifying for federal and state financial aid. A student cannot receive federal or state financial aid for graduate credit hours until the student is fully admitted by an academic department to a graduate program of study.

Academic Enrichment

The Department of Academic Enrichment (AE) improves academic success by helping underprepared students prepare, prepared students advance and advanced students excel. AE services include both credit classes and non-credit labs with all services free except for regular class fees. Stop by Humphreys 127, or call 660-543-4061 for information on any of the following programs:

College Skills Classes.

Students may choose courses that provide a solid foundation for learning in college. Courses include:

- ! AE 1000 *Introduction to College Writing*
- ! AE 1010 *Textbook Reading Techniques*
- ! AE 1012 *Speed Reading*
- ! AE 1020 *College Study Skills*
- ! AE 1030 *Introductory Algebra*

Learning Center. Individualized programs such as a math lab and self-paced credit courses are offered in the Learning Center, HUM 110, 9 a.m. to 4 p.m. Monday through Friday. Areas of instruction include:

- ! Mathematics (basic math through college algebra)
- ! Reading skills (vocabulary, comprehension and rate)
- ! Study skills (lecture note-taking, test-taking and time management)
- ! Standardized test preparation (C-BASE, GRE, LSAT, GMAT and TOEFL)
- ! English language improvement for international students
- ! Credit classes (Microsoft Office Suite, Speed Reading and Pre-Algebra Review)

Writing Center. In free one-on-one conferences, instructors assist students at all stages of the writing process from brainstorming ideas to polishing drafts. In addition, computers, handbooks, style manuals and instructional handouts are provided to support any writing task from crafting an effective thesis statement to building an eye-catching résumé. The Writing Center is open Monday through Friday in Humphreys 116. Online writing assistance is available at www.cmsu.edu/writingcenter.

McNair Central Achievers Program.

Designed primarily for juniors and seniors, McNair offers preparation for doctoral study for U.S. citizens and permanent residents who meet government eligibility requirements. Activities include information seminars, faculty mentoring, and a paid summer research internship. Because of federal guidelines, students must apply for acceptance to the McNair program through the Department of Academic Enrichment.

Student Support Services (TRIO-SSS).

Funded by a U.S. Department of Education grant, TRIO-SSS offers tuition-free developmental education courses in writing, reading, mathematics and college success strategies. These courses offer small class sizes, individualized learning methods, one-on-one

tutorials and advisement sessions. TRIO-SSS also offers extra advisement opportunities and free tutoring in a variety of high-risk courses. Because of federal guidelines, students must apply for acceptance to the TRIO-SSS program through the Department of Academic Enrichment.

Summer Suspension Waiver Program.

Students on academic suspension, with GPAs of 1.50 or higher, may request readmission for summer classes. Faculty mentors meet weekly with students to discuss strategies for improving academic performance. Students who successfully complete the summer program and achieve at least a 2.00 summer GPA are permitted to enroll for fall classes.

AE 1400. This course, *Student Development Seminar*, orients new students to Central through discussion of academic purpose, university resources, academic skills, relating to others, making choices, and creating goals. **Central encourages all freshmen to enroll in this course their first semester.** This course is one semester hour and runs a half semester.

AE 1450 Valuing Differences. Within the context of a one-hour personal, experiential, and interactive learning course, explore current issues and challenges related to race, gender, and culture. This course is one semester hour and runs a half semester.

Assessment

Periodic measurements of student perceptions and intellectual growth are obtained as one means for the University to assess and to improve student learning, academic programs and student services. 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.

Assessment and Testing Services

The Office of Assessment and Testing

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Services, Humphreys 223, 660-543-4919, is located within the Office of Institutional Effectiveness. The Office of Assessment and Testing Services administers, supports and coordinates Central's Assessment and Testing Services Programs. The major goals of the assessment program are to improve student learning, teaching, student support services and institutional effectiveness; document overall institutional and program quality; and communicate assessment information to appropriate offices and constituencies. All students are required to participate in the university's assessment program. The Testing Services Program supports the assessment program through its administration of a variety of surveys and standardized examinations designed to assess student competency, satisfaction and attitudes. In addition, the Office of Assessment and Testing Services administers many other assessments that assist students entering the university, help place students in appropriate courses, or are used for admission into graduate programs or professional schools upon completion of their degree at Central. Staff can assist with identifying appropriate reconsideration (Planned Placement) and Math for Credit Exams. An official photo I. D. with signature (e.g., driver's license, state ID, military I.D., current passport) is required when taking tests or inquiring about test scores.

Information Related to Test Registration and Score Reports. In addition to the administration of a variety of tests and surveys, the Office of Assessment and Testing Services also maintains test scores and distributes registration material for other examinations not administered by Assessment and Testing Services. Central is not authorized, for example, to administer the Graduate Management Admission Test (GMAT), a computer-based test used for admission into specific graduate business programs. However, the office does maintain GMAT test scores and provides registration materials and information for students who are interested in taking this exam.

The Office of Assessment and Testing Services maintains test scores and provides registration information and materials for all of the tests listed below. Those tests administered at Central through Assessment and Testing Services are marked with an asterisk (*).

- *American College Testing Program (ACT)
- *American Drafting and Design Association Exam (ADDA)
- *Area Concentration Achievement Test (ACAT)
- *College Basic Academic Subject Examination for General Education
- *College Basic Academic Subject Examination for Teachers
- *College-Level Examination Program (CLEP-CBT)
- *Constructor Certification Exam (CCE)
- *Counselor Preparation Comprehensive Exam (CPCE)
- *Diagnostic Readiness Test (DRT)
- *General Education Development (GED)
- Graduate Management Admission Test (GMAT)
- Graduate Record Examination - General Test (GRE-General)
- Graduate Record Examination - Subject Tests (GRE-Subject)
- *Institutional Test of English as a Foreign Language (ITP)
- *Law School Admissions Test (LSAT)
- *Major Field Achievement Test (MFAT)
- Medical College Admissions Test (MCAT)
- *Miller Analogies Test (MAT)
- *National League of Nursing Achievement Tests (NLN-Achievement)
- *National Registry of Emergency Medical Technician - First Responder (NREMT-FR)
- *PRAXIS Series (previously National Teacher Exams)
- *School Leadership Licensure Assessments (SLLA and SSA)
- TeckChek
- Test of English as a Foreign Language (TOEFL)
- Test of Spoken English (TSE)
- *Travel Agency Proficiency Exam (TAP)
- *Watson-Glaser Critical Thinking Appraisal (WGCTA)

It is recommended that students considering admission to Central Missouri State University take the national ACT test due to its greater applicability. Official score reports are to be on file in the Office of Assessment and Testing Services. To request a free official ACT score report be sent to Central, applicants should enter **2272** on the ACT test registration form. The ACT Residual, however, is administered at selected times in the year. Scores from ACT Residual testing cannot be used for scholarships, athletic admission requirements, or admission to other institutions. Contact the Office of Assessment and Testing Services to obtain Central's institutional score recipient code for other standardized tests.

CLEP tests, which allow students to receive credit for specified courses, are available by appointment. There are also several locally developed examinations that allow students to receive credit in the area of mathematics. Other tests are available through the Office of Assessment and Testing Services that are used

to place students into courses that maximize their success. If you are interested in examinations to be used for admission to the university, tests for credit or placement, please call 660-543-4919 or stop by the Office of Assessment and Testing Services in Humphreys 223.

Registration is required for all exams. In compliance with the Americans with Disabilities Act, test accommodations are available for students who meet eligibility requirements. Contact the Office of Assessment and Testing Services for additional registration/test accommodation information. To view the test calendar visit:
www.cmsu.edu/testing-services/cal.cfm.

It is important to understand that only official test score reports, provided by the testing companies, can be used at Central as well as other institutions. Scores reported by Assessment and Testing Services, although valid at Central, are considered "unofficial" and cannot be applied or transferred to other colleges or universities. To protect confidentiality, score reports are not available by telephone, fax, email, Internet, or proxy. An official photo ID with signature is required to obtain a score report.

Assessment and Testing Services is a member of the National College Testing Association (NCTA) and the Consortium of College Testing Centers; and adheres to the NCTA Professional Standards and Guidelines.

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.

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.

Dining Service

In addition to regular meal service in residence halls, dining service is also available in the University Union. Dining service in the Union is located on the first floor which includes: **Central Courte** featuring Pizza Hut® pan pizza, Sub City, Burger King®, Taco Bell® Express, pastries, salads, daily specials, desserts, and other food items; **Courte Café** featuring daily entrees and soups. Located in the Recreation Center is **Freshens** which features drinks, fruit smoothies, popcorn, yogurt 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.

Distance Learning

Distance Learning at Central Missouri State University encompasses all formats of electronically-based education delivery systems.

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Within the Office of Extended Campus, Distance Learning manages, schedules, coordinates and assists in marketing all distance education courses and degree programs. Appropriate student services, including library resources, an online writing lab and technical support, are provided to meet the additional needs of the distance learner.

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 or the major department for names and offices of Resource Advisors.

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

KTBG-FM 90.9 The Bridge, 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. KTBG-FM broadcasts a full range of National Public Radio programs. The station also produces and airs a number of local programs. KTBG-FM can also be heard at the Lake of the Ozarks on 104.9 FM.

Both KMOS and KTBG-FM 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. James C. Kirkpatrick Library has a centralized reference area, which includes periodicals, government documents, and special collections. The government documents area houses the depository collections for federal and Missouri documents. Library holdings include approximately 504,932 books and bound volumes, 729,887 pieces of microform, 703,388 government documents, and 2,726 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. *Quest*, a computerized catalog, provides on-line access to library collections. The library is a participant in the Missouri Bibliographic User System (MOBIUS) giving students access to the library holdings of over 50 Missouri academic libraries. External library databases and collections are available via the Internet and interlibrary loan services. Library Services is committed to providing quality services using a variety of information resources and technologies. For more information about Library Services, please visit the web page <http://library.cmsu.edu>.

Harmon Computer Commons provides networked IBM and Mac workstations on a first-come first-served basis, access to software, the Internet, *Quest* (the library on-line catalog), email, and class assignments. Faculty may schedule any of the four computer classrooms for hands-on instruction. Research aids, tutorials, and supplementary material are available in the reference area of the Commons. Lamination services are provided for students, check for current pricing. Typewriters are available, and staff is available for assistance. Contact the Harmon Computer Commons in Library 1250, call 660-543-4196 or e-mail HCC@libserv.cmsu.edu. Visit the Harmon Computer Commons web page http://library.cmsu.edu/main/computer_commons.htm.

Audiovisual Services (Library 1340, 660-543-4142) supports the university community by circulating audiovisual equipment and the media collection. Reservations may be made up to two semesters in advance. Student requests for classroom presentation audiovisual equipment requires instructor approval. Lamps for

departmentally owned audiovisual equipment may be purchased through AV. Interlibrary film and video rental services are also available.

Classroom instruction has first priority, but support to non-academic areas and community groups is also provided. Certain audiovisual equipment may be rented, call for current rental price.

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 660-543-4007.

Office of Accessibility Services

The Office of Accessibility Services provides accommodations to persons with disabilities. Contact Accessibility Services at Union 222, (V/TTY) 660-543-4421, fax 660-543-4724 or visit www.cmsu.edu/access. A minimum of 48 hours notice is recommended for accommodations 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. Toll free numbers for Relay Missouri are 711 or 800-735-2966 for TTY and 711 or 800-735-2460 for voice callers.

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 Fairs
- Teacher Placement Day
- On-Campus Interviews
- Career Counseling
- Information on Employment Opportunities
- Career Library
- Career Workshops

- Résumé Writing Assistance
- Interviewing (via videotaped mock interviews)
- Job Search Skills
- Credential Services
- Vacancy Bulletins
- Part-Time Student Employment
- Experiential Education Opportunities
- Comprehensive Webpage including job listings

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 Engagement

Central's Office of Community Engagement encourages understanding and appreciation of all aspects of human diversity within the Central community and engages surrounding communities to collaboratively address social justice and community issues, as it relates to human diversity. 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 of Community Engagement achieves its mission through:

- ! Oversight of the university Campus Diversity Plan.
- ! Oversight of the Kansas City Task Force and the Kansas City Task Force Advisory Board.
- ! Assistance on university accreditation related to human diversity.
- ! Facilitation of campus and community educational programming and activities related

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to human diversity.

- ! Maintenance of campus diversity resource library.
- ! Incorporation of human diversity understanding into university operations and policies.
- ! Fostering of the Central Creed.
- ! Assistance to campus student multicultural programming.
- ! Assistance to all university programs on incorporation of diversity awareness programs and initiatives.
- ! Facilitation of goals related to human diversity as stated in the University Mission Statement.
- ! Interaction with diversity related offices and organizations on campus and in surrounding communities to build partnerships.

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, online and through interactive television. The Office also coordinates workshops, non-credit courses, contract training, high school dual credit courses, continuing education units (CEUs), vocational education courses and entrepreneurial courses.

Office of International Programs

The Office of International Programs, Ward Edwards 1200, 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.

Office of Student Financial Assistance

The Office of Student Financial Assistance administers a variety of federal and scholarship

programs, state grant, loan, and employment programs, all of which provide funds to help eligible students satisfy the educational and living expenses of attending Central. Knowledgeable staff members are available to assist students and their families with all aspects of applying for financial assistance and V.A. educational benefits. The office is located at Administration 104 and may be contacted by telephone 660-543-4040, Fax 660-543-8080, or e-mail FinAid@cmsu1.cmsu.edu.

Union Station: Crossroads to Technology

Union Station sells educationally priced computer hardware and software and is located in Union 119. Current faculty, staff and students are eligible to purchase hardware and software. Check our website at <http://ustore.cmsu.edu>.

University Health Services

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, nurse practitioners nurses, registered pharmacist, laboratory technician, and other qualified 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. Check our website www.cmsu.edu/uhs/ for additional information. For an appointment, call 660-543-4770 or inquire at the University Health Center.

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

Group Insurance. All students attending Central 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. Questions, call 660-543-4771 or check our website www.cmsu.edu/uhs/.

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 and fax. Additionally, the University Store has a textbook rental system for most texts needed in undergraduate classes. "A Partner in Education," the University Store is located on the lower level of the University Union. Check our website at <http://ustore.cmsu.edu>.

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 Engagement, Dining Service/Catering, Office of Career Services, Office of Campus Advocate, Student Government Association, Facilities and Conference Services Office, and the Office of Accessibility Services. 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 comprehensive speech-language and hearing clinic in the Welch-Schmidt Center for Communication Disorders (Martin 34). Undergraduate and graduate student clinicians, supervised by faculty of the Department of Communication Disorders, provide assessment and treatment to students, faculty and members of the community with articulation, voice, swallowing, stuttering, language and/or hearing

disorders.

The Center has treatment rooms with two-way mirrors, video and audio monitoring; an early childhood preschool for children with speech and language disorders who are between the ages of 2 ½ and 5 years; a voice and swallowing laboratory including rigid and flexible endoscopy for vocal fold visualization, air flow/pressure measurements and acoustic evaluation; four audiologic suites where hearing evaluations, impedance audiometry, otoacoustic emissions, video otoscopy, auditory brainstem response and electronystagmography are performed. The hearing aid laboratory is equipped with the latest technology for the fitting and dispensing of hearing instruments. Students have available a variety of current assessment and treatment materials and a student clinician workroom complete with Macintosh and PC workstations.

Students, faculty, staff and their immediate families may use the services of the Center at reduced fees. The Center welcomes self referrals and referrals from University faculty and staff, University Health Services and community health and educational agencies.

Other Services and Facilities

Airport

Central owns and operates the Max B. Swisher Skyhaven Airport located three miles west of Warrensburg on Highway 50. It includes 402 acres of land; a 4,200-foot lighted runway, with a full-length parallel taxiway; a 2,800-foot lighted 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 Association

The Alumni Association of Central Missouri State University provides opportunities for alumni to stay connected with their alma mater after graduation by hosting alumni gatherings throughout Missouri and around the country. Reunions are held for classes and organizations to reunite alumni and bring them to campus. Events are planned in conjunction with athletic events for alumni and fans alike. The Alumni Association seeks to recognize the accomplishments of alumni through awards such as the Distinguished Alumni Award, Distinguished International Alumni Award, and the Distinguished Recent Alumni Award. Scholarships are also available to the children of alumni who are attending Central Missouri State University.

Membership in the Alumni Association is complimentary to graduates of Central Missouri State University. Members receive *Central Today*, the alumni publication, four times per year as well as invitations to events in their area. Other benefits include assistance with reunion planning and locating fellow alumni, access to university facilities, bookstore discounts, and career assistance.

The Central Student Alumni Association helps to build school spirit and loyalty through events planned just for students. Activities include the homecoming bonfire, senior send-off, and bus trips to athletic events.

More information on the Alumni Association or Student Alumni Association can be found in the Smiser Alumni Center located in the University Union or by calling 660-543-8000.

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 Health and Human Performance 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 Health and Human Performance Office, Morrow 101, about usage.

The Center for Teaching and Learning

The Center for Teaching and Learning advances Central's academic mission by encouraging and supporting the advancement of instruction and the scholarship of teaching and learning. Professional, technological and developmental assistance for faculty and staff is provided by means of a coordinated training program, modern laboratory facilities and expert technical advice and support. The Center seeks to integrate sound teaching practice with current instructional technology to foster faculty growth and to contribute to Central's statewide mission in professional technology.

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. The Executive Director may be e-mailed at Vinson@cmsu1.cmsu.edu.

Child Care Centers

The University supports two child care centers on campus. The facilities are located at the Foster/Knox Building and the Central Village Apartment Complex. Both of these centers are licensed with the Missouri Department of Health and Senior Services. Central Village holds a certificate of accreditation from Missouri Accreditation and Foster/Knox is working toward their certification.

The child care facilities are available to all students, staff, and faculty. Children six weeks to ten years may enroll. Enrollment is accomplished through a waiting list. The child care centers have adopted *Creative Curriculum* to assist in planning appropriate learning experiences for every child in our program. Children over the age of one are provided meals.

Both centers offer full-day care, Monday-Friday and offer attendance options of Monday/Wednesday/Friday or Tuesday/ Thursday. Central Village offers evening care for children of students attending night classes Monday through Thursday evenings. Foster/Knox Center is the only center open during the Summer Sessions and offers a Summer Camp program for school-age children. For more information or to take a tour, call Foster/Knox at 660-543-4605 or Central Village at 660-543-4793.

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.

Information Services

With the University Director and most offices located in the Humphreys building, the Department of Information Services provides information processing, computer support,

network and telecommunications services for the entire University. The **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 2,500 microcomputers and web interfaces. 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 24 / 7 campus-wide computing access through over 3,900 workstations (with over 3,300 connected to a high speed 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 PBX 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 curricula 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 include, for example, tractor trailer units, school buses and 100cc motorcycles. Also

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housed within this facility are a driving simulation laboratory, advanced computer software training 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.

Prussing Agriculture Research Farm

The 260-acre Prussing Agriculture Research Farm, a teaching unit of the Agriculture Department utilizing the latest in agriculture technology, provides laboratory experience for students in agriculture classes and work opportunities for students interested in hands-on experience. Additional teaching/research facilities are a mature orchard, greenhouse complex with dwarf orchard, and research plots at the Max B. Swisher Skyhaven Airport. Agriculture research, funded by the University, private industry, and the Natural Resources Conservation Service is carried on by faculty and students at these facilities.

Public Safety

The Department of Public Safety includes the 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 660-543-4123.

Publications

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

Central Today. A quarterly tabloid for alumni and friends of the University published by the Office of Communication and Creative

Services and the Office of Alumni Relations and Development.

Central Missouri State University News. A weekly newsletter for faculty and staff published by the Office of Communication and Creative Services.

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

Research

The Office of Sponsored Programs establishes, administers and coordinates programs that guide Central in its research, scholarly activity and creative endeavors. The office 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. The office also maintains a research resource library that contains agency regulations and application forms, reference books and manuals on research administration, how-to books on grant writing and directories of foundation support. For assistance with any of your research needs contact the Office of Sponsored Programs or email Research@cmsu1.cmsu.edu.

Research Involving Human Subjects. In order to comply with federal regulations and to protect the health and safety of human subjects involved in research **all** research protocols involving the use of human subjects must be in compliance with Academic Procedures and Policies #9: Procedures for Human Subjects Review. In all cases involving human subjects in research, a completed and signed "Protection of Human Subjects Clearance Form" must be approved in advance by the The Human Subjects Review Committee and filed in the Office of Sponsored Programs before the research may start. Forms are available at www.cmsu.edu/research.

Research Involving Animals. Federal law requires that all research projects involving the use of selected mammals and birds be conducted to ensure humane treatment of the animals. Accordingly, all such projects, regardless of the funding source, must be approved in advance by the Institutional Animal

Use and Care Committee. Forms are available in the Office of Sponsored Programs.

Small Business Development Center

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

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. Each year a group of students spends Spring Break working with Habitat for Humanity building a home. For information on how to be a part of this enriching experience, stop by the Office of Campus Activities, Union 217, or call 660-543-4007.

Workshop on Wheels Child Care Resource and Referral

The Workshop on Wheels Child Care Resource and Referral is an in-service training project for child care providers, early childhood professionals, and parents affiliated with the Department of Educational Leadership and Human Development - Child and Family Development Program. 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 Child Care Resource and Referral is funded by grants from the Missouri Department of Elementary and Secondary Education - Division of Adult and Vocational Education (Family and Consumer Sciences), 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
 Bachelor of Science in Social Work

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.
2. Completion of a degree with a major/minor combination requires that a minimum of 20 semester hours of the major and a minimum of 10 hours of the minor must be taken through Central. Completion of a functional major requires that 30 hours of the functional major must be completed through Central. If a student completes more than one major, a minor is required. The last 12 semester hours earned toward a baccalaureate degree must be from Central.
3. A baccalaureate shall include a minimum of 40 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 be earned at Central in the minor.
4. A baccalaureate shall include the General Education as prescribed by the University. See "General Education" in this section.

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

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- 60-70 semester hours.
3. Candidates for this degree must achieve a minimum cumulative grade-point average of 2.25.

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.

SPECIFIC REQUIREMENTS FOR THE BACCALAUREATE-- BACHELOR OF SOCIAL WORK

This is a professional degree available through the Department of Sociology and Social Work.

1. The functional major for this degree normally shall be 64 semester hours.
2. No minor is required.
3. Candidates for this degree must maintain a minimum grade of C for all required social work courses.
4. Candidates for this degree must successfully complete a fifty (50) hour Field Observation and Participation experience and a five hundred (500) hour Field Practicum experience.

ASSOCIATE DEGREE

Central offers an Associate in Science degree.

GENERAL REQUIREMENTS FOR ASSOCIATE DEGREE

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 12 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 1350 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 must be met for each degree earned 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. Each degree earned must have a major/minor unique to that degree and not recognized as a major or minor in another degree.

*NOTE: with the exception of two or more functional majors, any course required in **both** the major(s) and/or the minor(s) constitutes an overlap and necessitates a comparable number of departmentally approved coursework hours to compensate for the overlap(s).

RESIDENCE

A candidate for any bachelor's degree must have earned at least 40 semester hours of junior/senior level coursework at an accredited senior institution of which at least 30 of those hours must be completed at Central. Fifty percent of the major and minor coursework must be completed through Central. The last 12 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, with the last 12 semester hours completed at Central.

GENERAL EDUCATION PROGRAM

The goals of the General Education Program are to provide students the opportunity to enhance the skills of the intellect; expand their knowledge, understanding, and appreciation of the arts, natural sciences, technology, social sciences, literature and the humanities; and contribute to the improvement of human interactions. These goals can best be accomplished through exposure to a common core of knowledge, as well as through the opportunity to select courses to accommodate individual interests. A common thread throughout the program components is our effort to provide students with the required competencies called for by the Missouri Coordinating Board for Higher Education (CBHE). The CBHE competencies are divided into two parts: Skill Areas (Communicating, Higher-Order Thinking, Managing Information, Valuing) and Knowledge Areas (Social and Behavioral Sciences, Humanities and Fine Arts, Mathematics, Life and Physical Sciences).

The Intellectual Skills component of the General Education Program should enable the student to think independently, to write effectively, to speak fluently, to read with comprehension, and to listen attentively. Intellectual Skills also include the abilities to use mathematical reasoning and thinking as well as computation, and to conceptualize goals and ways to attain those goals. Concurrent with the development of these skills should come improved ability to think logically, to analyze and compare, to question and evaluate.

The Integrative Studies component of the program is expressly designed to help students examine and develop imaginative, yet disciplined,

solutions to complex problems. They will do so by synthesizing the skills, knowledge, and methods developed in other components of the General Education Program. Selected information and skills developed in earlier classes should be so integrated that students discover connections among diverse human endeavors.

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 General Education 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 GENERAL EDUCATION PROGRAM

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

1. Students will take courses in four divisions: I. Intellectual Skills, II. Core, III. Personal Interaction and IV. Integrative Studies. In general, General Education courses in Divisions I-III 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 General Education Program where a requirement may be met in a variety of ways, colleges and departments shall allow students maximum freedom of

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choice whenever possible. However, colleges and departments may specify the General Education course(s) meeting that requirement for any or all of their degree programs.

5. Transfer students who complete their 42 credit hour General Education at other colleges and universities in Missouri are considered to have satisfied Central's 42 credit hour General Education requirement embodied in Divisions I and II. Transfer students, however, still must complete Central's Additional Institutional Requirements listed in Divisions III and IV of the General Education Program.
6. Courses taken to fulfill General Education requirements may not be taken on the Pass/Fail basis, but students who have fulfilled all General Education requirements in a specific area may elect to take additional General Education courses in the same area on the Pass/Fail basis.

Central Missouri State University CBHE General Education Reporting Matrix

State-Level Goals SKILL AREAS	Institutional Competencies	Course(s) and Credit Hours
Communicating		
To develop students' effective use of the English language and quantitative and other symbolic systems essential to their success in school and in the world. Students should be able to read and listen critically and to write and speak with thoughtfulness, clarity, coherence, and persuasiveness.	1. Apply the criteria of effective communication to assess the communication of self and others.	Agri 2130 (3) Comm 1000 (3) Engl 1020 (3)
	2. Conceive of writing as a recursive process that involves many strategies, including generating material, evaluating sources when used, drafting, revising, and editing.	Engl 1030 (3) Engl 1080 (6) Engl 2200 (3) Engl 2205 (3) Engl 2210 (3)
	3. Make formal written and oral presentations with consistent effectiveness.	Engl 2215 (3) Engl 2220 (3) Hist 1350 (3)
	4. Adapt language and communication strategies to a variety of situations.	Hist 1351 (3) Modern Languages
	5. Employ various organizational structures in a variety of communications.	Chin 1701 (3) Fren 1201 (3) Ger 1301 (3)
	6. Adapt communication to a variety of audiences.	Span 1601 (3) Mus 1210 (3)
	7. Communicate effectively in groups by listening, reflecting, and responding appropriately and in context.	Mf&C 1012 (2) Thea 1100 (3) Thea 2400 (3) WS 2000 (3)
	8. Identify the meaning of quantitative data, such as numbers, graphs, and charts, in a communication.	
	9. Employ quantitative data in communicating.	
Higher-Order Thinking		

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To develop students' ability to distinguish among opinions, facts, and inferences; to identify underlying or implicit assumptions; to make informed judgments; and to solve problems by applying evaluative standards.

1. Recognize that complexity, ambiguity, and uncertainty are persistent human conditions.	Anth 1810	(3)
	BE&O 1210	(2)
	Biol 1004	(4)
2. Identify, develop, implement and evaluate alternative problem-solving strategies for a particular context.	Chem 1103	(3)
	Chem 1104	(4)
	Comm 1000	(3)
3. Employ both induction and deduction and manipulate quantitative and qualitative evidence to study relationships.	Comm 3000	(3)
	Econ 1010	(3)
	Engl 2200	(3)
	Engl 2205	(3)
4. Evaluate the strength of another's and one's own thinking in various contexts and disciplinary frameworks by recognizing unstated assumptions, ideological biases, stereotypes, inconsistencies, reasoning fallacies, irrelevancies, governing paradigms, and other factors.	Engl 2210	(3)
	Engl 2215	(3)
	Engl 2220	(3)
	Geog 2212	(3)
	Geog 3201	(3)
	Hist 1350	(3)
	Hist 1351	(3)
	Hist 2402	(3)
	LIS 1600	(2)
5. Assess the reliability, validity, and adequacy of evidence, for example by employing standards of measurement, sampling, and alternative hypotheses in evaluating analyses and interpretations of studies.	Math 1111	(3)
	Math 1150	(4)
	Math 1620	(3)
	Phil 1000	(3)
	Phys 1103	(3)
	Phys 1104	(3)
	PolS 1500	(3)
6. Defend conclusions using relevant evidence and reasoned argument.	PolS 1510	(3)
	PolS 3522	(3)
7. Assess one's own problem-solving process.	Psy 1100	(3)
	T&OE 2000	(3)

Managing Information

To develop students' abilities to locate, organize, store, retrieve, evaluate, synthesize, and annotate information from print, electronic, and other sources in preparation for solving problems and making informed decisions.

1. Access and/or generate information from a variety of sources, including the most contemporary technological information services.	BE&O 1210	(2)
	Chem 1103	(3)
	Chem 1104	(4)
	EaSc 1004	(4)
	Engl 1020	(3)
2. Evaluate information for its currency, usefulness, truthfulness, and accuracy.	Engl 1030	(3)
	Engl 1080	(6)
	LIS 1600	(2)
3. Use appropriate technology to organize, store, and retrieve information effectively.	Phys 1103	(3)
	Phys 1104	(3)
	T&OE 2000	(3)
4. Reorganize information for an intended purpose, such as research projects.		
5. Present information clearly and concisely, using traditional and contemporary technologies, while avoiding plagiarism.		

Valuing

To develop students' abilities to understand the moral and ethical values of a diverse society and to understand that many courses of action are guided by value judgments about the way things ought to be. Students should be able to make informed decisions through identifying personal values and the values of others and through understanding how such values develop. They should be able to analyze the ethical implications of choices made on the basis of these values.

1. Compare and contrast historical and cultural ethical perspectives and belief systems.	Agri 2130 Anth 1820 Biol 1003	(3) (3) (3)
2. Utilize cultural, behavioral, historical, and scientific knowledge to clarify and articulate a personal value system.	Biol 1004 Comm 3000 EdCI 2110 Mf&C 1012	(4) (3) (3) (2)
3. Assess the alternatives and the consequences of various value judgments and their implications for individuals and groups.	Modern Languages Chin 1701 Fren 1201 Ger 1301	(3) (3) (3) (3)
4. Recognize conflicts within and between value systems and recognize and analyze ethical issues as they arise in a variety of contexts.	Span 1601 Mus 1210 Mus 1225 Phil 1000 PoIS 3522	(3) (3) (3) (3) (3)
5. Consider multiple perspectives, recognize biases, deal with ambiguity, and take a reasonable position.	Rel 1510 Soc 1800	(3) (3)

**State-Level Goals
KNOWLEDGE AREAS**

Institutional Competencies

Course(s) and Credit Hours

Social & Behavioral Sciences

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To develop students' understanding of themselves and the world around them through study of content and the processes used by historians and social and behavioral scientists to discover, describe, explain, and predict human behavior and social systems. Students must understand the diversities and complexities of the cultural and social world, past and present, and come to an informed sense of self and others. (Students must fulfill the state statute requirements for the United States and Missouri constitutions.)

1. Explain social institutions, structures, and processes across a range of historical periods and cultures.	Agri 2130 Anth 1820 BE&O 1210 Econ 1010	(3) (3) (2) (3)
2. Develop and communicate hypothetical explanations for individual human behavior within the large-scale historical and/or social context.	EdCI 2110 Geog 2212 Geog 3201 Hist 1350 Hist 1351	(3) (3) (3) (3) (3)
3. Draw on history and/or the social sciences to evaluate contemporary problems.	Hist 2402 LIS 1600 Mf&C 1012	(3) (2) (2)
4. Describe and analytically compare social, cultural, and historical settings and processes other than one's own.	Mus 1225 PoIS 1500 PoIS 1510 PoIS 3522	(3) (3) (3) (3)
5. Articulate the interconnectedness of people and places around the globe.	Psy 1100 Soc 1800 WS 2000	(3) (3) (3)
6. Describe and explain the constitutions of the United States and Missouri.		

Humanities & Fine Arts

To develop students' understanding of the ways in which humans have addressed their condition through imaginative work in the humanities and fine arts; to deepen their understanding of how that imaginative process is informed and limited by social, cultural, linguistic, and historical circumstances; and to appreciate the world of the creative imagination as a source of knowledge.

1. Describe the scope and variety of works in the humanities and/or fine arts.	Art 1800 Comm 1000 Comm 3000	(3) (3) (3)
2. Explain the historical, linguistic, stylistic, cultural, and/or social contexts of the humanities and/or fine arts.	Engl 2200 Engl 2205 Engl 2210 Engl 2215 Engl 2220	(3) (3) (3) (3) (3)
3. Identify the aesthetic values used to make critical judgments in various artistic fields.	Modern Languages Chin 1701 Fren 1201 Ger 1301 Span 1601	(3) (3) (3) (3) (3)
4. Form, communicate, and defend a response based upon aesthetic values to works in the humanities and/or fine arts.	Mus 1210 Rel 1510 Thea 1100 Thea 2400	(3) (3) (3) (3)
5. Identify the creative processes of artists in the visual, literary, and/or performing arts.		

Mathematics

<p>To develop students' understanding of fundamental mathematical concepts and their applications. Students should develop a level of quantitative literacy that would enable them to make decisions and solve problems and which could serve as a basis for continued learning. (The mathematics requirement for general education should have the same prerequisite(s) and level of rigor as college algebra.)</p>	1. Recognize and/or describe the cultural, historical, and/or scientific contributions of mathematics to society.	Math 1111	(3)
	2. Recognize and use connections within mathematics and between mathematics and other disciplines.	Math 1150	(4)
	3. Create and interpret graphs and tables.	Math 1620	(3)
	4. Use generalizations based upon pattern recognition.		
	5. Apply various mathematical models, techniques, and reasoning to solve problems.		

Life & Physical Sciences

<p>To develop students' understanding of the principles and laboratory procedures of life and physical sciences and to cultivate their abilities to apply the empirical methods of scientific inquiry. Students should understand how scientific discovery changes theoretical views of the world, informs our imaginations, and shapes human history. Students should also understand that science is shaped by historical and social contexts.</p>	1. Explain how to use the scientific method and how to develop and test hypotheses in order to draw defensible conclusions.	Anth 1810	(3)
	2. Evaluate scientific evidence and argument.	Biol 1003	(3)
	3. Describe the basic principles of the physical universe.	Biol 1004	(4)
	4. Describe concepts of the nature, organization, and evolution of living systems.	Chem 1103	(3)
	5. Explain how human choices affect the earth and living systems.	Chem 1104	(4)
		EaSc 1004	(4)
		Phys 1103	(3)
		Phys 1104	(3)
		T&OE 2000	(3)

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GENERAL EDUCATION PROGRAM

Some General Education selections listed on these pages may be limited by major/minor choice. Check the major/minor listing in the catalog for specific General Education requirements within the major/minor.

NOTE: The following three requirements must be completed to fulfill University requirements for graduation. These can be met by making careful selections in the General Education sections listed below.

1. Each student must take a course in fine arts (ART 1800, MUS 1210 or THEA 2400) in Div. II Area C, Part 2.*
2. Each student must take a history course in Div. II Area B or D (HIST 1350, HIST 1351, or HIST 2402). #
3. Each student must take a course (HIST 1350, HIST 1351, or POLS 1510) to fulfill state law requirements, Section 170.011 RSMO Supp (1988). +

Division I Intellectual Skills 12

Area A: Written Communication - 6 credit hours

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	6

Area B: Oral Communication - 3 credit hours

Choose one course from the following:

Comm 1000	Public Speaking	3
Thea 1100	Oral Interpretation	3

Area C: Mathematical Reasoning - 3 credit hours

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 30

Each student must take a course in fine arts (prefix 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: Part I - Life and Physical Sciences - 7 credit hours

Choose any 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)	3

Area A: Part II - Technology - 2-3 credit hours

Choose one technology course from the following:

BE&O 1210	Essentials of Managing Info.	2
LIS 1600	Information Resources	2
Mf&C 1012	Global Production Technology	2
T&OE 2000	Technology and Change	3

Area B: Social and Behavioral Sciences - 9 credit hours

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, §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 US to 1877	3
+ #Hist 1351	History of the US from 1877	3
PoIS 1500	Introduction to Political Science	3
+ PoIS 1510	American Government	3
Psy 1100	General Psychology	3
Soc 1800	General Sociology	3

Area C: Humanities and Fine Arts - 9 credit hours

Choose one literature course from the following:

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

Div. II Area C Continued

Choose two courses from the following, one of which must be Art, Music or Theatre.

Art 1800	Ideas and the Visual Arts	3
Comm 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 Civilization	3
Any Modern (Foreign) Language: Fren, Ger, Span, Chin		3

Area D: Cultural Interaction - 3 credit hours

Choose one course from the following:

Agri 2130	Global Agriculture	3
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Anth	1820	Cultural Anthropology	3
EdCl	2110	World Diversity and America . . .	3
Geog	3201	The Cultural Landscape	3
# Hist	2402	History of the Modern World . . .	3
Mus	1225	Music of World's Cultures	3
PolS	3522	Modern East Asia	3
WS	2000	Race, Class, and Gender	3

Additional Institutional Requirements		
Division III Personal Interaction 3		
Choose 3 hours from the following:		
CFD	1010	Indiv. & Family Relationships 3
Comm	3010	Interpersonal Communication 3
HEd	1100	Personal Health 3
PE	1203	Aerobic Conditioning 1
PE	1204	Stress Management 1
PE	1206	Lifetime Fitness 3
PE	2200	Weight Training 1
Phil	2300	Ethics 3
Psy	1320	Psych. of Personal Adjustment 3
Division IV Integrative Studies 3		
Each student must take a course in Integrative Studies which may be specified in major program or choose from Div. IV Area A. To enroll in a course for Div. IV Area 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 General Education Core courses, including a course from each core area. Any additional prerequisites are listed per course.		
Area A: General Integrative Studies Courses		
IGen	3116	Creative Problem Solving 3
IGen	3224	Critical Thinking 3
IGen	3232	Media Literacy 3
IGen	3468	Community, School & Family Connections 3
IGen	3472	Sports in American Life 3
IGen	3896	Assessing Global Change for the Information Age 3
IGen	4224	Comm., Science & Tech. 3
IGen	4231	Myth, Memory & Realities 3
IGen	4234	Arts: An Integrated Approach 3
IGen	4235	Cognitive Science 3
IGen	4236	Science and Religion: From Conflict to Dialogue 3
IGen	4244	Comp. Cross-Cultural Cinema 3
Area B: Capstone Integrative Studies Courses offered by student's major department		
ICap	4101	Agricultural Capstone Exper. 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 Management 3
ICap	4115	Safety & Health Management 3
ICap	4221	Artists in Contemporary Soc. 3
ICap	4222	The Biology Perspective 3
ICap	4225	Computer Science Capstone Experience 3
ICap	4233	Scientific, Hist. & Sociological Impact of Mathematics 3
ICap	4245	Actuarial Science Capstone Experience 3
ICap	4357	Business Policy 3

THE HONORS COLLEGE

The Honors College offers an academic program specifically designed to enhance the educational experience of highly able and/or exceptionally motivated undergraduate students. The Honors College 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 College provides a stimulating academic environment within which gifted students can nurture their talents.

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

All applicants must complete an application and arrange to have college and high school transcripts forwarded. For application material and information regarding admission requirements and benefits, interested students should contact the Dean of The Honors College, Library 1450, 660-543-4633.

Some of the present features of The Honors College include:

- Early enrollment
- Research Grants
- Course overload privilege
- Transcript recognition.

The Honors College Program

Division I Intellectual Skills 12

Area A: Written Communication - 6 credit hours

Engl	1080	Advanced Composition	3
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Students in The Honors College 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 credit hours

Choose one course from the following:

Comm	1000	Public Speaking	3
Thea	1100	Oral Interpretation	3

Area C: Mathematical Reasoning - 3 credit hours

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 30

Area A: Part I - Life and Physical Sciences - 7 credit hours

Students in The Honors College choose two courses with different prefixes one of which must have a laboratory component. Students may choose the courses listed in the regular General Education Program or may substitute higher level courses in the appropriate prefix categories to fulfill this requirement with approval of the Dean of The Honors College.

Area A: Part II - Technology - 2-3 credit hours

Choose one technology course from the following:

BE&O	1210	Essentials of Managing Info.	2
LIS	1600	Information Resources	2
Mf&C	1012	Global Production Technology	2
T&OE	2000	Technology and Change	3

Area B: Social and Behavioral Sciences - 9 credit hours

Hist	1350	History of U.S. to 1877	3
-OR-			
Hist	1351	History of U.S. from 1877	3

Students in The Honors College may choose two additional courses from the courses listed in the regular General Education Program or may substitute higher level courses in the appropriate prefix categories to fulfill this requirement with approval of the Dean of The Honors College

Area C: Humanities and Fine Arts - 9 credit hours

Literature – 3 credit hours
 Students in The Honors College may choose one of the courses listed in the regular General Education Program or may substitute a higher level course to fulfill this requirement with the approval of the Dean of The Honors College.

Modern (Foreign) Language --6 credit hours
 Students in The Honors College are required to take two modern language courses of a single foreign language.

Area D: Cultural Interaction - 3 credit hours

Students in The Honors College may choose one of the courses listed in the regular General Education Program or may substitute a higher level course in the appropriate prefix category to fulfill this requirement with approval of the Dean of The Honors College.

Additional Institutional Requirements	
Division III Personal Interaction 2	
Honr 3000	Honors Colloquium 2
<p>A multidimensional course, the content of which may vary with each offering; required of and open only to members of The Honors College. <i>May be repeated for a maximum of 6 semester hours.</i> Prerequisite: junior standing or approval by the Dean of the Honors College.</p>	
Division IV Integrative Studies 4	
Honr 4000	Honors Project* 4
<p>A research study or creative project entailing independent work, which is required of and only open to members of The Honors College. Prerequisite: senior standing or approval by the Dean of the Honors College. *Not available for graduate credit.</p>	

Policies Governing The Honors College Program

1. Each participant in The Honors College will be required to conform to the policy guidelines of The Honors College and the General Education Program. Suitable course electives consist of those courses permitted on the major/minor programs or in the General Education Program requirements. Any exceptions or departures will require the approval of the Dean of The Honors College.
2. Elementary education functional majors and elementary special education functional majors must include Engl 1080, Hist 1350 or Hist 1351, Modern Languages, Honr 3000 and Honr 4000 in The Honors College Program. All other requirements of The Honors College Program are fulfilled by the requirements of those majors in conformity with the policies of the General Education Program.

For more information contact: The Honors College, James C. Kirkpatrick Library 1450, Central Missouri State University, Warrensburg, MO 64093, 660-543-4633.

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 General Education 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 Assistant Provost for Undergraduate Studies. 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.

DEGREE IN LIBERAL STUDIES

Students wishing to pursue a Bachelor of Arts in Liberal Studies (42 000601) or a Bachelor of Science in Liberal Studies (43 000600) should request information about the degree from the Office of Academic Advisement (Ward Edwards 1100). Such a degree may cross several disciplines; however, all General Education and other degree requirements must be met. The student will submit his or her program through Academic Advisement to the Assistant Provost for Undergraduate Studies for approval.

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.

Buckinghamshire Chilterns University College, outside London, England. BCUC offers Central students an opportunity to study close to London and is particularly appropriate for students majoring in Drama and Theatre. A variety of other academic options are available including business, criminology, aviation and computer science.

Budapest University, Budapest, Hungary. Agreements have been signed which 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 fees and room and board at Central and 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.

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.

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.

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, communications and hotel and restaurant management.

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

Oslo University College, Oslo, Norway.

This direct exchange program allows Central students in teacher education, business, and literature to attend one of the leading institutions in Norway. Additional courses taught in English are being added each year.

UNITEC, Auckland, New Zealand. This university of about 16,000 students offers programs in architecture and design, arts and

sciences, business, health and environmental sciences and applied technology. Students should be aware of the southern hemisphere academic schedule.

University of Central Lancashire, Preston, England. The similarity of degree programs between our institutions provides a perfect framework for exchange activities. In addition to more traditional degree offerings, Central Lancashire offers unique programs in fire science, deaf studies, jewelry making and the sport sciences.

University of Glamorgan, outside Cardiff, South Wales. Exchanges are primarily for communications, criminal justice, 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.

University of Technology, Sydney, Australia. A wide selection of courses are available at one of Australia's top technology-based institutions of higher learning. Students are encouraged to apply early due to the high demand for a limited number of placements.

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. Additional study tours are available each year.

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.

Financial Assistance. An otherwise eligible student is normally permitted to use federal and

state 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 Student Financial Assistance, Administration 104, several months in advance of the scheduled departure date.

LIST OF AVAILABLE PROGRAMS

ACCOUNTING Functional Major, B.S. in Business Administration Degree
 ACTUARIAL SCIENCE AND MATHEMATICS Functional Major, B.S. Degree
 AEROSPACE MANUFACTURING TECHNOLOGY Functional Major, B.S. Degree
 AGRICULTURE-BUSINESS Functional Major, B.S. Degree
 AGRICULTURAL TECHNOLOGY Functional Major, B.S. Degree
 ART Functional Major, B.S. in Ed. Degree
 AUTOMOTIVE/POWER TECHNOLOGY Functional Major, B.S. Degree
 AVIATION TECHNOLOGY, Associate in Science Degree
 AVIATION TECHNOLOGY Functional Major, B.S. Degree
 BIOLOGY Functional Major, B.S. in Ed. Degree
 BIOLOGY Functional Major, B.S. Degree
 BIOLOGY Major, B.A. Degree
 BIOLOGY Major, B.S. Degree
 BROADCASTING AND FILM Major, B.S. Degree
 BUSINESS EDUCATION Functional Major, B.S. in Ed. Degree
 BUSINESS EDUCATION Major, B.S. in Ed. Degree
 CHEMISTRY Functional Major, B.S. in Ed. Degree
 CHEMISTRY Functional Major, B.S. Degree
 CHEMISTRY Major, B.A. Degree
 CHILD AND FAMILY DEVELOPMENT Functional Major, B.S. Degree
 COMMERCIAL ART Functional Major, B.F.A. Degree
 COMMUNICATION Major, B.A. Degree
 COMPUTER-AIDED DRAFTING AND DESIGN TECHNOLOGY Functional Major, B.S. Degree
 COMPUTER INFORMATION SYSTEMS Functional Major, B.S. in Business Administration Degree
 COMPUTER SCIENCE AND MATHEMATICS Functional Major, B.S. Degree
 CONSTRUCTION MANAGEMENT Functional Major, B.S. Degree
 COOPERATIVE ENGINEERING 3-2 Functional Major, B.A. Degree
 CRIMINAL JUSTICE Major, B.S. Degree
 CRISIS & DISASTER MANAGEMENT Major, B.S. Degree
 DIETETICS Functional Major, B.S. Degree
 EARTH SCIENCE Functional Major, B.S. in Ed. Degree
 EARTH SCIENCE Major, B.A. Degree
 ECONOMICS Major, B.A. Degree
 ECONOMICS Major, B.S. Degree
 ELECTRONICS ENGINEERING TECHNOLOGY Functional Major, B.S. Degree
 ELECTRONICS TECHNOLOGY Functional Major, B.S. Degree
 ELEMENTARY EDUCATION Functional Major, B.S. in Ed. Degree
 ENGLISH Functional Major, B.S. in Ed. Degree
 ENGLISH Major, B.A. Degree
 ENGLISH Major, B.S. in Ed. Degree
 FASHION: TEXTILES AND CLOTHING IN BUSINESS Functional Major, B.S. Degree
 FINANCE Functional Major, B.S. in Business Administration Degree
 FRENCH Major, B.A. Degree
 FRENCH Major, B.S. in Ed. Degree
 FRENCH Major, B.S. Degree
 GENERAL RECREATION Major, B.S. Degree

62 Options

GEOGRAPHY Major, B.A. Degree
GEOGRAPHY Major, B.S. Degree
GEOLOGY Functional Major, B.S. Degree
GRAPHIC ARTS TECHNOLOGY-MANAGEMENT Functional Major, B.S. Degree
HISTORY Major, B.A. Degree
HISTORY Major, B.S. Degree
HOTEL AND RESTAURANT ADMINISTRATION Functional Major, B.S. Degree
INDUSTRIAL TECHNOLOGY Functional Major, B.S. Degree
INDUSTRIAL TECHNOLOGY Major, B.S. Degree
INDUSTRIAL TECHNOLOGY-MANUFACTURING MANAGEMENT Functional Major, B.S. Degree
INTERIOR DESIGN Functional Major, B.F.A. Degree
JOURNALISM Major, B.S. Degree
MANAGEMENT Functional Major, B.S. in Business Administration Degree
MARKETING Functional Major, B.S. in Business Administration Degree
MATHEMATICS Functional Major, B.S. in Ed. Degree
MATHEMATICS Major, B.A. Degree
MATHEMATICS Major, B.S. in Ed. Degree
MATHEMATICS Major, B.S. Degree
MEDICAL TECHNOLOGY Functional Major, B.S. Degree
MIDDLE SCHOOL-JUNIOR HIGH SCHOOL Major, B.S. in Ed. Degree
MUSIC EDUCATION Functional Major, B.M.E. Degree
MUSIC Functional Major, B.M. Degree
MUSIC Major, B.A. Degree
NURSING Functional Major, B.S. Degree
OCCUPATIONAL EDUCATION Functional Major, B.S. Degree
OCCUPATIONAL SAFETY AND HEALTH Functional Major, B.S. Degree
ORGANIZATIOANL COMMUNICATION Major, B.S. Degree
PHOTOGRAPHY Major, B.S. Degree
PHYSICAL EDUCATION Functional Major, B.S. Degree
PHYSICS Functional Major, B.A. Degree
PHYSICS Functional Major, B.S. in Ed. Degree
PHYSICS Functional Major, B.S. Degree
POLITICAL SCIENCE Major, B.A. Degree
POLITICAL SCIENCE Major, B.S. Degree
PSYCHOLOGY Major, B.A. Degree
PSYCHOLOGY Major, B.S. Degree
PUBLIC RELATIONS Major, B.S. Degree
SAFETY MANAGEMENT Major, B.S. Degree
SECONDARY EDUCATION B.M.E. Degrees
SECONDARY EDUCATION B.S. in Ed. Degrees
SOCIAL STUDIES Functional Major, B.S. in Ed. Degree
SOCIAL WORK Functional Major, B.S.W. Degree
SOCIOLOGY Major, B.A. Degree
SOCIOLOGY Major, B.S. Degree
SOCIOLOGY Functional Major, B.S. Degree
SPANISH Major, B.A. Degree
SPANISH Major, B.S. in Ed. Degree
SPANISH Major, B.S. Degree
SPECIAL EDUCATION Functional Major, B.S. in Ed. Degree
SPEECH COMMUNICATION AND THEATRE Major, B.S. in Ed. Degree
SPEECH COMMUNICATION Major, B.A. Degree
SPEECH COMMUNICATION Major, B.S. Degree
SPEECH PATHOLOGY Functional Major, B.S. Degree
STUDIO ART Functional Major, B.F.A. Degree

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

THEATRE Functional Major, B.F.A. Degree

THEATRE Major, B.A. Degree

TOURISM Major, B.S. Degree

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

VOCATIONAL FAMILY AND CONSUMER SCIENCES Functional Major, B.S. in Ed. Degree

PREFIXES FOR COURSES

Acct -Accounting	Mf&C -Manufacturing and Construction
AE -Academic Enrichment	Mgt -Management
Agri -Agriculture	Mkt -Marketing
AMT -Aerospace Manufacturing Technology	ML -Modern Languages
Anth -Anthropology	MS -Military Leadership
Art -Art	Mus -Music
A&S -Arts and Sciences	Nur -Nursing
BE&O -Business Education and Office Information	PE -Physical Education
Biol -Biology	Phil -Philosophy
BLaw -Legal Studies	Phys -Physics
CD -Communication Disorders	PolS -Political Science
CDM -Crisis and Disaster Management	Pr&T -Power and Transportation
CFD -Child and Family Development	Psy -Psychology
Chem -Chemistry	Rec -Recreation
Chin -Chinese	Rel -Religious Studies
CIS -Computer Information Systems	RSET -Railway Signal Engineering Technology
CJ -Criminal Justice	Soc -Sociology
Comm -Communication	SoSc -Social Science
Coun -Counselor Education	SoWk -Social Work
CS -Computer Science	Span -Spanish
CSM -Consumer Services Management	SS&T -Safety Science
D&N -Dietetics and Nutrition	Thea -Theatre
EaSc -Earth Science	T&OE -Technology and Occupational Education
Econ -Economics	Tour -Tourism
EdAd -School Administration and Higher Education	TR -Therapeutic Recreation
EdCl -Curriculum and Instruction	WS -Women's Studies
EdSp -Special Education	
Engl -English	
ET -Electronics Technology	
FACS -Family and Consumer Sciences	
FAMe -Fashion and Apparel Merchandising	
Fin -Finance	
Food -Food	
Fren -French	
Geog -Geography	
Ger -German	
Grap -Graphics	
Hed -Health Education	
Hist -History	
HM -Hospitality Management	
Honr -Honors	
HRM -Human Resource Management	
ICap -Capstone Integrative Studies	
IEP -Intensive English Program	
IGen -General Integrative Studies	
IndM -Industrial Management	
InsT -Instructional Technology	
LIS -Library Science and Information Services	
MART -Mid-America Railway Technologies	
Math -Mathematics	

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 TECHNOLOGY Functional Major, B.S. Degree

(43 000209)

The graduate with a Bachelor of Science degree in Agricultural Technology will use the knowledge and skills obtained in the program to:

- Use language and concepts of agriculture effectively in written and oral communications
- Demonstrate computer literacy
- Demonstrate an understanding of theories and principles of economics and agri-business appropriate to the agricultural firm
- Demonstrate an understanding of the basic practices and theory of agricultural production (agricultural literacy)
- Provide evidence of an international-global perspective of agriculture
- Demonstrate appropriate and effective social interactions
- Demonstrate ability to analyze situations and solve problems in an agricultural context

				Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS				75	
Agri	2010	Computer Applications for Agriculturists	3	Agri 3610 Agricultural Insect Control	3
Agri	1100	Introduction to Agriculture	1	Chem 2650 Elem. Organic & Biochemistry ..	5
Agri	3140	Agri. Analysis & Statistics	3	Econ 1011 Principles of Microeconomics	3
Agri	1200	Agriculture Mechanics	3	Agri 1310 Agronomy I: Row Crops, 2 or	
Agri	1300	Introductory Plant Science	1	Agri 2315 Agronomy II: Forages, 2	2
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	Introductory Horticulture Science	3	Area 3 Horticultural Technology	
Agri	1610	Establishment & Care of Greenhouse Plants	3	Area 4 Agricultural Mechanization	
				List of electives available from Chair, Department of	
				Agriculture.	
MINOR NOT REQUIRED					
GENERAL EDUCATION REQUIREMENTS (page 48)				48	
Comm	1000	Div. I B (required)	3	Agri 2130 Div. II D (required)	3
Math	1111	Div. I C (required)	3	ICap 4101 Div. IV B (required)	3
Chem	1104	Div. II A (required)	4		
FREE ELECTIVES				1	
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	Econ 1011 Principles of Microeconomics	3
Agri	1300	Introductory Plant Science	1	Agri 1200 Agriculture Mechanics, 3 or	
Agri	1310	Agronomy I: Row Crops	2	Agri 3200 Farm Power & Machinery, 3	3
Agri	2330	Introduction to Soil Science	3	Agri 1600 Introductory Horticulture Science, 3 or	
Agri	1420	Animal Husbandry	3	Agri 1610 Establishment & Care of	
Chem	1104	Intro. to the Sciences: Chemistry	4	Greenhouse Plants, 3	3

GENERAL EDUCATION REQUIREMENTS (page 48) (In the minor, Chem 1104 fulfills 4 s.h. of Div. II A)

AGRICULTURE-BUSINESS Functional Major, B.S. Degree
(43 000111)

The graduate with a Bachelor of Science degree in Agriculture- Business will use the knowledge and skills obtained in the program to:

- Use language and concepts of agricultural business effectively in written and oral communications
- Demonstrate computer literacy
- Demonstrate an understanding of theories and principles of economics and agri-business appropriate to the agri-business firm
- Demonstrate an understanding of the basic practices and theory of agricultural production (agricultural literacy)
- Provide evidence of an international-global perspective of agriculture
- Demonstrate appropriate and effective social interactions
- Demonstrate ability to analyze situations and solve problems in an agri-business context
- Demonstrate a knowledge of how national and international policies impacting agriculture are developed.

				Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS				74	
Agri	2010	Computer Applications for Agriculturists	3	Agri 2425 Livestock Evaluation	3
Agri	1100	Introduction to Agriculture	1	Agri 3420 Animal Nutrition	3
Agri	2110	Agricultural Records	3	Agri 1600 Introductory Horticulture Science	3
Agri	2120	Agricultural Cooperatives	1	Agri 4820 Agricultural Safety	3
Agri	3110	Agri-Business Management	3	Acct 2101 Principles of Financial Acct.	3
Agri	3120	Dist. & Mktg. Agri. Products	3	Econ 1011 Principles of Microeconomics ...	3
Agri	3140	Agri. Analysis & Statistics	3	Econ 3030 Intermediate Microeconomics ...	3
Agri	4110	Agricultural Futures Trading	3	Mkt 3430 Personal Selling	3
Agri	4120	International Agriculture	3	Blaw 2720 Legal Environment of Business ...	3
Agri	4140	Agricultural Policy	3	Agri 1200 Agriculture Mechanics, 3 or	
Agri	4150	Natural Resource Econ. for Agri.	3	Agri 3200 Farm Power & Machinery, 3	3
Agri	1300	Introductory Plant Science	1	Agri 1310 Agronomy I: Row Crops, 2 or	
Agri	2330	Introduction to Soil Science	3	Agri 2315 Agronomy II: Forages, 2	2
Agri	2331	Soils	3	Agri 4340 Agri. Sprays & Chemicals, 3 or	
Agri	1420	Animal Husbandry	3	Agri 3610 Agricultural Insect Control, 3	3
MINOR NOT REQUIRED					
GENERAL EDUCATION REQUIREMENTS (page 48)				48	
Comm	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. IV B (required)	3
FREE ELECTIVES				2	
MINIMUM TOTAL				124	

VOCATIONAL AGRICULTURE EDUCATION Functional Major, B.S. in Ed. Degree
(Certification to teach vocational agriculture education in grades 9-12)
(41 000112)

The graduate with a Bachelor of Science in Education degree in Vocational Agriculture Education will use the knowledge and skills obtained in the program to:

- Understand the components of a complete secondary agriculture program including the essentials of a successful FFA chapter and an adult agricultural education program
- Formulate strategies and tools to use in planning a local agricultural education program to address local, state, national, and international needs
- Apply the Missouri State Standards and Quality Indicators for agriculture program improvement
- Distinguish methods of developing successful partnerships using community resources and successfully marketing an agricultural education program
- Demonstrate computer literacy
- Provide evidence of an international-global perspective of agriculture
- Use language and concepts of agriculture effectively in written and oral communications
- Demonstrate ability to analyze situations and solve problems in an agricultural context
- Demonstrate an understanding of the basic practices and theory of agricultural production (agricultural literacy)
- Demonstrate appropriate and effective social interactions.

(Continued on next page)

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				Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS				53	
Agri	2010	Computer Applications for Agriculturalists	3	Agri 3420 Animal Nutrition	3
Agri	1100	Introduction to Agriculture	1	Agri 1600 Introductory Horticulture Science ..	3
Agri	3110	Agri-Business Management	3	Agri 4820 Agricultural Safety	3
Agri	3120	Dist. & Mktg. Agri. Products	3	Agri 4900 Planning & Conducting Programs in Agricultural Education	3
Agri	1200	Agriculture Mechanics	3	Agri 4910 Agri. Occupations Exper. Prog. ...	2
Agri	3200	Farm Power & Machinery	3	Agri 4920 Agri. Mechanics in Agri. Ed.	2
Agri	1300	Introductory Plant Science	1	Econ 1011 Principles of Microeconomics ...	3
Agri	1310	Agronomy I: Row Crops	2	Biol 1004 Intro. to the Sciences: Ecology ...	4
Agri	2315	Agronomy II: Forages	2	Agri 4430 Animal Science: Beef, 3 or	
Agri	2330	Introduction to Soil Science	3	Agri 4435 Animal Science: Pork, 3	3
Agri	1420	Animal Husbandry	3		
MINOR NOT REQUIRED					
GENERAL EDUCATION REQUIREMENTS (page 48)--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	PoS 1510 Div. II B (required)	3
Chem	1104	Div. II A (required)	4	Agri 2130 Div. II E (required)	3
Hist	1350	Div. II B or		Psy 4230 Psy. of Adolescence	3
Hist	1351	Div. II B (required)	3	ICap 4101 Div. IV 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 205)				28	
Agri	4930	Methods of Teaching Voc. Agri.	3	Agri 4940 Secondary Field Exp. II	2
MINIMUM TOTAL				126	

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 2010 Computer Applications for Agriculturalists (3) Understanding and using computers to define, analyze, and solve agricultural problems. Topics include descriptive statistics, farm budgets, decision models, information retrieval and agri-marketing techniques.

Agri 4000 Special Projects in Agriculture (1-6) 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. Prerequisite: Econ 1011.

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 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. Prerequisites: Econ 1011; Agri 2010 or concurrently; Math 1111 or concurrently.

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 and Agri 2010.

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 2010 and Agri 3120.

Agri 4120 International Agriculture (3) Economic, cultural, governmental and environmental factors which influence agricultural production and trade among countries. Prerequisites: Agri 2130 and Agri 3120.

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.

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. An additional fee is associated with this course.

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.

Agronomy

Agri 1300 Introductory Plant Science (1) Emphasis on the structure/function relationships of anatomy, morphology, and physiology of horticultural and agronomic crops.

Agri 1310 Agronomy I: Row Crops (2) Principles and practices in cereal crop production. Prerequisite: Agri 1300.

Agri 2315 Agronomy II: Forages (2) Principles and practices of forage crop production. Prerequisite: Agri 1300

Agri 2330 Introduction to Soil Science (3) Chemical and physical properties of soils. Prerequisite: Chem 1104. An additional fee is associated with this course.

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; Agri 1310 or Agri 2315. An additional fee is associated with this course.

Agri 4320 Agricultural Plant Diseases (3) Agricultural plant diseases with emphasis on recognition and control. Prerequisites: Agri 1600; 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 1310 or Agri 2315.

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

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.

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

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

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 Introductory Horticulture Science (3) A general survey dealing with the home garden and orchard; principles of landscape art and plant propagation. Prerequisite: Agri 1300. An additional fee is associated with this course

Agri 1610 Establishment and Care of Greenhouse Plants (3) Identifying, establishing, maintaining, harvesting and displaying greenhouse plants. An additional fee is associated with this course.

Agri 3610 Agricultural Insect Control (3) Insect control with emphasis on recognition of destructive forms, general principles of insect habits and classification. An additional fee is associated with this course.

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. An additional fee is associated with this course.

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 1112. An additional fee is associated with this course.

Agri 4610 Turfgrasses (3) Selection, identification, establishment and maintenance of turfgrasses. Prerequisites: Biol 1112, Agri 1600 and Agri 2330. An additional fee is associated with this course.

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. Prerequisites: junior standing and Agri 1200 or Agri 3200.

Agri 4900 Planning and Conducting Programs in Agricultural Education (3) Development and organization of vocational agriculture programs at the secondary level to meet the needs of local schools and community.

Agri 4910 Agricultural Occupations Experience Programs (2) Understandings and competencies required to establish, administer, and evaluate supervised agricultural occupational experience programs. Prerequisite: Agri 4900.

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 4900.

Agri 4930 Methods of Teaching Vocational Agriculture* (2) Prerequisites: admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with Agri 4940 during the Professional Semester. *Not available for graduate credit

Agri 4940 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 Agri 4930 during the Professional semester. *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. *Not available for graduate credit.

Aviation Technology

In the Department of Aviation Technology, 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, 5--Aviation Safety.

Department of Aviation Technology Statement of Policy

An Avia 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 Aviation Technology.

AVIATION Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)
(000157)

				Sem. Hours
MINOR REQUIREMENTS				21
Avia	1020	Aeronautics, 2 or	** Approved electives in aviation	17-19
Avia	1310	FAA Private Requirements, 4	**Must include a minimum of 3SH of Upper Division courses.	

AVIATION TECHNOLOGY, Associate in Science Degree

AVIONICS Option, Associate in Science Degree (22 000136)

				Sem. Hours
FIRST YEAR REQUIREMENTS				31
ET	1026	DC Circuit Analysis	T&OE 3060	Technical Report Writing
ET	1027	AC Circuit Analysis	Engl 1020	Composition I
ET	1050	Digital Principles & Applications	Math 1111	College Algebra
ET	2048	Active Electronic Devices	Math 1112	College Trigonometry
Grap	1110	Fundamentals of Drafting	Elective	2

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SECOND YEAR REQUIREMENTS				31
Avia	2230	Aircraft Electrical Systems	ET 2060	Microprocessors: Theory & Appl.
Avia	3260	Aircraft Radio Installation & Oper.	ET 3014	Analog-Digital Circuitry
Avia	3262	Aircraft Com./Navigation Sys.	ET 3041	Communication Systems
Avia	3264	Aircraft Pulse & Related Systems	Hist 1350	History of the U.S. to 1877, 3 or
ET	2058	Operational Amplifiers--Theory & Applications	Hist 1351	History of the U.S. from 1877, 3
MINIMUM TOTAL				62

FLIGHT Option, Associate in Science Degree (22 000160)

				Sem. Hours
FIRST YEAR REQUIREMENTS				32
Pr&T	1010	Power Mechanics	Hist 1350	History of the U.S. to 1877, 3 or
Avia	1310	FAA Private Requirements	Hist 1351	History of the U.S. from 1877, 3 or
Avia	1320	Private Flight A	PolS 1510	American Government, 3
Avia	1321	Private Flight B	Elective from the following	
Avia	3310	Commercial Flight A	Anth 1810	Human Prehistory
Avia	3311	Commercial Flight B	Econ 1010	Principles of Macroeconomics 3
Avia	3325	FAA Instrument Requirements	Geog 2212	World Geography
ET	1010	Applied Electricity	PolS 1500	Intro to Political Science
*Engl	1020	Composition I	Psy 1100	General Psychology
*Engl	1030	Composition II	Soc 1800	General Sociology
Grap	1110	Fundamentals of Drafting		

*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).

SECOND YEAR REQUIREMENTS				29	
Avia	2310	Propulsion Systems	3	Avia 3340 Aircraft Systems & Components	3
Avia	3305	FAA Commercial Requirements	3	T&OE 3060 Technical Report Writing	2
Avia	3312	Commercial Flight C	1	Econ 1010 Principles of Macroeconomics	3
Avia	3313	Instrument Flight A	1	Math 1111 College Algebra	3
Avia	3314	Instrument Flight B	1	EaSc 3114 Meteorology	3
Avia	3315	Commercial Flight D	1	Elective from the following	3
Avia	3316	Commercial Flight E	1	Comm 1000 Public Speaking	3
Avia	3317	Commercial Flight F	1	Thea 1100 Oral Interpretation	3
MINIMUM TOTAL				61	

MAINTENANCE Option, Associate in Science Degree (22 000161)

				Sem. Hours	
FIRST YEAR REQUIREMENTS				35	
*Avia	1200	General Mechanics	3	*ET 1010 Applied Electricity	3
*Avia	1210	Aircraft Recip. Power Plants	3	*Grap 1110 Fundamentals of Drafting	3
*Avia	1255	Basic Airframe Maintenance	3	*Mf&C 1120 Welding	2
*Avia	2230	Aircraft Electrical Systems	3	Engl 1020 Composition I	3
*Avia	3220	Aircraft Engine Testing	3	*Avia 4240 Aircraft Engine Instr. & Syst., 3 or	
*Avia	3230	Aircraft Ignition-Starting Systems	3	Avia 4010 Aerodynamics, 3	3
*Avia	3255	Metal Airframe Processing	3		
SECOND YEAR REQUIREMENTS				35-36	
*Avia	2220	Aircraft Carburetion & Lubrication Systems	4	*Avia 4230 Aircraft Instrument Systems	3
*Avia	3210	Aircraft Hydraulic Systems	3	*T&OE 1040 Technical Mathematics I	3
*Avia	3215	Gas Turbine Engines	3	T&OE 3060 Technical Report Writing	2
*Avia	3225	Propellers & Components	3	Avia 4220 Transport Aircraft Systems, 2 or	
*Avia	3240	Aircraft Air Conditioning & Pressurization Systems	2	*Avia 3250 Complex Aircraft Systems, 3	2-3
*Avia	3260	Aircraft Radio Installation & Oper.	1	*Avia 4080 Nondestructive Insp. & Test., 3 or	
*Avia	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 General Education courses during the summer sessions.

AVIATION TECHNOLOGY Functional Major, B.S. Degree
(43 000159)

The graduate with a Bachelor of Science degree in Aviation Technology will use the knowledge and skills obtained in the program to:

- Research, prepare and present both oral and written reports on technical or management subjects related to his/her area of specialization
- Identify, analyze and solve technical or management problems related to his/her field of specialization
- Function effectively as a participating member of a work group to accomplish a particular goal
- Demonstrate desirable work habits and professional and conscientious attitudes in his/her particular areas of instruction through participation in professional activities and organizations, and leadership activities both in and out of the classroom
- Demonstrate a mastery of skill beyond the entry level related to one or more areas of technical, management or marketing specialities in the major area of study
- Demonstrate technical and general knowledge required in occupational work areas related to the major field of study.

FUNCTIONAL MAJOR REQUIREMENTS				Sem. Hours	
Avia	4010	Aerodynamics	3	Avia 4040 Aviation Management	3
				70-77	

Avia	4500	Aviation Safety	3
Avia	4090	Aviation Law	3
Avia	4420	Air Transportation	3
T&OE	3060	Technical Report Writing	2
Avia	1020	Aeronautics, 2 or	
Avia	1310	FAA Private Requirements, 4	2-4
IndM	4210	Industrial Management, 3 or	
Mgt	3310	Principles of Management, 3	3

Math	1131	Calculus for Business & Econ.	3
Departmentally approved electives from one of the five areas listed below. A listing of courses is available from the Chair of the Department			
45-50			
Area 1 Professional Pilot			
*Area 2 Maintenance Management			
Area 3 Airport Management			
Area 4 Avionics Management			
Area 5 Systems Design Technology			
Area 6 Flight Operations Management			

MINOR NOT REQUIRED

GENERAL EDUCATION REQUIREMENTS (page 48)				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. IV B (required)	3
BE&O	1210	Div. II A (required), 2 or					
LIS	1600	Div. II A (required), 2	2				
FREE ELECTIVES				0-5			
*Students choosing Area 2 will not take FREE ELECTIVES of 0-5, but will take 14 additional semester hours for Airframe and Powerplant certification. This brings the MINIMUM TOTAL to 136-138 hours.							
MINIMUM TOTAL				124			

AEROSPACE MANUFACTURING TECHNOLOGY Functional Major, B.S. Degree

Requirements for this program (offered jointly by the Departments of Power and Transportation and Manufacturing and Construction) are outlined under the Department of Manufacturing and Construction. Courses will be offered through both departments, and students may contact the Chair and/or faculty from either department for information and advice related to the program.

General and Professional

Avia 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.

Avia 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.

Avia 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.*

Avia 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.

Avia 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.

Avia 4045 Airport Management (3) Airport operations and management principles and applications. Personnel, security, budgeting, contracts, maintenance and public relations.

Avia 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.

Avia 4070 Aviation History (3) Major events, people, and changing technologies in the development of the present day air transportation system.

Avia 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 Avia 1200; and ET 1010; or either/both concurrently.

Avia 4090 Aviation Law (3) Legal foundations and the federal and state regulatory functions which influence aviation and those who work in the industry.

Aviation Maintenance

Avia 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.

Avia 1210 Aircraft Reciprocating Power Plants (3) Aircraft reciprocating power plants, construction, operation, overhaul, and engine logs. Laboratory experience in disassembling, cleaning, inspection, and assembling.

Avia 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.

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Avia 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.

Avia 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.

Avia 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.

Avia 1255 Basic Airframe Maintenance (3) Selecting airframe materials, repairing, rigging, and caring for fabric covered airframes. Prerequisite: Mf&C 1120.

Avia 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.

Avia 2230 Aircraft Electrical Systems (3) The theory, operation, and repair of aircraft electrical systems and components.

Avia 3210 Aircraft Hydraulic Systems (3) Theory and practice in the operation, maintenance, and overhaul of hydraulic systems and components.

Avia 3215 Gas Turbine Engines (3) Application, design, construction, operation, and overhaul of gas turbine power plants. Laboratory experiences in disassembling, inspection and assembling.

Avia 3220 Aircraft Engine Testing (3) Theory and practice in installing, trouble shooting, testing, and repairing of aircraft engines.

Avia 3225 Propellers and Components (3) Propellers, governors, and de-icing systems. Inspection, servicing, and overhaul of propellers.

Avia 3230 Aircraft Ignition-Starting Systems (3) Theory and practice in the operation, maintenance, and overhaul of ignition and starting systems and their components.

Avia 3240 Aircraft Air Conditioning and Pressurization Systems (2) Theory and practice with pneumatic, anti-icing, cabin pressurization, and air conditioning systems.

Avia 3250 Complex Aircraft Systems (3) Theory, operation and repair of complex aircraft fuel systems, position and warning systems, ice and rain protection systems. Prerequisite: Avia 2230.

Avia 3255 Metal Airframe Processing (3) Theory and practice in the construction and repair of metal airframes.

Avia 3260 Aircraft Radio Installation and Operation (1) Theory and practice with communication and navigation radio equipment. Prerequisite: Avia 2230.

Avia 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.

Avia 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.

Avia 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. *Not available for graduate credit.

Avia 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: Avia 3340. *Not available for graduate credit.

Avia 4230 Aircraft Instrument Systems* (3) Theory and practice of installing, operating, marking, adjusting, and interpreting aircraft instruments. *Not available for graduate credit.

Avia 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.

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.

Avia 1310 FAA Private Requirements (4) Basic ground school in support of flight training to prepare for the FAA examination for the Private Pilot Certificate. A fee is charged for pilot supplies and ground school materials.

Avia 1320 Private Flight A (1) Increase student's knowledge and experience to operate aircraft in solo flight and night conditions. Third class medical required before class begins. Approximately 20 flight hours required.

Avia 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: Avia 1320.

Avia 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.

Avia 3305 FAA Commercial Requirements (3) Commercial ground school subjects in support of flight

training to prepare for FAA examination for Commercial Pilot Certificate. Prerequisite: Avia 3314.

Avia 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. Prerequisite: Avia 1321 or Private Pilot Certificate.

Avia 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. Prerequisite: Avia 3310.

Avia 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. Prerequisite: Avia 3311.

Avia 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: Avia 3312.

Avia 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: Avia 3313.

Avia 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. Prerequisite: Avia 3314.

Avia 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. Prerequisite: Avia 3315.

Avia 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. Prerequisite: Avia 3316.

Avia 3325 FAA Instrument Requirements (4) Instrument ground school subjects in support of flight training to prepare for FAA examination for instrument rating. Prerequisite: Avia 1321.

Avia 3330 Multi-Engine Certification (1) Classroom and laboratory instruction to provide aeronautical knowledge and skills for multi-engine pilot certification. Prerequisite: Avia 3314.

Avia 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. Prerequisite: Avia 2310.

Avia 3360 Flight Instructor--Airplane (3) Combines classroom and flight laboratory experience to prepare for FAA written examination and flight test for flight instructor rating. Prerequisite: Avia 3317.

Avia 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: Avia 3360.

Avia 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: Avia 3330 and Avia 3360.

Avia 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. Prerequisites: Avia 3317 and Avia 3330.

Avia 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.

Avia 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.

Avia 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.

Avia 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: Avia 3317 and Avia 4220.

Avia 4350 Aviation Weather (3) Meteorology for pilots with information for understanding and interpreting aviation weather reports and forecasts, weather hazards including windshear, turbulence, icing and visibility restrictions. Prerequisite: Avia 1310

Avia 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: Avia 3317.

Transportation

Avia 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.

Avia 4430 Corporate Aviation Management (3) Role, scope and purpose of business aviation. Managerial, administrative and financial business functions related to the use of business aviation aircraft.

Aviation Safety

Avia 4500 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.

Integrative Studies Capstone

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.

Military Leadership

In the Department of Military Leadership, 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 Leadership 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 Leadership.

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 five-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 Leadership.

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 3330, MS 3340, MS 4410, MS 4420, MS 4430, MS 4440 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, 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 Leadership.

MILITARY SCIENCE Minor for a Bachelor's Degree

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

				Sem. Hours
MINOR REQUIREMENTS				29-31
MS	3310	Officership As a Profession	3	MS 4410 Adv. Military Management Systems I
MS	3320	Military Operations & Techniques ...	3	..... 3
MS	3330	Intro. to the Army Physical Fitness	2	MS 4420 Adv. Military Management Systems II
		Program	2	..... 3
MS	3340	Concepts in Fitness Training Dev. ...	2	MS 4430 Mgt. of the Unit Fitness Program 2

MS	4440	The Army Master Fitness Training Program	2
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
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.

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. Prerequisites: MS 1110 or consent of Department Chair.

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 and must be taken concurrently with MS 3330.

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 and MS 3330 and must be taken concurrently with MS 3340.

MS 3330 Introduction to the Army Physical Fitness Program (2) Basic components of fitness and an overview of the principles of exercise.

MS 3340 Concepts in Fitness Training Development (2) Development of the unit physical fitness program with an in-depth analysis of the principles of fitness and exercise. Prerequisite: MS 3330.

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 and MS 3340 and must be taken concurrently with MS 4430. *Not available for graduate credit.

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 and MS 4430 and must be taken concurrently with MS 4440. *Not available for graduate credit.

MS 4430 Management of the Unit Fitness Program*

(2) Alternate athletic activities and risk assessment planning. Prerequisite: MS 3340. *Not available for graduate credit.

MS 4440 The Army Master Fitness Training

Program* (2) Administration of the unit fitness program with emphasis on the regulatory requirements governing the unit fitness program. Prerequisite: MS 4430. *Not available for graduate credit.

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 five 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) Five 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 bachelor's of science in nursing. The program is accredited by the Missouri State Board of Nursing, and the Commission on Collegiate Nursing Education.

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 March for Fall semester nursing classes and in October for Spring.

The necessary application and forms are available after meeting with an advisor in the Department of Nursing.

Admission Criteria to the Undergraduate Nursing Program

1. Evidence of good moral character as determined by the Missouri State Board of Nursing in the Nurse Practice Act (1999) and by the American Nurses' Association Code for Nurses (2001).
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 2.5 cumulative grade-point average is required at the time of application.
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. A student receiving more than one D and/or F 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 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.
8. Completion of the **American College Test (ACT)**, the **Watson-Glaser Critical Thinking exam** and the **Nelson-Denny Reading Tests** prior to admission to the nursing program. Information about the ACT and the Watson-Glaser may be obtained from the Testing Center (Humphreys 223). Information about the Nelson-Denny may be obtained from the Department of Academic Enrichment in Humphreys 127. 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.
10. Official transcripts-it is the students 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.
11. Speech and hearing exam.
12. Physical exams and required immunizations must be complete and validated before the first day of clinical.
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 in the English Department through the English Language Institute.
14. Two letters of reference.

Additional considerations given to the following:

- Academic history with patterns and trends indicating potential for academic success.
- The functional abilities required to be successful in the nursing program, with reasonable accommodation. See **Core Performance Standards**.
- Eligibility for licensure. Refer to the Nurse Practice Act in the state in which you anticipate licensure. In Missouri refer to Sections 335.046 and 335.066 at www.ecodev.state.mo.us/pr/nursing.
- Number of credit hours taken at Central Missouri State University.

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 Chem 1104, Biol 2401, Biol 2402, Biol 3611, Psy 1100, Soc 1800, D&N 3340, Nur 1600, Nur 2000, Nur 3312. Grade point averages are a determining factor in selection.

Core Performance Standards for Admission and Progression

FUNCTIONAL ABILITY : STANDARD : SOME EXAMPLES OF NECESSARY ACTIVITIES (Not Inclusive)

Critical thinking : Critical thinking ability sufficient for clinical judgment. : Identify cause-effect relationships in clinical situations, develop nursing care plans. Interpret variations in vital signs, lab values, etc.

Interaction : Interpersonal abilities sufficient to interact with individuals, families, and groups from a variety of socio-economic and cultural backgrounds. : Establish rapport with patients/clients and colleagues. Works as a team member.

Communication : Communication abilities sufficient for interaction with others in verbal and written form. : Explain treatment procedures, initiate health teaching, document and interpret nursing actions and patient/client responses.

Motor skills : Gross and fine motor abilities sufficient to provide safe and effective nursing care. Move around work area and within confined spaces. Calibrate and use equipment, position clients, insert catheters, injections.

Sensory/Perceptual : Auditory/visual and tactile ability sufficient to monitor and assess health needs. : Hear monitor alarm, (IV alarm, etc.), emergency signals, auscultatory sounds, cries for help.

Re-Application for Admission

A student re-applying for admission to the nursing program within 6 months to a year of the initial application is not required to obtain a new physical exam or speech/hearing exam.

A student re-applying for admission to the nursing program over a year's time, but within 18 months of the initial application, is required to obtain a repeat physical exam with only those tests being repeated that are deemed necessary by the physician or nurse practitioner. Students need not repeat speech/hearing exam.

A student re-applying for admission to the nursing program over 18 months from the initial application is required to obtain a repeat physical exam and a repeat speech/hearing exam.

Students in non-compliance with these requirements will be referred to the Health Committee.

80 Nursing

It is the responsibility of the applying student to provide documentation of compliance with these health requirements by the time of admission. Students not in compliance with these requirements will be referred to the Health Committee.

The Health Committee recommends that each student assume responsibility for personal health maintenance. An annual health assessment is strongly encouraged. Students are required to maintain insurance coverage for illness and accidents throughout their time in the program.

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 for 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 major.
2. Students who withdraw from the nursing program must follow the Nursing Department's Withdrawal Policy contained herein 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 and/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 passing each course in a particular semester in the program to progress to the next semester.

Withdrawal Policy

Students within the program who withdraw from any nursing course are automatically suspended from the program and must follow the Nursing Department's Readmission Policy in order to be readmitted. Students who withdraw from a nursing course and do not follow the requirements of the Nursing Department Withdrawal Policy as stated below will not be considered for readmission.

Students who withdraw from any nursing course must compete with other students for readmission to the program. Students may be readmitted only once to the nursing program based on the decision of the Admissions and Progression Committee.

Students who have been attending meetings of a nursing course and wish to withdraw should:

Clinical/practicum courses

1. Notify their instructor in writing of their desire to withdraw and their reason for this decision.
2. Meet with the chair.
3. Follow the University process for withdrawal (See Central's University Calendar and Handbook or Catalog for information).

Theory courses

1. Notify their instructor in writing of their desire to withdraw and their reason for this decision.
2. Follow the university policy for withdrawal (See Central's University Calendar and Handbook or Catalog for information).

Students are not eligible to withdraw from a nursing clinical/practicum course when they have received their final grade from the instructor. Students who receive a final grade of D or F from the instructor and withdraw from the course will have their erroneous "W" changed to the appropriate failing grade by the Department of Nursing.

Students who have not attended classes in the semester they wish to withdraw may withdraw from nursing courses by following the University Withdrawal Policy.

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. Only students in good standing at a nationally accredited baccalaureate nursing program are eligible for transfer. Credits 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 40 semester hours of upper-level courses, with a minimum of 30 semester hours in the nursing major at Central. Those courses required to be taken through Central in the nursing major are 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, the Nursing Department Transfer Committee 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 Department Transfer Committee 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 student will have the chair or dean from the nursing school they are transferring from write a letter to the chair of Central's Department of Nursing stating they are a student in good standing.
7. All prospective transfer students will be interviewed by the department Chairperson.

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 40 semester hours of upper-level courses, with a minimum of 30 semester hours in the nursing major through Central. Those required are Nur 3312, Nur 4010, Nur 4011, Nur 4050, Nur 4420, Nur 4421, Nur 4620, Nur 4621, ICap 4111, nursing electives, and service learning.
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 non-college nursing courses may be applied to the nursing major upon successful performance on challenge examinations. A maximum of 30 semester hours of special credit may be awarded by challenge.

Special Expenses

1. Additional expenses for nursing majors include: uniforms, caps, shoes, name pin, watch with second hand, stethoscope, sphygmomanometer, health insurance, background check, 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 according to CNE orientation manual.
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.

Accreditation Status

The nursing program is accredited by the Missouri State Board of Nursing and the Commission on Collegiate Nursing Education. Contact numbers for the Nursing Department's accrediting agencies are: Missouri State Board (573) 751-0681; Commission on Collegiate Nursing Education (202) 887-6791.

NURSING Functional Major, B.S. Degree
(43 000133)

- The graduate with a Bachelor of Science degree in Nursing will use the knowledge and skills obtained in the program to:
- Communicate in a manner that reflects that communication is a reciprocal process utilizing multiple modes in adapting language and communication strategies appropriate to professional role and setting
 - Demonstrate intellectual skill based on the use of theories and principles guided by logic and sound judgment allow for the provision of safe and quality nursing care. Using reasoning, the student will be able to assess, plan, intervene and evaluate while providing holistic care in diverse environments utilizing pertinent resources.
 - Actively engage in interaction based on mutual respect with collaboration toward goal achievement
 - Internalize and demonstrate ethically grounded behaviors reflective of the ANA Standards of Nursing Practice (1998) and ANA Code for Nurses (2001)
 - Use technical skills required for the delivery of quality nursing care

				Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS				80	
Nur 1600	Intro. to Professional Nursing	1	Nur 4311	Advanced Concepts of Adult Nursing Practicum	3
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 4620	Nursing Management	3
Nur 4010	Research in Nursing	2	Nur 4621	Nursing Management Practicum	3
Nur 4011	Professional Issues & Ethics in Nursing	2	Biol 2401	Anatomy & Physiology I	4
Nur 3110	Concepts of Nursing I	6	Biol 2402	Anatomy & Physiology II	4
Nur 3111	Concepts of Nursing I Practicum	2	Biol 3611	Microbiology	4
Nur 3300	Concepts of Altered Health	5	D&N 3340	Nutrition	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 4210	Advanced Concepts of Nursing in Family Health	3	Nur 4040	Nursing Informatics	2
Nur 4211	Advanced Concepts of Nursing in Family Health Practicum	2	Nur 4405	Aging of Self & Others	2
Nur 4310	Advanced Concepts of Adult Nursing	2			
MINOR NOT REQUIRED					
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the functional major, Biol 2401 and Biol 2402 are allowed to fulfill 4 s.h. of Div. II A)					
Chem 1104	Div. II A (required)	3	Soc 1800	Div. II B (required)	3
Psy 1100	Div. II B (required)	3			
MINIMUM TOTAL				124	

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 D&N 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 1104, admission to the Nursing Program and achievement of 90% or higher on pharmacotherapeutics calculation exam. Advanced Placement registered nurse students are exempt from Nur 3300 prerequisites. Athletic training majors are exempt from NUR 3300 and the pharmaco-therapeutics calculation exam.

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 3322 or concurrently or RN standing. *Not available for graduate credit.

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. Prerequisite: Admission to the Nursing Program or RN standing. *Not available for graduate credit.

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. *Not available for graduate credit.

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. *Not available for graduate credit. An additional fee is associated with this course.

Nur 4211 Advanced Concepts of Nursing in Family

Health Practicum* (2) Application of nursing process with emphasis on nursing science applicable to the family, including women's and children's health care issues. 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 the nursing process and communication in health care settings. Prerequisite: Nur 3110 or concurrently and Nur 3312. An additional fee may be associated with this course.

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, Biol 3611, and admission to the Nursing Program.

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. An additional fee is associated with this course.

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. 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. An additional fee is associated with this course.

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. *Not available for graduate credit.

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. Prerequisite Nur 4310 or concurrently; may be taken concurrently with Nur 4210 and Nur 4211. An additional fee may be associated with this course. *Not available for graduate credit.

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 and Nur 4311 or Nur 4050 or concurrently. *Not available for graduate credit.

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. Prerequisites: Nur 4420 or concurrently; may be taken concurrently with Nur 4620 and Nur 4621. An additional fee may be associated with this course. *Not available for graduate credit.

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 4311 or Nur 4050 or concurrently. *Not available for graduate credit.

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. 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.

Safety Sciences

In the Department of Safety Sciences, 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 Major, B.S. Degree
(43 000243)

The graduate with a Bachelor of Science degree in Safety Management will use the knowledge and skills obtained in the programs to:

- Demonstrate an awareness of legal, professional and ethical responsibilities
- Understand the importance of continuous professional development
- Possess knowledge of contemporary Safety Science and Technology issues faced in local, national and global contexts
- Identify managerial solutions using business principle models
- Identify behavioral solutions to occupational safety and health problems.

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, 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	
MAJOR REQUIREMENTS						54	
SS&T	3000	Prin. of Accident Causation & Prev.	3	SS&T	3430	Industrial Hazard Control	3
SS&T	3070	Psychology & Philosophy of Safety	3	SS&T	4425	Safety & Health Legislation & Standards	3
SS&T	4000	Ergonomics in Safety & Health	3	SS&T	4430	Workers Compensation Legislation	3
SS&T	4010	Accident Investigation	3	SS&T	4435	Environmental Compliance	3
SS&T	4020	Legal Aspects of Safety & Health	3	SS&T	4510	Loss Control	3
SS&T	4035	Safety Program Development	3	SS&T	4520	Safety & Risk Analysis	3
SS&T	3120	Introduction to Industrial Hygiene	3	SS&T	4940	Introductory Quantitative Methods	3
SS&T	4140	Safety & Health Laboratory	3	SS&T	4990	Intern. in Safety Sci. & Tech., 3 or	
SS&T	4215	Transportation & Storage of Hazardous Materials	3	SS&T	4910	Spec. Proj. in Safety Sci. & Tech., 3	3
SS&T	4360	Introduction to Systems Safety	3				
MINOR REQUIREMENTS						18-22	
GENERAL EDUCATION REQUIREMENTS (page 48)						48	
Math	1111	Div. I C (required)	3	Psy	1100	Div. II B (required)	3
Phys	1103	Div. II A (required)	3	ICap	4115	Div. IV B (required)	3
Chem	1104	Div. II A (required)	4				
FREE ELECTIVES						0-4	
MINIMUM TOTAL						124	

SAFETY Minor for a Bachelors Degree

(Central does not confer teacher certification for this minor)

Students seeking a Safety Management Major, B.S. Degree are restricted from pursuing a Safety Minor.
(000193)

						Sem. Hours
MINOR REQUIREMENTS						24
SS&T	3000	Prin. of Accident Causation & Prev.	3	SS&T	4425	Safety & Health Legislation
SS&T	3015	Emergency Preparedness	3			& Standards
SS&T	4010	Accident Investigation	3	SS&T	4430	Workers Compensation Legislation ...
SS&T	4035	Safety Program Development	3	SS&T	4940	Introductory Quantitative Methods ...
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
SS&T	1800	Introduction to Fire Science	3	SS&T	4850	Industrial Fire Protection
SS&T	2800	Fire Prevention & Protection	3	Mf&C	3330	Bldg. Codes & Code Adm.
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.
SS&T	3700	Security Org. & Management	3	Mgt	1300	Introduction to Business
SS&T	4710	Security Technology	3	BLaw	2720	Legal Environment of Business ...
SS&T	4830	Fire Investigation	3			

OCCUPATIONAL SAFETY AND HEALTH Functional Major, B.S. Degree

(43 000226)

The graduate with a Bachelor of Science degree in Occupational Safety and Health will use the knowledge and skills obtained in the programs to:

- Demonstrate an awareness of legal, professional and ethical responsibilities
- Understand the importance of continuous professional development
- Possess knowledge of contemporary Safety Science and Technology issues faced in local, national and global contexts
- Identify technical solutions to occupational safety and health problems
- Identify scientific solutions to the mitigation of hazardous exposures.

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						68
SS&T	3000	Prin. of Accident Causation & Prev.	3	SS&T	3120	Introduction to Industrial Hygiene
SS&T	4000	Ergonomics in Safety & Health	3	SS&T	4140	Safety & Health Laboratory
SS&T	4010	Accident Investigation	3	SS&T	4360	Introduction to Systems Safety
SS&T	4035	Safety Program Development	3	SS&T	3430	Industrial Hazard Control

86 Safety Sciences

SS&T 4425	Safety & Health Legislation & Standards	3	SS&T 4435	Environmental Compliance	3
SS&T 4430	Workers Compensation Legislation	3	SS&T 4850	Industrial Fire Protection	3
			SS&T 4940	Introductory Quantitative Methods	3
			SS&T 4990	Intern. in Safety Sci. & Tech.	6
			Biol 2401	Anatomy & Physiology I	4
			Chem 2650	Elem. Organic & Biochemistry	5
			Phys 1101	College Physics I	4
			Phys 1102	College Physics II	4
			Math 1131	Calculus for Business & Econ.	3
			BLaw 2720	Legal Environment of Business	3

*MINOR NOT REQUIRED

GENERAL EDUCATION REQUIREMENTS (page 48)--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. IV B (required)	3	
FREE ELECTIVES						11
MINIMUM TOTAL						124

*Students wishing to pursue the masters program in Industrial Hygiene should minor in Chemistry. The requirement for Chem 2650 and Chem 1104 will be met by the Chemistry Minor.

CRISIS & DISASTER MANAGEMENT Major, B.S. Degree

The graduate with a Bachelor of Science degree in Crisis and Disaster Management will use the knowledge and skills obtained in the programs to:

- Demonstrate an awareness of legal, professional and ethical responsibilities
- Understand the importance of continuous professional development
- Possess knowledge of contemporary Safety Science and Technology issues faced in local, national and global contexts
- Describe the four phases of emergency management: preparedness, mitigation, response, and recovery
- Outline the roles and responsibilities of the private sector, public sector, and non-governmental organizations in the state and local emergency response plans
- Use technological tools to organize information, communicate, and respond to crisis and disaster events.

EMERGENCY MANAGEMENT OPTION, B.S. Degree (000248)						Sem. Hours
MAJOR REQUIREMENTS						45
CDM 3000	Crisis & Disaster Management	3	CDM 4990	Internship in Crisis & Disaster Mgmt.	3-6	
CDM 3400	Community Mitigation and Recovery	3	SS&T 3015	Emergency Preparedness	3	
CDM 4200	Disaster Management Technology	3	CDM 3035	Emergency Response	3	
CDM 4800	Integrated Emergency Management	3	CDM 4035	Disaster and Society	3	
CDM 4400	Research Issues in C&DM	3	Departmentally approved management electives			6
CDM 4900	Directed Studies: Technology App.	3	Departmentally approved communication elective			3
CDM 4910	Special Projects: Field Exercises	3	Departmentally approved technical elective			3
MINOR REQUIREMENTS						18-25
GENERAL EDUCATION REQUIREMENTS (page 48)						48
FREE ELECTIVES						6-13
MINIMUM TOTAL						124

HAZARDOUS MATERIALS OPTION, B.S. Degree (000250)						Sem. Hours
MAJOR REQUIREMENTS						45
CDM 3000	Crisis & Disaster Management	3	CDM 4990	Internship in Crisis & Disaster Mgmt.	3-6	
CDM 3400	Community Mitigation and Recovery	3	CDM 3225	Hazardous Materials Emer. Response	3	
CDM 4200	Disaster Management Technology	3	CDM 4245	Managerial Issues in Haz. Materials	3	
CDM 4800	Integrated Emergency Management	3	SS&T 4215	Trans. and Storage of Haz. Materials	3	
CDM 4400	Research Issues in C&DM	3	Departmentally approved management electives			6
CDM 4900	Directed Studies: Technology App.	3	Departmentally approved communication elective			3
CDM 4910	Special Projects: Field Exercises	3	Departmentally approved technical elective			3
MINOR REQUIREMENTS						18-25
GENERAL EDUCATION REQUIREMENTS (page 48)						48
FREE ELECTIVES						6-13
MINIMUM TOTAL						124

BUSINESS CONTINUITY OPTION, B.S. Degree (000251)						Sem. Hours
MAJOR REQUIREMENTS						45
CDM 3000	Crisis & Disaster Management	3	CDM 4800	Integrated Emergency Management	3	
CDM 3400	Community Mitigation and Recovery	3	CDM 4400	Research Issues in C&DM	3	
CDM 4200	Disaster Management Technology	3	CDM 4900	Directed Studies: Technology App.	3	

CDM 4910	Special Projects: Field Exercises	3	CDM 4990	Internship in Crisis & Disaster Mgmt.	3-6
			CDM 3715	Business Continuity Planning	3
			SS&T 4720	Personnel and Information Security	3
			CDM 4745	Crisis Management	3
				Departmentally approved management electives	6
				Departmentally approved communication elective	3
				Departmentally approved technical elective	3
MINOR REQUIREMENTS					18-25
GENERAL EDUCATION REQUIREMENTS (page 48)					48
FREE ELECTIVES					6-13
MINIMUM TOTAL					124

DRIVER EDUCATION

(Endorsement to teach driver education in grades 9-12. Teacher must be certified in another elementary, middle school or secondary teaching field.)

MINOR REQUIREMENTS					Sem. Hours	12
DrEd 2010	Introduction to Safety Education	3	DrEd 2030	Dev. Vehicle Operation		
DrEd 2020	Driver Task Analysis	3		Skills & Competencies	3	
			DrEd 2040	Developing Classroom Knowledge	3	

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 4015 School Safety, Security and Crisis Management (3) Provides school personnel with current information addressing school safety and security needs, including an analysis of threat identification, violence prevention, safety plans, and crisis response.

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.

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 (3) 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. An additional fee is associated with this course.

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.

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 CDM 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.

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 (3) 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.

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.

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.

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.

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 Task Analysis (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 Developing Vehicle Operation Skills and Competencies (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 2040 Developing Classroom Knowledge (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.

Crisis and Disaster Management

CDM 3000 Introduction to Crisis and Disaster Management (3) Natural, technological, and man-caused crises and disasters. All-hazards mitigation, preparedness, response, and recovery systems. Roles and responsibilities of government, non-governmental organizations, business, and industry.

CDM 3035 Emergency Response (3) Management of resources during operations. Emphasis on warning systems, emergency operations centers, and incident command systems. Topics include human behavior, public health and safety. Prerequisites: CDM 3000 or permission.

CDM 3225 Hazardous Materials Emergency Response (3) Properties of hazardous materials. Development and implementation of plans/programs required for safe response. Utilization of tools and techniques during response to spills and releases. Prerequisites: CDM 3000 or permission.

CDM 3400 Community Mitigation and Recovery (3) Concept and meaning of risk. Integration of mitigation during development, post-disaster redevelopment, and maintenance; formation of disaster-resistance communities, including sociological and political considerations. Prerequisites: CDM 3000 or permission.

CDM 3715 Business Continuity Planning (3) Planning methodologies utilized by business and industry. Risk identification, business impact analysis, and the adoption of alternative recovery methods for critical processes. Prerequisites: CDM 3000 or permission.

CDM 4035 Disaster and Society* (3) Impact of disasters on social systems. Disaster mythology; individual and

community response. Communications within affected groups and organizations. Prerequisite: CDM 3000 or permission. *Not available for graduate credit.

CDM 4200 Disaster Management Technology* (3) Technologies used in support of disaster operations. Tools and techniques to collect, analyze, and manage information. Including communication systems, modeling, mapping, and emergent technologies. *Not available for graduate credit.

CDM 4245 Managerial Issues in Hazardous Materials* (3) Addresses managerial concerns of the Incident Commander at the community/organization level. Emphasis is placed on strategic goals and decision-making. Other subjects covered include response planning, personnel and training, operation of command posts, and use of the Incident Command System. Prerequisites: CDM 3000 or permission. *Not available for graduate credit.

CDM 4400 Research Issues in Crisis and Disaster Management* (3) Introduces the research process, ethics, methodology, and data analysis. Preparation of academic papers, written reports, and proposals. Prerequisites: CDM 3000 or permission. *Not available for graduate credit.

CDM 4745 Crisis Management* (3) Systematic study of crisis in business and industry; vulnerability analysis, disaster-resistant companies, crisis communications strategies, employee support services, and public relations. Prerequisites: CDM 3000 or permission. *Not available for graduate credit.

CDM 4800 Integrated Emergency Management* (3) Factors influencing multi-agency coordination during phases of disaster management. Explores relationships between public and private sector institutions and collaboration during emergency incidents. Prerequisites: CDM 3000 or permission, and senior status. *Not available for graduate credit.

CDM 4900 Directed Studies: Technology Application* (3) Individual or group study of emerging technology applications related to crisis and disaster management. *May be repeated for a maximum of 6 hours.* Prerequisite: departmental approval. *Not available for graduate credit.

CDM 4910 Special Projects: Field Exercises* (1-3) Individual or group participation in approved community, institutional, or agency emergency exercises or disaster drills. *May be repeated for a maximum of 3 hours.* Prerequisite: departmental approval. *Not available for graduate credit.

CDM 4990 Internship in Crisis and Disaster Management* (3-6) Practicum experiences are based upon student preparation and interest. Actual work experience in government, non-governmental organizations, business, and industry. *May be repeated for a maximum of 6 hours.* Prerequisite: departmental approval and junior status. *Not available for graduate credit.

School of Technology

Career and Technology Education

Business Education

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

(Certification to teach business education subjects in grades 9-12)
(41 000524)

The graduate with a Bachelor of Science in Education degree with a functional major in Business Education will:

- Meet all Missouri Standards for Teacher Educators (MoSTEP).
- Meet all competencies set by the Missouri Department of Elementary and Secondary Education for Business Education (MoSTEP Standard 1.1 ". . . knows the discipline.") which includes the following areas: business interrelationships, accounting/finance, business communications, business and personal law, economics, information systems, keyboarding, marketing, and management.
- Pass the PRAXIS II subject area exam at the level set by the Missouri Department of Elementary and Secondary Education.

		Sem. Hours
MAJOR REQUIREMENTS		33
BE&O 1510	Foundations of Administrative Management & Business Education . . . 3	
BE&O 1535	Word Processing I 3	
BE&O 1536	Word Processing II 3	
BE&O 3501	Business and Education Technology . . 3	
BE&O 3510	Desktop Publishing for Bus. 3	
BE&O 4550	Administrative Support Management . . 3	
BE&O 4560	Infor. Design & Presentation 3	
Acct 2101	Principles of Financial Acct. 3	
Acct 2102	Principles of Managerial Acct. . . . 3	
Mgt 3325	Business Communications 3	
BLaw 2720	Legal Environment of Business . . . 3	
MINOR REQUIREMENTS		18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--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.		
Comm 1000	Div. I B (required) 3	
Math 1111	Div. I C or 3	
Math 1620	Div. I C (required) 3	
BE&O 1210	Div. II A (required) 2	
Hist 1350	Div. II B or 3	
Hist 1351	Div. II B (required) 3	
Econ 1010	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. of Div. III.		
PROFESSIONAL EDUCATION REQUIREMENTS (see page 205)		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)

The graduate with a Bachelor of Science in Education degree with a functional major in Business Education, will use the knowledge and skills obtained in the program to:

- Meet all Missouri Standards for Teacher Educators (MoSTEP).
- Meet all competencies set by the Missouri Department of Elementary and Secondary Education for Business Education (MoSTEP Standard 1.1 ". . . knows the discipline.") which includes the following areas: business interrelationships, accounting/finance, business communications, business and personal law, economics, information systems, keyboarding, marketing, and management.
- Pass the PRAXIS II subject area exam at the level set by the Missouri Department of Elementary and Secondary Education.

		Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS		39
BE&O 1510	Foundations of Administrative Management & Business Education . . 3	
BE&O 1535	Word Processing I 3	
BE&O 1536	Word Processing II 3	
BE&O 3501	Business and Education Technology . . 3	
BE&O 3510	Desktop Publishing for Bus. 3	
BE&O 4550	Administrative Support Management . . 3	

BE&O	4560	Infor. Design & Presentation	3
Acct	2101	Principles of Financial Acct.	3
Acct	2102	Principles of Managerial Acct.	3
Mgt	3325	Business Communications	3
Mkt	3400	Principles of Marketing	3
BLaw	2720	Legal Environment of Business	3
BLaw	3721	Law of Business Transactions	3

MINOR NOT REQUIRED

(Continued on next page)

(Continued from previous page)

GENERAL EDUCATION REQUIREMENTS (page 48)--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.

Comm	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
BE&O	1210	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. III.

PROFESSIONAL EDUCATION REQUIREMENTS (see page 205) 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				23			
BE&O	1210	Essentials of Managing Information	2	BE&O	3501	Business & Education Technology	3
BE&O	1510	Foundations of Administrative Management & Business Education	3	BE&O	3510	Desktop Publishing for Bus.	3
				BE&O	4560	Infor. Design & Presentation	3
BE&O	1535	Word Processing I	3	Econ	1010	Principles of Macroeconomics	3
BE&O	1536	Word Processing II	3				

GENERAL EDUCATION REQUIREMENTS (page 48) (In the minor, BE&O 1210 fulfills 2 s.h. of Div. II A; Econ 1010 fulfills 3 s.h. of Div. II B)

ADMINISTRATIVE SUPPORT Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)

(000548)

				Sem. Hours				
MINOR REQUIREMENTS				21				
BE&O	1210	Essentials of Managing Information	2	Electives from the following				4
BE&O	1510	Foundations of Administrative Management & Business Education	3	BE&O	1550	Administrative Support Practicum	1-3	
				BE&O	3510	Desktop Publishing for Bus.	3	
BE&O	1535	Word Processing I	3	BE&O	3535	Internship in Administrative Support Management	3	
BE&O	1536	Word Processing II	3					
BE&O	3501	Business & Education Technology	3	BE&O	4560	Infor. Design & Presentation	3-9	
Acct	2101	Principles of Financial Acct.	3	CIS	4610	Special Projects	1-3	

GENERAL EDUCATION REQUIREMENTS (page 48) (In the minor, BE&O 1210 fulfills 2 s.h. of Div. II A)

Business Education

consumer, and skills in word processing, spreadsheet and presentation software.

BE&O 1210 Essentials of Managing Information (2)

Prepare students to be active computer users. Includes evaluating computers, Internet use as a student and

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 4210 Methods of Teaching Business Education (3) Prepares student as teachers of business education by assisting in the development of instructional methods and techniques for student-oriented classroom instruction.

BE&O 4220 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 BE&O 4230 during the Professional Semester. *Not available for graduate credit.

BE&O 4230 Methods of Teaching Business-General* (2) Prerequisites: admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with BE&O 4220 during the Professional Semester. *Not available for graduate credit.

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 4280 Implementing Vocational Business Education (3) Required for Missouri vocational business education certification. Covers information needed to plan, implement, and maintain vocational business education programs.

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 Keyboarding (3) Primary emphasis on building speed and accuracy in keying by

touch. 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 keyboarding. 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 Administrative Support Practicum (1-3) Practical supervised work experience for students enrolled in 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 Administrative Support Procedures (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 Business and Education 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 BE&O 1210, 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 Administrative Support 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 Administrative Support 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.

BE&O 4550 Administrative Support 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.

Technology and Occupational Education

In Technology and Occupational Education, 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)

The graduate with a Bachelor of Science in Education degree in Technology Education will use the knowledge and skills obtained in the program to:

- Be capable of implementing a contemporary technology education program based on the *Standards for Technological Literacy*
- Possess a conceptual understanding of 1) the nature and history of technology and, 2) the influence of technology on society and the environment
- Demonstrate competence with various technologies including design, communication, manufacturing, construction, transportation, energy, bio-related technology, and computer technology
- Employ and teach problem solving methods to solve technical problems
- Demonstrate the ability to operate lab equipment in an efficient and safe manner, and teach accordingly
- Demonstrate the ability to operate, schedule and control labs for technology education programs
- Display professional habits including involvement in professional associations related to Technology Education, continuous learning, and collegiality

		Sem. Hours	
MAJOR REQUIREMENTS		39	
Communication Technology		Materials and Processes Technology	
Grap	1010 Introduction to Desktop	Mf&C 1010	Mat. for Mfg. & Construction 3
	Publishing & Printing 3	Mf&C 2310	Construction Techniques 3
Grap	1110 Fundamentals of Drafting 3	Mf&C 3550	Principles of Numerical Control, 3 or
Grap	4570 Computer Graphics 3	Mf&C 4520	Robotics and Automation, 3 3
Energy and Power Technology		Organization and Administration	
ET	1020 General Electronics 3	T&OE 3110	Selection & Org. of Subject
ET	1010 Applied Electricity, 3 or		Matter for Ind. Voc. Tech. Ed. . . . 3
ET	2020 Industrial Electricity, 3 3		
Pr&T	1010 Power Mechanics 3	Electives	
		Grap	2500 Communication Technology 3
		T&OE	2000 Technology & Change 3
		IGen	3116 Creative Problem Solving 3
MINOR REQUIREMENTS		18-24	
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the major, T&OE 2000 fulfills 2 s.h. in Div. IIAB;			
IGen 3116 fulfills 3 s.h. in Div. IV A) 43			
Biol	1003 Div. II A (required) 3	PoIS	1510 Div. II B (required) 3
Phys	1104 Div. II A (required) 4	Psy	4230 Psy. of Adolescence 3
Hist	1350 Div. II B or	Geog	3201 Div. II D (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 205)		28	
MINIMUM TOTAL		128	

OCCUPATIONAL EDUCATION Functional Major, B.S. Degree

(This "2+2" program is designed to build upon an Associate Degree and may complete Missouri Vocational

Teaching Certification requirements for Trade, Industrial and Health Sciences Instructors)
(43 000249)

				Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS				82
Completed at CMSU		Courses transferring from AAS degree		
EdCl	3500	Secondary Teaching & Behavioral Mgt.	3	
		Computer Graphics	3	
EdCl	2240	Educational Psychology	3	
Grap	4570	Sel. & Org of Subject Matter for Ind. Voc. Tech. Ed.	3	
IGen	3116	Creative Problem Solving	3	
T&OE	2000	Technology and Change	3	
T&OE	3060	Technical Report Writing	2	
T&OE	4022	Occupational Administration/ Teaching Internship	3	
T&OE	4180	Adult Programs	3	
		Teaching Specialty Area:	21	
		Teaching Specialty Area: Trade/Technical, Health Occupations or Technical Electives (primary or support area; any appropriate area of technology). EdCl 2240 must be taught by a state-approved two-year or four-year institution. T&OE 3110, T&OE 4110, T&OE 4140, T&OE 4150, and T&OE 4160 must be taught by a state-approved four-year institution.		

(Continued on next page)

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MINOR NOT REQUIRED

GENERAL EDUCATION REQUIREMENTS - 48 s.h. (In the major, T&OE 2000 fulfills 3 s.h. in Div. II A; IGen 3116 fulfills 3 s.h. in Div. IV A)	42
From the AAS Degree, 21 semester hours apply to University Studies; balance (27 semester hours to include T&OE 2000 and IGen 3116) taken at CMSU.	
MINIMUM TOTAL	124

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)

				Sem. Hours
MINOR REQUIREMENTS				21
T&OE	2000	Technology & Change	3	
T&OE	3110	Selection & Org. of Subject Matter for Ind. Voc. Tech. Ed.	3	
ET	1010	Applied Electricity	3	
Grap	1110	Fundamentals of Drafting	3	
Grap	2500	Communication Technology	3	
Mf&C	1010	Mat. for Mfg. & Construction	3	
Pr&T	1010	Power Mechanics	3	
GENERAL EDUCATION REQUIREMENTS (page 48) (In the minor, T&OE 2000 fulfills 2 s.h. of Div. II A)				

General

T&OE 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: AE 1030 or one unit of high school algebra.

T&OE 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 T&OE 1040.

T&OE 1090 Exploratory Problems in T&OE (1-3) Individual or group work on introductory level technical problems in technology and occupational education. Provide exploration of content not available through normal course offerings. *May be repeated for a maximum of 6 hours.* Prerequisites: written contract/proposal with objectives and departmental consent.

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

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

T&OE 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.

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

T&OE 4000 Special Projects in Technology and Occupational Education (1-3) Investigation of contemporary problems and issues in technology and occupational education by selected individuals or groups. *May be repeated for a maximum of 6 semester hours.* Prerequisites: written contract/proposal with objectives and written department consent.

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

T&OE 4020 Technology Education 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.

T&OE 4022 Occupational Administration/Teaching Internship (1-3) Provides a mentored administration/teaching experience at the secondary/post-secondary level. Evaluation by on-site mentor and Coordinator of Technology and Occupational Education. *May be repeated for a maximum of 6 semester hours.*

Prerequisites: T&OE 3110, T&OE 4160, and permission of the Coordinator of T&OE.

T&OE 4090 Special Problems in Technology and Occupational Education (1-3) Meets student needs for additional research and/or laboratory experience in the development of technical knowledge and skills in the areas of technology and occupational education. *May be repeated for a maximum of 6 semester hours.*
Prerequisites: written contract/proposal with objectives and written department consent.

Professional

T&OE 3110 Selection and Organization of Subject Matter for Industrial Vocational Technical Education (3) Selecting and organizing subject matter for teaching industrial and technical education.

T&OE 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.

T&OE 4120 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 T&OE 4160 during the Professional Semester. *Not available for graduate credit.

T&OE 4140 New Teacher Institute (3) Develop teaching/instructional management skills needed to perform effectively in classrooms/laboratories. Includes structured activities designed to assist beginning vocational-technical teachers during their first teaching years.

T&OE 4150 Vocational Guidance (3) Facilitate awareness and ability in vocational guidance. Includes problems, methods, and procedures for assisting individuals in choosing, preparing for, entering, and progressing in their vocation.

T&OE 4160 Principles of Teaching Industrial Education* (2) Prerequisites: T&OE 3110 and admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with T&OE 4120 during the Professional Semester. *Not available for graduate credit.

T&OE 4180 Adult Programs in Occupational Education (3) Principles, objectives, philosophies, organization, administration, and supervision of adult health, agricultural, industrial, and homemaking occupations.

Graphic Imaging and Design Technology

Computer Aided Drafting and Design

In the Department of Graphic Imaging and Design Technology, the second digit in the Grap prefix courses stands for the following: 0--Graphic Arts, 1--Computer-Aided Drafting and Design Technology, 5--General, 6--Multimedia.

COMPUTER-AIDED DRAFTING AND DESIGN TECHNOLOGY

Functional Major, B.S. Degree

(43 000231)

The graduate with a Bachelor of Science Degree in Computer-Aided Drafting and Design Technology will use the knowledge and skills obtained in the program to:

- Apply current computer-aided drafting and design concepts and technical knowledge to interpret and develop orthographic, pictorial, and schematic drawings
- Develop sketching, manual drafting, and computer aided drafting skills to create orthographic, pictorial, and schematic drawings
- Integrate related technical and scientific support skills and concepts into computer-aided drafting and design technology applications
- Demonstrate oral, written, graphic and numerical communication skills applicable to individual and group activities utilized in computer-aided drafting and design and related technologies
- Apply critical and creative thinking as needed for problem solving applicable to computer-aided drafting and design and related technologies
- Apply principles of management of personnel, equipment, materials, and processes applicable to computer-aided drafting and design and related technologies
- Display a value system based on personal characteristics and ethical behavior appropriate for professions in computer-aided drafting and design and related technologies.

		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
T&OE 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		
GENERAL EDUCATION REQUIREMENTS (page 48)		48
Math 1111	Div. I C (required)	3
Phys 1104	Div. II A (required)	4
IGen 3116	Div. IV A (required)	3
FREE ELECTIVES		11
MINIMUM TOTAL		124

Graphic Arts Technology

GRAPHIC ARTS TECHNOLOGY MANAGEMENT Functional Major, B.S. Degree (43 000146)

The graduate with a Bachelor of Science Degree with a Functional Major in Graphic Arts Technology Management will use the knowledge and skills in the program to:

- Utilize terminology appropriate to graphic arts
- Analyze graphic production systems and solve problems associated with these systems
- Demonstrate knowledge of current trends and innovations in graphic arts
- Discuss the role of team dynamics in the work environment
- Explain the industry structure and career opportunities in graphic arts
- Demonstrate effective written and oral communication skills
- Appreciate the societal significance of graphic arts
- Exhibit professional ethics, environmental responsibility and safety
- Perform basic production processes which illustrate conceptual understanding of the printing production cycle.

				Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS				68
Grap	1000	Orientation to Graphic Arts	1	
Grap	1010	Introduction to Desktop Publishing & Printing	3	
Grap	2030	Desktop Publishing for Printing Applications	3	
Grap	2031	Electronic Publishing Systems	3	
Grap	2032	Imaging Technology for the Graphic Arts	3	
Grap	2035	Image Assembly	3	
Grap	3034	Offset Press Technology	3	
Grap	3045	Substrates & Inks	3	
Grap	3051	Graphic Arts Management	3	
Grap	3057	Graphic Arts Quality Assurance	3	
Grap	4038	Principles of Color Reproduction	3	
Grap	4053	Graphic Arts Production Analysis	3	
Grap	4055	Printing Estimating & Costing	3	
Grap	4095	Senior Seminar in Graphic Arts	1	
Acct	2100	Survey of Accounting	3	
Mgt	3325	Business Communications	3	
Grap	3016	Graphic Arts Practicum, 3 or		
T&OE	3022	Internship in Technology, 3	3	
IndM	4210	Industrial Management, 3 or		
Mgt	3310	Principles of Management, 3	3	
Electives from the following				6
Grap	2610	Principles of Multimedia	3	
Grap	3024	Flexographic Technology	3	
Grap	3040	Screen Printing	3	
Grap	3043	Finishing Operations	3	
Grap	4045	Color Electronic Prepress Systems	3	
Grap	4051	Print Production	3	
Electives from one of the following areas				12
Area 1 Customer Service & Sales				
Area 2 Graphic Design				
Area 3 Multimedia Imaging				
Area 4 Production Management & Supervision				
Area 5 Technical Applications				
List of courses available from Department of Graphic Imaging and Design Technology.				
MINOR NOT REQUIRED				
GENERAL EDUCATION REQUIREMENTS (page 48)				48
Chem	1104	Div. II A (required) or		
Phys	1104	Div. II A (required)	4	
FREE ELECTIVES				8
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				6-7
Grap	1010	Introduction to Desktop Publishing & Printing	3	
Grap	1110	Fundamentals of Drafting	3	
Phot	1210	Elementary Photography	3	
Phot	1211	Elementary Technique & Critique	1	
Departmentally approved electives in graphics ..				13-14

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 methods and image generation using current desktop software. 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. Prerequisite: Grap 2030.

Grap 2032 Imaging Technology for the Graphic Arts

(3) Investigation of photographic and electronic technology used to produce line, halftone and color separated images for printing processes. Laboratory experiences support lecture/theory content. Prerequisite: Grap 1010.

Grap 2035 Image Assembly (3) Manual and electronic imposition methods, prepress proofing, conventional lithographic platemaking, computer to plate techniques, and direct digital printing. 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 Graphic Imaging and Design Technology.

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 Offset 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) Computer image preparation, screen tensioning, mesh selection, photo stencils, squeegees, markets, principles and applications for industrial screen printing. Laboratory experiences support lecture/theory content. Prerequisite: Grap 1010.

Grap 3043 Finishing Operations (3) Equipment, operations, and principles relative to trimming, binding, folding, shipping/mailling and specialized finishing operations, including scoring, perforating, die-cutting, embossing and foil stamping. 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. Prerequisites: Grap 2031 and Grap 2035.

Grap 3057 Graphic Arts Quality Assurance (3) Statistical quality control for graphic arts production; includes data analysis, product acceptance, process control, and problem solving techniques used in the management of quality. Prerequisites: 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 and Grap 2032.

Grap 4051 Print Production (3) Applied experiences in management and technological applications in the production of printed material including prepress, press, and post press operations. Prerequisites: Grap 2032, Grap 2035, and Grap 3051.

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 and Costing (3)

Identification of costs relative to materials, operations, and labor utilized in the production of printed matter. Budgeting, forecasting, cost accounting, and budgeted hourly rates. Prerequisites: Grap 3051 and Grap 4053.

Grap 4095 Senior Seminar in Graphic Arts (1)

Professional preparation integrating team building skills, problem solving, and analysis of current trends specific to graphic arts. Prerequisite: 90 semester hours.

Computer-Aided Drafting and Design Technology

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.

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 4124 Geometric Dimensioning and Tolerancing Principles (2) Basic theory and application of geometric dimensioning and tolerancing practices applicable to working drawings of machine parts. Prerequisite: Grap 1120.

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.

Grap 1500 Technical Problems in Graphics (1-3)

Individual or group work on introductory level technical problems in graphics. Provide exploration of content not available through normal course offerings. *May be repeated for a maximum of 6 hours.* Prerequisite: written contract/proposal with objectives and departmental consent.

Grap 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.

Grap 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.* Prerequisites: written contract/proposal with objectives and written department consent.

Grap 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.

Multimedia

Grap 2610 Principles of Multimedia (3) Selection, organization, and production of materials for multimedia. Introductory experiences creating web pages and interactive presentations for business, industry, and education.

Grap 2620 Multimedia Applications I (3) Multimedia experiences including implementation of visual and sound applied to the www and other technologies. These applications include still and motion imaging and animation. Hands-on experiences supplement lecture. Prerequisite: Grap 2610.

Grap 2670 Multimedia Animation (3) Fundamentals of animation theories and practices specializing in digital applications. Planning and storyboarding for types of animation. Hands-on experiences will supplement lecture. Prerequisite: Grap 2610.

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.

General

Fashion and Apparel Merchandising

FASHION: TEXTILES AND CLOTHING IN BUSINESS

Functional Major, B.S. Degree

(43 000118)

The graduate with a Bachelor of Science degree with a functional major in Fashion: Textiles and Clothing in Business will use the knowledge and skills obtained in the program to:

- Demonstrate an understanding of fashion terminology as related to the apparel industry
- Recognize the significance of practical reasoning to decision making
- Develop verbal and nonverbal communication skills
- Demonstrate a positive relationship with employers, employees, and the public served
- Demonstrate professional qualities which show value systems that enable actions that are socially ethical and responsible
- Demonstrate the ability to apply job related techniques through the psychomotor domain.

FUNCTIONAL MAJOR REQUIREMENTS				Sem. Hours	
.....				72	
FAMe 1400	Intro. to Fashion Merchandising	3	FAMe 4434	Fashion History	3
FAMe 1420	Applied Design in Fashion & Apparel Merchandising	3	FAMe 4442	Advanced Textiles	3
FAMe 1450	Textile & Apparel Fabrications I	3	FAMe 4444	Fashion Merchandising	3
FAMe 2430	Image Management for Fashion	3	FAMe 4445	Senior Seminar in Fashion & Apparel Merchandising	3
FAMe 2440	Fashion Merchandising Practicum	3	FAMe 4490	Internship in Fashion & Apparel Merchandising	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
MINOR NOT REQUIRED					
GENERAL EDUCATION REQUIREMENTS (page 48)					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. IV A (required)	3
FREE ELECTIVES					4
MINIMUM TOTAL					124

CLOTHING Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)

(000123)

MINOR REQUIREMENTS				Sem. Hours	
.....				21	
FAMe 1420	Applied Design in Fashion & Apparel Merchandising	3	FAMe 2442	Textiles	3
FAMe 2430	Image Management for Fashion	3	Departmentally approved electives		12

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 (3)

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 Image Management for Fashion (3)

Wardrobe planning from aesthetic, social, psychological, and economic viewpoints.

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.*

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: 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 or equivalent 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.

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.

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.*

Photography

PHOTOGRAPHY Major, B.S. Degree

(43 000228)

- The graduate with a Bachelor of Science degree in Photography will use the knowledge and skills obtained in the program to:
- Produce a portfolio appropriate to career goals.
 - Prepare for employment in photographic occupations.
 - Possess the flexibility to accommodate technological change.
 - Interpret the attributes of a photograph.
 - Demonstrate a functional understanding of selected photographic materials and processes.
 - Enjoy life more as a result of having developed skills in photography.
 - Recognize and acquire professional and visual ethics pertaining to photography.
 - Possess a sense of personal creativity.
 - Possess confidence in the skills and technology of professional imagery.
 - Establish the attitude and skills for self-motivated learning.

		Sem. Hours
MAJOR REQUIREMENTS		46
Phot 1210	Elementary Photography 3	(Continued from previous page)
Phot 1211	Elementary Technique & Critique ... 1	Phot 3250 Portrait Photography 3
Phot 1215	Photographer's Forum 3	Phot 4200 Color Imaging 3
Phot 2200	Color Transparency Photography 3	Phot 4252 Portfolio Photography 3
Phot 2210	Intro. Studio Techniques 3	
Phot 2220	Photographic Materials & Proc. 3	
Phot 2270	Zone System of Photography 3	
Phot 3230	Electronic Imaging 3	
(Continued on next page)		
Electives from one of the following areas		15
Area 1 Commercial		
Area 2 Media		
Area 3 Digital Imaging		
Area 4 Portrait		
Area 5 Technical		
MINOR REQUIREMENTS		18-25
GENERAL EDUCATION REQUIREMENTS (page 48)		48
lGen 3116	Div. IV A (required) 3	
FREE ELECTIVES		5-12
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
Phot 1210	Elementary Photography 3	Phot 3250 Portrait Photography 3
Phot 1211	Elementary Technique & Critique ... 1	Electives in photography 10-11
Phot 2210	Intro. Studio Techniques 3	

Phot 1203 Amateur Photography (3) Course encompasses exposing, and printing photographs including darkroom experiences. Color and digital imaging are introduced. Not for Photo majors or minors.

Phot 1210 Elementary Photography (3) Composing, exposing, processing, and printing of photographs. Must furnish focusing camera with adjustable f-stops, shutter speeds, and light meter. Prerequisite: Phot 1211 must be taken concurrently.

Phot 1211 Elementary Technique and Critique (1) Explanation, demonstrations, and critique of Elementary Photography assignments. Prerequisite: must be taken concurrently with Phot 1210.

Phot 1215 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.*

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

Phot 2210 Introduction to Studio Techniques (3) Theory and laboratory experiences involving problems associated with a variety of photographic situations applicable to commercial photography. Prerequisite: Phot 1210. And Phot 1211.

Phot 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: Phot 1210.

Phot 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: Phot 1210.

Phot 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: Phot 1210.

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

Phot 3215 Origins of Photography (3) A survey of the people, styles, inventions, and processes in photography from early developments to present day.

Phot 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: Phot 1210.

Phot 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: Phot 1210.

Phot 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: Phot 1210.

Phot 3260 Multi-Image Presentation (3) Provide knowledge and develop skill in planning, researching, photographing, sequencing, and producing multi-image presentations.

Phot 4200 Color Imaging (3) In-depth experience in exposing, manipulating and printing color images. Prerequisite: Phot 2210, Phot 2200, Phot 3230.

Phot 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.

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

Phot 4230 Business Management for Photographers (3) Exploratory experiences, information and techniques concerning the use of computer hardware and software use for photographic business management. Prerequisite: PHOT 3250.

Phot 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: Phot 1210 and Phot 3250.

Phot 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.

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

Electronics Technology

The second digit of each course number stands for the following: 0-Electronics Technology, 3-Electronics Engineering Technology, 4-Mid-America Railway Technologies, 5-Railway Signal Engineering Technology.

ELECTRONICS ENGINEERING TECHNOLOGY Functional Major, B.S. Degree

(43 000227)

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						79	
ET	1026	DC Circuit Analysis	4	EET	3320	Intro. to Data Communications	3
ET	1027	AC Circuit Analysis	4	EET	3330	Intro. to Communication Systems	3
ET	1050	Digital Principles & Applications	4	EET	3340	Control Systems Design	3
ET	2048	Active Electronic Devices	4	EET	4310	Fuzzy Logic Systems Design	3
ET	2058	Operational Amplifiers--Theory		EET	4320	Adv. Control Systems Design	3
		& Applications	4	EET	4330	Digital Signal Processing	
ET	2060	Microprocessors: Theory & Appl.	4			Systems Design	3
ET	2065	Computer Programming for		EET	4340	Neural Network Systems Design	3
		Electronics Technology	4	Mf&C	2500	Applied Computer Technology	2
EET	2300	Calculus for Electronics		T&OE	1042	Technical Mathematics II	3
		Engineering Technology	3	T&OE	2040	Calculus for Technology	3
EET	2320	Advanced Digital Circuitry	3	T&OE	3060	Technical Report Writing	2
EET	2330	Transform Analysis	3	Phys	1101	College Physics I	4
EET	3310	Microprocessor Systems Design	3	Phys	1102	College Physics II	4
MINOR NOT REQUIRED							
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the functional major, Phys 1101 and Phys 1102 are allowed to fulfill 3 s.h. of Div. II A)						45	
Comm	1000	Div. I B (required)	3	Chem	1104	Div. II A (required)	4
Math	1111	Div. I B (required)	3	Econ	1010	Div. II C (required)	3
MINIMUM TOTAL						124	

ELECTRONICS TECHNOLOGY Functional Major, B.S. Degree

(43 000221)

The graduate with a Bachelor of Science degree in Electronics Technology will use the knowledge and skills obtained in the program to:

- Research, prepare and present both oral and written reports on technical or management subjects related to his/her area of specialization
- Identify, analyze and solve technical or management problems related to his/her field of specialization
- Function effectively as a participating member of a work group to accomplish a particular goal
- Demonstrate desirable work habits and professional and conscientious attitudes in his/her particular areas of instruction through participation in professional activities and organizations, and leadership activities both in and out of the classroom
- Demonstrate a mastery of skill beyond the entry level related to one or more areas of technical, management or marketing specialties in the major area of study
- Demonstrate technical and general knowledge required in occupational work areas related to the major field of study.

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						79	
ET	1026	DC Circuit Analysis	4	ET	3041	Communication Systems	4
ET	1027	AC Circuit Analysis	4	T&OE	1042	Technical Mathematics II	3
ET	1050	Digital Principles & Applications	4	T&OE	2040	Calculus for Technology	3
ET	2048	Active Electronic Devices	4	T&OE	3060	Technical Report Writing	2
ET	2058	Operational Amplifiers--Theory		Phys	1104	Intro. to the Sciences: Physics	4
		& Applications	4	Mgt	3310	Principles of Management, 3 or	
ET	2060	Microprocessors: Theory & Appl.	4	IndM	4210	Industrial Management, 3	3
ET	2065	Computer Programming for				Electives in electronics technology	14
		Electronics Technology	4			Electives in management	9
ET	3014	Analog-Digital Circuitry	4			Departmentally approved electives	5
MINOR NOT REQUIRED							
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the functional major, Phys 1104 fulfills 3 s.h. of Div. II A)						45	
Comm	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						22-23
ET	1026	DC Circuit Analysis	4	Math	1112	College Trigonometry ,2 or
ET	1027	AC Circuit Analysis	4	T&OE	1042	Technical Mathematics, 3
ET	1050	Digital Principles & Applications	4	Upper-level electives in electronics technology		
ET	2048	Active Electronic Devices	4			
UNIVERSITIES STUDIES REQUIREMENTS (Math 1111 Div I C is required)						

RAILWAY SIGNAL ENGINEERING TECHNOLOGY Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor,
prerequisites are required for non ET or EET majors)
(000244)

						Sem. Hours
MINOR REQUIREMENTS						24
RSET	1510	Fundamentals of Railway Signal Engineering Technology	3	RSET	3540	Wayside Signal Design (Wayside I)
RSET	2520	Crossing Warning System Design (Crossings I)	3	RSET	3550	Interlocking Design (Wayside II)
RSET	2530	Crossing Warning System Advanced Applications (Crossings II)	3	RSET	3560	Advanced Wayside Signal System Design (Wayside III)
				RSET	4570	Train Control
				RSET	4580	Advanced Signaling Topics

Electronics Technology

Most ET and EET courses have a zero-credit laboratory requirement. Labs are scheduled for ET 1026, ET 1027, ET 1050, ET 2048, 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 (4: 3 lecture, 1 lab) Analysis and application of D.C. principles to passive networks. Laboratory experience in the use of basic test instruments. Prerequisite: T&OE 1040 or Math 1111 may be taken concurrently.

ET 1027 AC Circuit Analysis (4: 3 lecture, 1 lab) 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 T&OE 1042 or either concurrently and ET 1026.

ET 1050 Digital Principles and Applications (4: 3 lecture, 1 lab) 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.

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 2048 Active Electronic Devices (4: 3 lecture, 1 lab) 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 2058 Operational Amplifiers--Theory and Applications (4: 3 lecture, 1 lab) 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 (4: 3 lecture, 1 lab) 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 1050 or concurrently.

ET 2065 Computer Programming for Electronics Technology (4: 3 lecture, 1 lab) 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 1050 or concurrently.

ET 3014 Analog-Digital Circuitry (4: 3 lecture, 1 lab) 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 1050.

ET 3017 Industrial Electronics (4: 3 lecture, 1 lab) 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 (4: 3 lecture, 1 lab) 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 1050 or ET 2058 or concurrently.

ET 3038 Audio Systems (4: 3 lecture, 1 lab) 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 (4: 3 lecture, 1 lab) 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 (4: 3 lecture, 1 lab) 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 or consent of instructor.

ET 3058 A+ Certification (3) Preparation for the Computing Technology Industry Association computer certification. Includes both Core module test over PC hardware and DOS/Windows module over basic operating system fundamentals.

ET 3060 CCNA I (3) Local CISCO Academy internetworking fundamentals including LAN design, installation and troubleshooting. Hands on experiences involving cabling, routers and router configuration. Emphasis on CCNA certification.

ET 3061 CCNA II (3) Local Cisco Academy VLANs, IGRP, ACLs, WAN fundamentals and design, and emerging technologies. Hands-on experiences with routers and switches. Emphasis on CCNA certification. Prerequisite: ET 3060.

ET 3062 Cisco CCDA Certification (3) Preparation for the Cisco Certified Design Associate (CCDA) certification test. Prerequisites: ET 3060 or CCNA certification.

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* (4: 3 lecture, 1 lab) 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 2020 or consent of instructor. *Not available for graduate credit.

ET 4040 Win2000 MCSE Certification 1 (3) Microsoft Certified Systems Engineer (MCSE) certification in the core requirements of installing, configuring, and administering Microsoft Windows 2000 Professional and Server. Prerequisite: ET 3058 or instructor consent.

ET 4042 Win2000 MCSE Certification 2 (3) Microsoft Certified Systems Engineer (MCSE) certification in the core requirements of Implementing and Administering Microsoft Windows 2000 Network Infrastructure and Directory Services Infrastructure.

ET 4043 Win2000 MCSE Certification 3 (3) Windows 2000 Microsoft Certified Systems Engineer (MCSE) certification in one core exam and two elective exams. Prerequisites: ET 4042.

ET 4044 Video Systems* (4: 3 lecture, 1 lab) 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. *Not available for graduate credit.

ET 4048 Advanced Communication Systems* (4: 3 lecture, 1 lab) 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 4060 Cisco CCNP Advanced Routing Certification* (3) Cisco Local Academy advanced topics in VLSMs, OSPF environments, EIGRP, BGP, optimizing routing, and

scalability. Hands-on experiences with emphasis on Cisco's CCNP 640-503 certification test. Prerequisites: ET 3061 or CCNA certification or instructor consent. *Not available for graduate credit.

ET 4061 Cisco CCNP Remote Access Certification* (3) Cisco Local Academy remote access topics in WAN protocols, WAN design, network management and security. Hands-on experiences with emphasis on Cisco's CCNP 640-505 certification test. Prerequisites: ET 4060 or instructor consent. *Not available for graduate credit.

ET 4062 Cisco CCNP Switching Certification* (3) Cisco Local Academy advanced switching topics. Hands-on experiences with emphasis on the Cisco CCNP 640-504 is certification test. Prerequisites: ET 4061 or instructor consent. *Not available for graduate credit.

ET 4063 Cisco CCNP Support Certification* (3) Cisco Local Academy Local and Wide Area Network troubleshooting. Hands-on experiences with emphasis on the Cisco CCNP 640-506 certification test. Prerequisites: ET 4062 or instructor consent. *Not available for graduate credit.

ET 4064 Cisco CCDP Certification* (3) Preparation for the Cisco certified Design Professional (CCDP) certification test. Prerequisites: ET 3061 or CCNA certification; and ET 4062 or concurrent. *Not available for graduate credit.

Electronics Engineering Technology

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: T&OE 2040.

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: ET 1050.

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: T&OE 2040 and ET 2048.

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: T&OE 2040 and ET 2060.

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 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 2300 or concurrently, and EET 2330.

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.* *Not available for graduate credit.

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. Prerequisites: ET 2065, EET 2320, and EET 3310. *Not available for graduate credit.

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 3310 and EET 3340. *Not available for graduate credit.

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. Prerequisites: ET 2065, EET 2320, EET 2330, and EET 3310. *Not available for graduate credit.

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. Prerequisites: ET 2065, EET 2320, and EET 3310. *Not available for graduate credit.

Mid-America Railway Technologies

MART 1410 Signals I (4) Entry-level concentration on the basics of Railway Signaling gaining fundamental skills and knowledge essential to becoming a competent Signalman. Prerequisite: Work Keys Profile assessment instrument.

MART 1412 Signals II (4) Intermediate-level, introduces new skills and concepts while building on the fundamentals learned in Signals I with newer signal technologies. Prerequisite: MART 1410.

MART 1414 Signals III (4) Advanced-level course focuses on advanced microprocessor-based technologies and re-examination of major equipment and systems. Prerequisite: MART 1412.

MART 2416 Grade Crossing Warning Systems (2) Concentrates on grade-crossing warning systems from gate mechanics to constant warning devices, and FRA Part 234 Grade Crossing Signal Safety. Prerequisite: MART 1414.

MART 2418 Signal Systems I (2) Emphasis on the overall signal system including standard practices of installing, maintaining, and troubleshooting mechanical, electrical, and electronic equipment as well as advanced microprocessor-based systems. Prerequisite: MART 2416.

MART 2420 Signal Systems Management (2) Review of major systems that comprise the overall signal system. Important techniques for leading effectively, maintaining workplace productivity. Prerequisite: MART 2418.

Railway Signal Engineering Technology

RSET 1510 Fundamentals of Railway Signal Engineering Technology (3) History of railroad signaling, purposes, application of electronics/electrical principles, terminology and symbols, fail-safe design, vital and non-vital design, track circuits, and equipment and circuitry. Prerequisite: ET 1027.

RSET 2520 Crossing Warning System Design (Crossings I) (3) Basic principles, terminology, symbols applied to real-life applications in fail-safe, vital/non-vital track design, track circuits, equipment, and circuitry applied to crossing warning systems. Prerequisite: RSET 1510.

RSET 2530 Crossing Warning System Advanced Applications (Crossings II) (3) Complicated factors involved in crossing systems, interconnecting crossing warning systems, wayside signals and advanced train detection. Prerequisite: RSET 2520.

RSET 3540 Wayside Signal Design (Wayside I) (3) Signal systems in control of train movement, intermediate signal design, electric lock, switch circuit design, train detection, block signal systems, coded track, and train braking. Prerequisite: RSET 2530.

RSET 3550 Interlocking Design (Wayside II) (3) Interlocking designs, control of power switches, routing trains and signals, locking circuits, remote control interlockings, lamp failures, and programmable controllers. Prerequisite: RSET 3540.

RSET 3560 Advanced Wayside Signal System Design (Wayside III) (3) Complete wayside signal systems, complicated interlocking design, parallel routes, sectional release, block design, programming of programmable controllers, and testing of signal systems. Prerequisite: RSET 3550.

RSET 4570 Train Control (3) Train control system design, methods of train control, intermittent and continuous cab signal systems, carborne equipment, levels of enforcement and communication based train control systems. Prerequisite: RSET 3560.

RSET 4580 Advanced Signaling Topics (3) Yard signal systems, train inspection systems, cost justification, project quoting, project management, and the latest technology of railway signaling. Prerequisite: RSET 4570.

Industrial Management

In the department of Manufacturing and Construction, the second digit in the course number with a prefix of **IndM** stands for the following: 2--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 Facilities Management (3) Provides students and practitioners with the practical resources that describe the techniques and procedures for developing an efficient facility layout and an introduction to computer simulations.

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.

Aerospace Manufacturing Technology

In the area of Aerospace Manufacturing Technology, the second digit in the course number with a prefix of **AMT** stands for the following: 0--General, 1--Aerospace, 2--Manufacturing.

AEROSPACE MANUFACTURING TECHNOLOGY Functional Major, B.S. Degree (43 000852)

The graduate with a Bachelor of Science degree with a functional major in Aerospace Manufacturing Technology will use the knowledge and skills obtained in the program to:

- Apply technical, statistical and managerial concepts and principles to aerospace manufacturing situations to maintain and improve production processes and product quality.
- Understand the properties, characteristics, and appropriate use of manufacturing materials, standards, specifications and processes.
- Utilize critical thinking skills and systematic problem solving techniques to analyze production control issues; collect and interpret data; and to prepare, present and communicate professional reports.
- Understand management concepts, cost and economic issues, effective decision-making, quality improvement, production planning, control techniques and information systems used in the multicultural and global business environment.
- Demonstrate professional, ethical and value driven communication skills to interpret, convey, and articulate reports, problems and proposed solutions in the group or team environment.

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						78	
AMT	3130	Composite Technology I	3	Mf&C	1501	Seminar in Manufacturing	1
AMT	3210	Mfg. in the Aerospace Industry	3	Mf&C	3510	Mfg. Planning & Control	3
AMT	4060	Aerospace Mfg. Safety	3	Mf&C	3520	Manufacturing Economy	3
AMT	4221	Mfg. Problem Solving	3	Mf&C	3550	Principles of Numerical Control	3
AMT	4250	Project Management in		Mf&C	4520	Robotics and Automation	3
		Aerospace Manufacturing	3	Mf&C	4580	Quality Systems	3
Avia	1200	General Mechanics	3	Grap	1110	Fundamentals of Drafting	3
Avia	2230	Aircraft Electrical Systems	3	Grap	1120	Machine Drafting	3
Avia	3250	Complex Aircraft Systems	3	Grap	2170	Intro. to Computer-Aided Drafting	3
Avia	3255	Metal Airframe Processing	3	Grap	4124	Geometric Dim. & Tolerance	2
Avia	4010	Aerodynamics	3	IndM	4210	Industrial Management	3
Pr&T	4032	Hydraulics & Pneumatics	3	IndM	4240	Facilities Management	3
Pr&T	4230	Aircraft Instrument Systems	3	T&OE	3060	Technical Report Writing	2
Mf&C	1010	Materials for Mfg. & Construction	3	T&OE	3022	Internship in Technology	4
MINOR NOT REQUIRED							
GENERAL EDUCATION REQUIREMENTS (page 48)						48	
Comm	1000	Div. I B (required)	3	Econ	1010	Div. II B (required)	3
Math	1111	Div. I C (required)	3	I Gen	3116	Div. IV A or	
Phys	1104	Div. II A (required)	4	I Cap	4110	Div. IV B (required)	3
BE&O	1210	Div. II A (required)	3				
MINIMUM TOTAL						126	

General

AMT 4060 Aerospace Manufacturing Safety (3)

Safety, health and environmental issues in aerospace manufacturing with an emphasis on the management of safety programs in manufacturing industries.

Aerospace

AMT 3130 Composite Technology I (3) Fundamental principles of materials, basic design theory, manufacturing processes, inspection and repair concepts.

AMT 4250 Project Management in Aerospace Manufacturing (3) Managing aerospace manufacturing projects. Students deal with decision making, organizing, planning, and controlling manufacturing projects in the aerospace industry. Prerequisite: Mf&C 3510.

Manufacturing

AMT 3210 Manufacturing in the Aerospace Industry (3) Manufacturing activities required in order to plan, organize, schedule, control and direct manufacturing activities in the environment of an aerospace industry.

AMT 4221 Manufacturing Problem Solving (3) A micro-level look at issues that directly affect processes, procedures, and management within the manufacturing industry.

Automotive Technology

In the area of Automotive Technology, 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, 5--Aviation Safety.

POWER AND TRANSPORTATION Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)

(000162)

		Sem. Hours
MINOR REQUIREMENTS		22
Pr&T 1010	Power Mechanics	3
Pr&T 4032	Hydraulics & Pneumatics	3
Elect one of the following groups		16
General		
Avia 1020	Aeronautics	2
Pr&T 4410	Intermodal Surface Trans.	3
Departmentally approved electives in		
Power & Transportation		11
Automotive		
Pr&T 2110	Eng. Theory & Maintenance	4
Pr&T 2130	Auto. Electrical Systems	4
Pr&T 2132	Fuel Sys. & Emission Control	4
Pr&T 3120	Steering, Susp. & Brakes	4

AUTOMOTIVE/POWER TECHNOLOGY Functional Major, B.S. Degree

(43 000838)

The graduate with a Bachelor of Science degree in Automotive and Power Technology will use the knowledge and skills obtained in the program to:

- Research, prepare and present both oral and written reports on technical or management subjects related to his/her area of specialization
- Identify, analyze and solve technical or management problems related to his/her field of specialization
- Function effectively as a participating member of a work group to accomplish a particular goal
- Demonstrate desirable work habits and professional and conscientious attitudes in his/her particular areas of instruction through participation in professional activities and organizations, and leadership activities both in and out of the classroom
- Demonstrate a mastery of skill beyond the entry level related to one or more areas of technical, management or marketing specialities in the major area of study
- Demonstrate technical and general knowledge required in occupational work areas related to the major field of study.

		Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS		73
Pr&T 1010	Power Mechanics	3
Pr&T 2110	Engine Theory & Maintenance	4
Pr&T 2130	Auto. Electrical Systems	4
Pr&T 2132	Fuel Systems & Emission Controls	4
Pr&T 2150	Mobile HVAC	3
Pr&T 3150	Diesel Technology	3
Pr&T 4032	Hydraulics & Pneumatics	3
T&OE 3022	Internship in Technology	3
ET 1026	DC Circuit Analysis	4
Grap 1110	Fundamentals of Drafting	3
Acct 2100	Survey of Accounting	3

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Mf&C	2530	Machine Tool Technology	3
T&OE	3060	Technical Report Writing	2
IndM	4210	Industrial Management, 3 or	
Mgt	3310	Prin. of Management, 3	3

Departmentally approved electives from one of the three areas listed below. A listing of courses is available from the Chair of the Department 28

- Area 1 Automotive Technology
- Area 2 Design Technology
- Area 3 Management Technology

MINOR NOT REQUIRED

GENERAL EDUCATION REQUIREMENTS (page 48) 48

Math	1111	Div. I C (required)	3	Econ	1010	Div. II B (required)	3
Phys	1104	Div. II A (required)	4	Psy	1100	Div. II C (required)	3
BE&O	1210	Div. II A (required), 2 or		ICap	4112	Div. IV B (required)	3
LIS	1600	Div. II A (required), 2	2				

UPPER-LEVEL ELECTIVES 3

MINIMUM TOTAL 124

General and Professional**Pr&T 1010 Power Mechanics (3: 2 lecture, 1 lab)**

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 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 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: 2 lecture, 1 lab) 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 4032 Hydraulics and Pneumatics (3: 2 lecture, 1 lab) Fluid power principles with practical application of hydraulics, pneumatics, and fluidics. Prerequisites: Math 1111 or T&OE 1040.

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. Prerequisite: Pr&T 4032.

Pr&T 4038 Advanced Hydraulics (3) Hydraulic system analysis and troubleshooting along with servo and electronic control theory and application. Prerequisite: 4032.

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 (4: 3 lecture, 1 lab) 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 (4: 3 lecture, 1 lab) Procedures for testing, adjusting, repairing, and servicing of electrical components in automotive charging, starting, ignition, and accessory systems. Prerequisite: Pr&T 1010 or concurrently.

Pr&T 2132 Fuel Systems and Emission Controls (4: 3 lecture, 1 lab) Fuel and related emission control systems. Basic carburetion, fuel injection, and emission control devices. Prerequisite: Pr&T 2130.

Pr&T 2150 Mobile Heating, Ventilating, Air-Conditioning (Mobile HVAC) (3: 2 lecture, 1 lab) Designed to introduce technicians to mobile heating, ventilation, and air-conditioning systems.

Pr&T 3110 Automotive Engine Overhaul (4: 3 lecture, 1 lab) 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 or Agri 3200.

Pr&T 3120 Steering, Suspension and Brakes (4: 3 lecture, 1 lab) 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 (4: 3 lecture, 1 lab) 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 (4: 3 lecture, 1 lab) In-depth classroom and laboratory experiences in the diagnosis, service and repair of transmissions and drivelines. Prerequisite: Pr&T 1010 or Agri 3200.

Pr&T 3150 Diesel Technology (3: 2 lecture, 1 lab) 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 or Agri 3200.

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.

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. *Not available for graduate credit.

Manufacturing and Construction

In the area of Manufacturing and Construction, the second digit in the course number with a prefix of **Mf&C** stands for the following: 0--General, 1--Metals, 2--Woods, 3--Construction, 4--Plastics, 5--Manufacturing.

CONSTRUCTION MANAGEMENT Functional Major, B.S. Degree (43 000239)

The graduate with a Bachelor of Science degree with a functional major in Construction Management will use the knowledge and skills obtained in the program to:

- Apply oral, written, graphic and listening skills as each enhances the behavioral principles or attitude and effective communications.
- Apply scientific knowledge of the mathematical, physical, and construction sciences to the economic utilization of materials and forces of nature affecting construction practice. To implement the various forms of technology necessary to complete the task of construction management, utilizing the computer and electronic data processing through complete word-processing, data bases, spreadsheets, applications, and the information highway.
- Apply the principles and philosophy of management systems, cost accounting, and economics to the construction industry, including the interpretation of contracts, the values of team building, and the Construction Code of Conduct established by the industry through the assistance of the American Institute of Constructors.
- To identify the appropriate construction management principles necessary to complete the site plans, evaluating vendors and subcontractors, writing field purchase orders, change orders, subcontract agreements, shop drawings, as built drawings daily logs and job diaries, construction reports and progress payment requests.
- To execute construction safety standards including the ability to interpret the OSHA construction standards, establish safety and health procedures on the job site, and perform hazard material and process analysis.
- Understand the science of materials and methods of construction as they apply to the sixteen Construction Specifications Institute (CSI) Divisions designated for the construction industry. Including terminology, standard designations, sizes, and quality testing.
- Complete the estimating, cost accounting, and bidding sequence necessary for construction job acquisition and completion. To prepare and complete cost control processes including the ability to establish a budget, prepare cost reports, and forecast expenditures.
- Perform quantity take-off, interpret construction specification, identify appropriate codes, identify site conditions, apply value engineering, and develop detailed project proposals. To prepare a complete construction project schedule, develop a procurement time table, establish a project manual and plan showing the logical sequence of activities and time duration in order to monitor progress and update schedules.

						Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS						83
Mf&C 2020	Mechanics of Materials	3	T&OE 3022	Internship in Technology	1	
Mf&C 2040	Materials Testing	3	IndM 4210	Industrial Management	3	
Mf&C 3020	Applied Strength of Materials	3	IndM 4260	Industrial Supervision	3	
Mf&C 1300	Intro. to Construction Management	2	EaSc 2100	Engineering Geology	4	
Mf&C 1301	Sem. in Construction Mgt.	2	Math 1112	College Trigonometry	2	
Mf&C 2310	Construction Techniques	3	Math 1131	Calculus for Business & Econ.	3	
Mf&C 2325	Project Cost Estimating	3	Acct 2101	Principles of Financial Acct.	3	
Mf&C 2340	Surveying & Construction Layout	3	Fin 2801	Business Statistics I	3	
Mf&C 3320	Prin. of Construction Mgt.	3	Mgt 3310	Principles of Management	3	
Mf&C 3330	Building Codes & Code Adm.	3	Grap 2160	Structural Drafting, 3 or		
Mf&C 3350	Building Structures	3	Grap 3150	Civil Drafting, 3 or		
Mf&C 3355	Scheduling for Mfg. & Const.	3	Grap 3160	Residential Arch. Drawing, 3	3	
Mf&C 4310	Construction Safety	3	Acct 2102	Principles of Managerial Acct., 3 or		
Mf&C 4330	Mechanical Systems for Buildings	3	BLaw 2720	Legal Environment of Business, 3 or		
Mf&C 4355	Computer-Based Project Control	3	Mkt 3400	Principles of Marketing, 3	3	
Mf&C 4380	Heavy Equipment	3	HRM 3920	Human Resource Management, 3 or		
Grap 1110	Fundamentals of Drafting	3	Fin 3805	Real Estate Prin. & Practices, 3	3	
MINOR NOT REQUIRED						
GENERAL EDUCATION REQUIREMENTS (page 48)						48
Math 1111	Div. I C (required)	3	BE&O 1210	Div. II A (required)	2	
Phys 1103	Div. II A (required)	3	Econ 1010	Div. II B (required)	3	
EaSc 1004	Div. II A (required)	4	ICap 4109	Div. IV B (required)	3	
MINIMUM TOTAL						131

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	
Grap	1110	Fundamentals of Drafting	3	ICap	4110	Industrial Problem Solving	3	
Grap	1120	Machine Drafting	3	Pr&T	1010	Power Mechanics	3	
Grap	2170	Intro. to Computer-Aided Drafting	3	ET	1010	Applied Electricity, 3 or		
Mf&C	1010	Mat. for Mfg. & Construction	3	ET	2020	Industrial Electricity, 3	3	
Mf&C	1510	Intro. to Manufacturing Processes	3	Electives in Math and/or Phys				6
Mf&C	2515	Applied Manufacturing Processes	3	Upper-level electives in ET, Grap, Mf&C, IndM, Pr&T, or T&OE				4
Mf&C	2530	Machine Tool Technology	3	(Continued on next page)				

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MINOR REQUIREMENTS	18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the major, iCap 4110 fulfills 3 s.h. of Div. IV B)	45
FREE ELECTIVES	2-9
MINIMUM TOTAL	124

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

The graduate with a Bachelor of Science Degree in Industrial Technology 2+2 functional major transfer program will use the knowledge and skills obtained in the program to:

- Apply mathematical, statistical and scientific principles to industrial situations to maintain and enhance the work within industry
- Use the computer proficiently as an essential tool in planning, monitoring, and controlling of work within industry
- Understand management concepts of cost estimating, quality improvement, scheduling, production planning and control, industrial supervision, work design and ergonomics and plant layout and materials handling
- Communicate effectively in both individual and team situations using both oral and written communications
- Utilize critical thinking skills to solve industrial problems in both individual and team situations.

Sem. Hours

FUNCTIONAL MAJOR REQUIREMENTS	76-82
Associate Degree	42
A Technology related Associate in Science Degree from an accredited community college or technical institute in a field of study related to Industrial Technology will be accepted. Forty-two semester hours of the degree transferred should apply towards the major and the remainder towards General Education The General Education requirements transferred must be equivalent to Central's requirements.	Departmentally approved upper-level electives from one of the three areas listed below. A listing of courses is available from the Chair of the Department
IndM 4210 Industrial Management	3
IndM 4240 Facilities Management, 3 or	
Mf&C 4355 Computer-Based Project Control, 3 or	
IndM 4260 Industrial Supervision	3
Mf&C 3320 Prin. of Construction Mgt., 3 or	
Mf&C 3520 Manufacturing Economy, 3	3
Mf&C 3510 Manufact. Planning & Control, 3 or	
Mf&C 3355 Scheduling for Mfg. & Const., 3	3
Mf&C 4015 Legal Aspects of Industry	3
Mf&C 4310 Construction Safety, 3 or	
AMT 4060 Aerospace Manufact. Safety, 3	3
Mf&C 4580 Quality Systems	3
	<i>A list of required background courses follow each area.</i>
	Area 1 Aerospace manufacturing
	Pr&T 1200 General Mechanics
	Pr&T 1255 Basic Airframe Maintenance
	Mf&C 1120 Welding
	Area 2 Construction Management
	Mf&C 2310 Construction Techniques
	Mf&C 2325 Project Cost Estimating
	Mf&C 2040 Materials Testing
	Area 3 Manufacturing Management
	Grap 1110 Fundamentals of Drafting
	Grap 1120 Machine Drafting

MINOR NOT REQUIRED	
GENERAL EDUCATION REQUIREMENTS (page 48)	48
Math 1111 Div. I C (required)	3
Phys 1104 Div. II A (required)	4
BE&O 1210 Div. II A (required)	2
Econ 1010 Div. II B (required)	3
ICap 4109 Div. IV B (Area 2) or	
ICap 4110 Div. IV B (Area 1 & 3) or	
IGen 3116 Div. IV A (Area 1)	3
MINIMUM TOTAL	127

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

The graduate with a Bachelor of Science degree with a functional major in Industrial Technology-Manufacturing Management will use the knowledge and skills obtained in the program to:

- Apply mathematical, statistical and scientific principles to manufacturing situations to maintain and enhance production and product quality.
- Understand the properties, characteristics, and appropriate use of manufacturing materials, standards, specifications and manufacturing processes.
- Use the computer proficiently as an essential tool: to plan, monitor and control production; to collect and analyze data; and to prepare, present and communicate professional reports.
- Understand business, costs, economic justification, manufacturing economy, decision-making, quality improvement, production planning, production control techniques and manufacturing information systems.
- Use appropriate communication skills to interpret, convey, and articulate reports, problems and proposed solutions in the group or team environment.
- Use critical thinking, observation, questioning, analyzing techniques to solve manufacturing related problems systematically in both an independent and a team environment.
- Utilize effective leadership and supervisory skills with a concern for diversity, the global environment and professional ethics.

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						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						82	
Mf&C	1010	Mat. for Mfg. & Construction	3	IndM	4220	Work Design & Ergonomics	3
Mf&C	2020	Mechanics of Materials	3	IndM	4240	Facilities Management	3
Mf&C	2040	Materials Testing	3	IndM	4260	Industrial Supervision	3
Mf&C	1501	Seminar in Manufacturing	2	Grap	1110	Fundamentals of Drafting	3
Mf&C	1510	Intro. to Manufacturing Processes	3	Grap	1120	Machine Drafting	3
Mf&C	2515	Applied Manufacturing Processes	3	Grap	2170	Intro. to Computer-Aided Drafting	3
Mf&C	2530	Machine Tool Technology	3	Grap	4124	GD&T Principles	2
Mf&C	3510	Mfg. Planning & Control	3	Pr&T	4032	Hydraulics & Pneumatics	3
Mf&C	3520	Manufacturing Economy	3	SS&T	3120	Intro. to Industrial Hygiene, 3 or	
Mf&C	3530	Inspection & Quality Control	3	SS&T	3430	Industrial Hazard Control, 3	3
Mf&C	3550	Principles of Numerical Control	3	T&OE	3022	Internship in Technology	1
Mf&C	3562	Computer Numerical Control	3	Math	1112	College Trigonometry	2
Mf&C	4520	Robotics & Automation	3	Departmentally approved electives			12
Mf&C	4580	Quality Systems	3				
MINOR NOT REQUIRED							
GENERAL EDUCATION REQUIREMENTS (page 48)						48	
Math	1111	Div. I C (required)	3	BE&O	1210	Div. II A (required)	2
Phys	1104	Div. II A (required)	4	Econ	1010	Div. II B (required)	3
Chem	1103	Div. II A (required)	3	ICap	4110	Div. IV B (required)	3
MINIMUM TOTAL						130	

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	2040	Materials Testing	3	Mf&C	3355	Scheduling for Mfg. & Const.	3
Mf&C	2325	Project Cost Estimating	3	Mf&C	1510	Intro. to Manufac. Processes	3
Grap	1110	Fundamentals of Drafting	3	Mf&C	2515	Applied Manufac. Processes	3
Electives from the following -- select				Mf&C	2530	Machine Tool Technology	3
manufacturing or construction courses			9	Mf&C	3510	Mfg. Planning & Control	3
Mf&C	2310	Construction Techniques	3	Mf&C	3550	Principles of Numerical Control	3
Mf&C	3320	Prin. of Construction Mgt.	3	Grap	2170	Intro. to Computer-Aided	
Mf&C	3350	Building Structures	3	Drafting			3
Mf&C	4380	Heavy Equipment	3				

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 (2) 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 1112.

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

Mf&C 3020 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 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 4015 Legal Aspects of Industry (3) Coverage of legal aspects of industry. Focus on the legal system, sources of law, and types of law affecting the manufacturing and/or construction industry.

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.

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 upholstery.

Construction

Mf&C 1300 Introduction to Construction

Management (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 1311 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.

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.

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. Prerequisites: Mf&C 2310 and Mf&C 2040, or consent of instructor.

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 2040 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. Prerequisites: Mf&C 2310 or junior standing, or consent of instructor.

Mf&C 4325 Computer Estimating and Cost Analysis (3) An advanced course in construction cost estimating

118 Manufacturing and Construction

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. Prerequisites: Mf&C 2310 or junior standing.

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-Based Project Control (3) An advanced course in construction project scheduling utilizing the computer and associated professional software to assist the project scheduler. Prerequisites: Mf&C 3355.

Mf&C 4380 Heavy Equipment (3) Survey of the types, uses, and economics of heavy equipment utilized in the construction industry. Prerequisites: Mf&C 2310, Math 1111.

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: BE&O 1210 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 or junior class standing.

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.

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. *Not available for graduate credit.

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.

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.

Arts and Sciences

A&S 1244 Special Topics (1-3) Individual or group work in the arts and sciences.

A&S 2244 Special Topics (1-3) Individual or group work in the arts and sciences.

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.

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.

AFRICANA STUDIES Minor for a Bachelor's Degree

(000323)

		Sem. Hours
MINOR REQUIREMENTS		21-22
Hist	2410	Introduction to Africana Studies 3
Univ	1050	Valuing Differences 1
*ISP	4000	Study Abroad, 3 or
**Hist	4351	Special Projects in History, 3 or
#Engl	4990	Special Projects in English, 3 3
Africana Studies		
Select 11-12 credit hours from Area A or Area B as a field of concentration. Select 2-3 credit hours from the Area not chosen for concentration for a total of 14-15 credit hours.		
Africana Studies Area A		
Literary, Geographical, Political and Historical Development		
Mus	1281	History and Development of Jazz 3
Geog	3221	Geography of Africa 2
Hist	4309	African American in American History 3
Hist	4471	The African Diaspora 3
Hist	4472	African History 3
+Engl	3990	Special Topics in English 3
Engl	4680	African American Literature 3
PoIS	3551	Race & Ethnic Politics in the U.S. 3
PoIS	4553	20 th Cent. African-American Politics 3
Africana Studies Area B		
Gender, Culture and Social Issues		
Soc	1800	General Sociology 3
Electives from the following 9		
+#A&S	1244	Special Topics 3
WS	2000	Race, Class and Gender 3
Rel	2410	Exploring Religions of Africa, the Caribbean, and African-America 3
Soc	1830	Social Problems 3
Soc	3825	Race and Ethnic Relations 3
Soc	3845	Social Inequality 3
Soc	4810	Urban Sociology 3
*(University of Ghana)		
**(Research & Writing Course in African/African American History)		
#(Research & Writing Course in African American Literature)		
+(Research & Writing Course in Survey of Twentieth Century African American Literature)		
+ #(Elementary Akan)		

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: Central Missouri State University 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)

The graduate with a Bachelor of Science in Education degree in Art will use the knowledge and skills obtained in these programs to:

- Demonstrate critical and creative thinking by incorporating theories and practices in art and design production adequate for innovative expression in the visual arts.
- Communicate and support informed and artistically sensitive interpretations and judgments about his/her own work as well as visual forms made by others by using perceptual, critical and aesthetic concepts that underlie the disciplines of art and design.
- Recognize and describe major periods, styles and artists in art history, as well as the historical forces that influence aesthetics, creativity and critical theory.
- Facilitate a culturally rich and visually sensitive society by recognizing and utilizing the unique and important artistic contributions made by women and men from diverse racial, geographical and cultural groups.
- Use technology in creative, critical and teaching processes as well as a resource for producing art and gathering information about art, art history, aesthetics and art criticism.

				Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS				57	
Art	1110	Drawing I	3	Art 1825 Art History Survey II	3
Art	1120	Drawing II	3	Art 3915 Prob. in Elementary Art Education	3
Art	3209	Figure Construction	3	Art 3920 Prob. in Secondary Art Education	3
Art	1315	Design I	3	Art 1815 Art History Survey I, 3 or	
Art	1325	Design II	3	Art 1835 Survey of Non-Western Art	
Art	3314	Fibers	3	History, 3	3
Art	2412	Ceramics I	3	Art 4850 20th Century Art & Architecture, 3 or	
Art	2420	Sculpture I	3	Art 4860 Contemporary Art & Design, 3	3
Art	2511	Painting I	3	ICap 4221 Artists in Contemporary Society	3
Art	2710	Introduction to Printmaking	3	Upper-level concentration in studio art in one of	
Art	1800	Ideas & the Visual Arts	3	the following areas: drawing, painting, watercolor,	
				sculpture, fibers, printmaking, ceramics	
				6	

MINOR NOT REQUIRED

GENERAL EDUCATION REQUIREMENTS (page 48)--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. IV B.)

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	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. III.

PROFESSIONAL EDUCATION REQUIREMENTS (see page 205)

				28
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MINIMUM TOTAL

				127
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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)

The graduate with a Bachelor of Fine Arts degree in Art will use the knowledge and skills obtained in these programs to:

- Demonstrate critical and creative thinking by incorporating theories and practices in art and design production adequate for innovative expression in the visual arts.
- Communicate and support informed and artistically sensitive interpretations and judgments about his/her own work as well as visual forms made by others by using perceptual, critical and aesthetic concepts that underlie the disciplines of art and design.
- Recognize and describe major periods, styles and artists in art history, as well as the historical forces that influence aesthetics, creativity and critical theory.
- Facilitate a culturally rich and visually sensitive society by recognizing and utilizing the unique and important artistic contributions made by women and men from diverse racial, geographical and cultural groups.
- Use technology in creative, critical and teaching processes as well as a resource for producing art and gathering information about art, art history, aesthetics and art criticism.

				Sem. Hours			
FUNCTIONAL MAJOR REQUIREMENTS				87			
Art	4020	Studio Seminar (Portfolio)	3	Art	2412	Ceramics I, 3 or	
Art	1110	Drawing I	3	Art	2420	Sculpture I, 3	3
Art	1120	Drawing II	3	Art	1815	Art History Survey I, 3 or	
Art	1315	Design I	3	Art	1835	Survey of Non-Western Art	
Art	1325	Design II	3			History, 3	3
Art	2335	Design III	3	Art	4850	20th Century Art & Architecture, 3 or	
Art	2511	Painting I	3	Art	4860	Contemporary Art & Design, 3	3
Art	3510	Watercolor	3	Elective in art			3
Art	2610	Introduction to Commercial Art	3	Departmentally approved electives from one of the			
Art	2710	Introduction to Printmaking	3	following areas			36
Art	1800	Ideas & the Visual Arts	3	Area 1 Graphic Design			
Art	1825	Art History Survey II	3	Area 2 Illustration			
ICap	4221	Artists in Contemporary Society	3	(List available from the Chair of the Art Department.)			

MINOR NOT REQUIRED

GENERAL EDUCATION REQUIREMENTS (page 48) --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. IV B)	42
MINIMUM TOTAL	129

INTERIOR DESIGN Functional Major, B.F.A. Degree

(47 000374)

The graduate with a Bachelor of Fine Arts degree in Art will use the knowledge and skills obtained in these programs to:

- Demonstrate critical and creative thinking by incorporating theories and practices in art and design production adequate for innovative expression in the visual arts.
- Communicate and support informed and artistically sensitive interpretations and judgments about his/her own work as well as visual forms made by others by using perceptual, critical and aesthetic concepts that underlie the disciplines of art and design.

- Recognize and describe major periods, styles and artists in art history, as well as the historical forces that influence aesthetics, creativity and critical theory.
- Facilitate a culturally rich and visually sensitive society by recognizing and utilizing the unique and important artistic contributions made by women and men from diverse racial, geographical and cultural groups.
- Use technology in creative, critical and teaching processes as well as a resource for producing art and gathering information about art, art history, aesthetics and art criticism.

(Program listed on next page)

(Continued from previous page)

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						87	
Art	4020	Studio Seminar	3	Grap	3160	Residential Arch. Drawing	3
Art	1110	Drawing I	3	lCap	4221	Artists in Contemporary Society	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	Art	2511	Painting I, 3 or	
Art	2310	Introduction to Interior Design	3	Art	3510	Watercolor, 3	3
Art	2320	Residential Interior Design	3	Art	1815	Art History Survey I, 3 or	
Art	2335	Design III	3	Art	1835	Survey of Non-Western Art	
Art	3305	Interior Design Presentation Techniques	3			History, 3	3
Art	3310	Traditional Interiors	3	Art	4850	20th Century Art & Architecture, 3 or	
Art	3320	Prof. Practice for Interior Designers	3	Art	4860	Contemporary Art & Design, 3	3
Art	3330	Restaurant & Store Planning	3	Electives from the following			6
Art	3340	Interior Detailing & Furniture Design	3	Art	2610	Intro. to Commercial Art	3
Art	4340	Corporate & Institutional Design	3	Art	2710	Introduction to Printmaking	3
Art	1800	Ideas & the Visual Arts	3	Art	3314	Fibers	3
Art	1825	Art History Survey II	3	Art	4310	Design Internship	3
Art	3800	History of Furniture & Interiors	3	Grap	4162	Commercial Arch. Drawing	3
FAMe	2442	Textiles	3	Grap	4170	Computer-Aided Drafting	
FAMe	4410	Architectural Interiors	3			and /Design	3
Grap	1110	Fundamentals of Drafting	3	Thea	1600	Stagecraft & Lighting	3
Grap	2170	Intro. to Computer-Aided Drafting	3				
MINOR NOT REQUIRED							
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the functional major, Art 1800 fulfills 3 s.h. of Div. II C;							
lCap 4221 fulfills 3 s.h. of Div. IV B)							42
MINIMUM TOTAL						129	

STUDIO ART Functional Major, B.F.A. Degree
(47 000378)

The graduate with a Bachelor of Fine Arts degree in Art will use the knowledge and skills obtained in these programs to:

- Demonstrate critical and creative thinking by incorporating theories and practices in art and design production adequate for innovative expression in the visual arts.
- Communicate and support informed and artistically sensitive interpretations and judgments about his/her own work as well as visual forms made by others by using perceptual, critical and aesthetic concepts that underlie the disciplines of art and design.
- Recognize and describe major periods, styles and artists in art history, as well as the historical forces that influence aesthetics, creativity and critical theory.
- Facilitate a culturally rich and visually sensitive society by recognizing and utilizing the unique and important artistic contributions made by women and men from diverse racial, geographical and cultural groups.
- Use technology in creative, critical and teaching processes as well as a resource for producing art and gathering information about art, art history, aesthetics and art criticism.

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						86	
Art	1110	Drawing I	3	Art	2412	Ceramics I	3
Art	1120	Drawing II	3	Art	2420	Sculpture I	3
Art	3110	Drawing III	3	Art	2511	Painting I	3
Art	3209	Figure Construction	3	Art	2710	Introduction to Printmaking	3
Art	1315	Design I	3	Art	1800	Ideas & the Visual Arts	3
Art	1325	Design II	3	Art	1825	Art History Survey II	3
Art	2335	Design III	3	lCap	4221	Artists in Contemporary Society	3

Art	1815	Art History Survey I, 3 or	
Art	1835	Survey of Non-Western Art	
		History, 3	3
Art	4850	20th Century Art & Architecture, 3 or	
Art	4860	Contemporary Art & Design, 3	3
Electives in art			17

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
Area 2 - Painting			
Art	3510	Watercolor	3
Art	3511	Painting II	9
Art	4511	Painting III	9
Area 3 - Ceramics			
Art	4020	Studio Seminar	3
Art	3412	Ceramics II	9
Art	4412	Ceramics III	9
Area 4 - Printmaking			
Art	3710	Intaglio	3
Art	3720	Lithography	3
Art	3730	Serigraphy	3
Art	3740	Relief Printmaking	3
Electives in Printmaking			9

MINOR NOT REQUIRED

GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the functional major, Art 1800 fulfills 3 s.h. of Div. II D);	
I Cap 4221 fulfills 3 s.h. of Div. IV 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

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.

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. An additional fee is associated with this course.

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. An additional fee is associated with this course.

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 the elements of residential design. 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 3305 Interior Design Presentation Techniques (3) The techniques necessary for the presentation of interior design solutions. Both traditional media and computer-aided technology will be implemented. Prerequisites: Art 1325 and Art 2310.

Art 3310 Traditional Interiors (3) A study of traditional interior design problems. An emphasis in 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.* An additional fee is associated with this course.

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 3340 Interior Detailing and Furniture Design (3)

The detailing of interior environments and furniture design to include casework and furnishings through a coordinated study of structure, style, and materials. Prerequisite: Art 2320.

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. An additional fee is associated with this course.

Art 2420 Sculpture I (3) Fundamentals in sculpture including additive, subtractive, and construction techniques. An additional fee is associated with this course.

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. An additional fee is associated with this course.

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. An additional fee is associated with this course.

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. An additional fee is associated with this course.

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. An additional fee is associated with this course.

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.*

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. An additional fee is associated with this course.

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. An additional fee is associated with this course.

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. An additional fee is associated with this course.

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. An additional fee is associated with this course.

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. An additional fee is associated with this course.

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. An additional fee is associated with this course.

Art 3640 Package Design (3) Packaging and point-of-sale graphics from concept to client presentation. Usually offered spring only. Prerequisite: Art 3620. An additional fee is associated with this course.

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. An additional fee is associated with this course.

Art 4610 Interactive Design (3) An introduction to the field of digital visual communication. Integration of new technologies, concepts and methods will be explored. Prerequisites: Art 3660 and consent of instructor or department advisor.

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. An additional fee is associated with this course. *Not available for graduate credit.

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. An additional fee is associated with this course. *Not available for graduate credit.

Printmaking

Art 2710 Introduction to Printmaking (3) This course is designed to acquaint the student with the basics of various printmaking processes. Prerequisites: Art 1110 and Art 1315. An additional fee is associated with this course.

Art 3710 Intaglio (3) Intaglio printmaking methods and production. *May be repeated for a maximum of 12 semester hours.* Prerequisite: Art 2710. An additional fee is associated with this course.

Art 3720 Lithography (3) Printmaking techniques in traditional stone lithography. *May be repeated for a maximum of 12 semester hours.* Prerequisite: Art 2710. An additional fee is associated with this course.

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. An additional fee is associated with this course.

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. An additional fee is associated with this course.

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 1835 Survey of Non-Western Art History (3) The survey of the aesthetic and stylistic development of the traditional arts and architecture of non-western culture.

Art 3800 History of Furniture and Interiors (3) The survey of the furniture and interiors from ancient to modern times. Emphasis is given to the styles from the Renaissance to the nineteenth century.

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 4860 Contemporary Art & Design (3) The exploration of contemporary art and design in a context of art historical style by utilizing specialized information networks which chart and chronicle its development.

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. An additional fee is associated with this course.

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. An additional fee is associated with this course.

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. An additional fee is associated with this course.

Art 4920 Methods of Teaching Art* (2) Prerequisites: admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with Art 4930 during the Professional Semester. *Not available for graduate credit.

Art 4930 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 Art 4920 during the Professional Semester. *Not available for graduate credit.

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
Biomedical Sciences		

BIOLOGY Major, B.A. Degree

(42 000379)

The graduate with a Bachelor of Arts degree in Biology will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (managing information)
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety. (technology)
- Develop demonstrations and experiments that illustrate biological concepts or develop new concepts. Think logically within the scientific parameters of professional biologists. (higher-order thinking)
- Use the language and concepts of Biology to communicate effectively in oral and written form; to follow instructions precisely and to function in independent and collaborative settings. (communicating and interacting)
- Read scientific texts in a language other than English (communicating)
- Exhibit the ethical use of knowledge, materials and procedures that demonstrates an impact on society. (valuing)
- Be eligible to apply for jobs in many commercial laboratories, quality control positions, and related. (technology, interacting)
- Be eligible to apply for graduate programs in the area of biology represented by the student's major interest and coursework (technology, interacting)
- Be eligible to apply for entry into professional schools in medicine, dentistry, veterinary medicine and related paramedical professions. (technology, interacting)

				Sem. Hours
MAJOR REQUIREMENTS				38
Biol	1000	The Discipline of Biology	0.5	
Biol	4000	Biology Colloquium	0.5	
Biol	2020	General Ecology	3	
Biol	1111	Biology I	4	
Biol	1112	Biology II	4	
Biol	2511	Genetics	4	
Biol	2512	Cell Biology	3	
ICap	4222	The Biological Perspective	3	
Upper-level electives in biology			16	

MINOR REQUIREMENTS	18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the major, Biol 1111 and Biol 1112 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. IV B)	38
MODERN LANGUAGE REQUIREMENT	3-9
(Refer to Bachelor's Degree Requirements section for fulfillment options.)	
FREE ELECTIVES	14-27
MINIMUM TOTAL	124

BIOLOGY Major, B.S. Degree

(43 000380)

The graduate with a Bachelor of Science degree in Biology will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (managing information)
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety. (technology)
- Develop demonstrations and experiments that illustrate biological concepts or develop new concepts. Think logically within the scientific parameters of professional biologists. (higher-order thinking)
- Use the language and concepts of Biology to communicate effectively in oral and written form; to follow instructions precisely and to function in independent and collaborative settings. (communicating and interacting)
- Exhibit the ethical use of knowledge, materials and procedures that demonstrates an impact on society. (valuing)
- Be eligible to apply for jobs in many commercial laboratories, quality control positions, and related. (technology, interacting)
- Be eligible to apply for graduate programs in the area of biology represented by the student's major interest and coursework (technology, interacting)
- Be eligible to apply for entry into professional schools in medicine, dentistry, veterinary medicine and related paramedical professions. (technology, interacting)

MAJOR REQUIREMENTS	Sem. Hours	44	
Biol 1000 The Discipline of Biology	0.5	Biol 2511 Genetics	4
Biol 4000 Biology Colloquium	0.5	Biol 2512 Cell Biology	3
Biol 2020 General Ecology	3	ICap 4222 The Biological Perspective	3
Biol 1111 Biology I	4	Departmentally approved electives in biology (See	
Biol 1112 Biology II	4	Department Chair for assignment to faculty advisor) 22	

MINOR REQUIREMENTS	18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the major, Biol 1111 and Biol 1112 are allowed to fulfill 4 s.h. of Div. II A; ICap 4222 fulfills 3 s.h. of Div. IV B)	41
FREE ELECTIVES	14-27
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)

The graduate with a Biology Functional Major, Bachelor of Science in Education Degree will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (managing information)
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety. (technology)
- Develop demonstrations and experiments that illustrate biological concepts or develop new concepts. Think logically within the scientific parameters of professional biologists. (higher-order thinking)
- Use the language and concepts of Biology to communicate effectively in oral and written form; to follow instructions precisely and to function in independent and collaborative settings. (communicating and interacting)
- Exhibit the ethical use of knowledge, materials and procedures that demonstrates an impact on society. (valuing)
- Manage a biology secondary education program with a laboratory emphasis with confidence, enthusiasm, efficiency and safety. (communicating, interacting)
- Be qualified for teacher certification in the State of Missouri (interacting)

FUNCTIONAL MAJOR REQUIREMENTS	Sem. Hours	67.5-70.5	
Biol 1000 The Discipline of Biology	0.5	Biol 2512 Cell Biology	3
Biol 2020 General Ecology	3	Biol 3611 Microbiology	4
Biol 1111 Biology I	4	Biol 3712 Field Natural History	4
Biol 1112 Biology II	4	Biol 4810 Curriculum Dev. in Biological Sci. 2	
Biol 2511 Genetics	4	Biol 4811 Investigative Laboratory	2

EaSc 1004	Intro. to the Sciences: Geology	4	EaSc 4010	Special Problems in Geology	1
EaSc 3114	Meteorology	3	Chem 1131	General Chemistry I	5
			Chem 1132	General Chemistry II	5
			*Phys 1101	College Physics I	4
			*Phys 1102	College Physics II	4
			T&OE 2000	Technology & Change	3
			Biol 3431	Animal Physiology, 4 or	
			Biol 4411	Plant Physiology, 4	4
			Math 1150	Pre-Calculus Mathematics, 4 or	
			Math 1131	Calculus for Bus. & Econ, 3	3-4
				Upper-level electives in biology	1-3

*Students who want an endorsement in Physics must take Phys 2121 and Phys 2122.

MINOR NOT REQUIRED

GENERAL EDUCATION REQUIREMENTS (page 48)--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;

T&OE 2000	fulfills 2 s.h. of Div. IIAB; in the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. IV 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	Psychology of Adolescence	3

Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. of Div. III.

PROFESSIONAL EDUCATION REQUIREMENTS (see page 205)	28
MINIMUM TOTAL	128.5

BIOLOGY Minor for a Bachelor's Degree
(Central does not confer teacher certification for this minor.)
(000476)

MINOR REQUIREMENTS	24				
Biol 2020	General Ecology	3	Biol 2511	Genetics	4
Biol 1111	Biology I	4	Biol 2512	Cell Biology	3
Biol 1112	Biology II	4		Electives in biology	6

GENERAL EDUCATION REQUIREMENTS (page 48) (In the minor, Biol 1111 and Biol 1112 are allowed to fulfill 4 s.h. of Div II A)

BIOLOGY Functional Major, B.S. Degree
(43 000383)

The graduate with a Biology Functional Major, Bachelor of Science Degree will use the knowledge and skills obtained in the program to achieve various student learning outcomes depending upon the options selected in this program. There are three emphasis areas – Biomedical emphasis, Ecology/Environment emphasis and Conservation Enforcement emphasis. Students in this program will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (managing information)
- Use various field and laboratory techniques and/or instruments with understanding, accuracy, precision and safety. (technology)
- Develop demonstrations and experiments, and plan and lead field trips that illustrate biological concepts or develop new concepts. Think logically within the scientific parameters of professional biologists. (higher-order thinking)
- Use the language and concepts of Biology to communicate effectively in oral and written form; to follow instructions precisely and to function in independent and collaborative settings. (communicating and interacting)
- Exhibit the ethical use of knowledge, materials and procedures that demonstrates an impact on society. (valuing)
- Students emphasizing the Biomedical option will be eligible to apply for entry into professional schools in medicine, dentistry, veterinary medicine and related paramedical professions. (technology, interacting)
- Students emphasizing the Ecology/Environment option will be eligible to apply to advanced degree programs in environmental, ecological and related programs, and to apply for positions in the EPA, Mo. Dept of Conservation, Department of Natural Resources, and other such agencies. There are also many private businesses and testing laboratories working on ecological/environmental projects to which our graduates may apply. (technology, communicating)
- Students emphasizing the Conservation Enforcement option will be eligible for internships and positions with the Missouri Department of Conservation, Department of Natural Resources and be eligible to apply for jobs in federal and state environmental agencies. They will also be eligible for positions in businesses interacting with these environmental agencies. (technology, communicating, interacting)

FUNCTIONAL MAJOR REQUIREMENTS	77-78				
CORE	36-37				
Biol 1000	The Discipline of Biology	0.5	Biol 1112	Biology II	4
Biol 1111	Biology I	4	Biol 2020	General Ecology	3
			Biol 2511	Genetics	4

Biol	2512	Cell Biology	3	B. Biomedical/Molecular Studies	40		
Biol	4000	Biology Colloquium	0.5	Biol	3611	Microbiology	4
ICap	4222	The Biological Perspective	3	Phys	1101	College Physics I	4
Chem	1131	General Chemistry I	5	Biol	3431	Animal Physiology	4
Chem	1132	General Chemistry II	5	Biol	4411	Plant Physiology	4
Elective from the following				Elective from the following			
Chem	2650	Elem. Organic & Biochemistry	5	Biol	4403	Environmental Physiology	4
Chem	3341	Organic Chemistry	4	Biol	4311	Parasitology	4
Biol	4514	Molecular Biology, 3 and		Biol	4511	Cytogenetics	4
Biol	4515	Molecular Biology Lab, 2	5	Departmentally approved electives			
Elect one of the three options (A, B, or C)				(see Chair or advisor)			
A. Ecological Studies				20			
Biol	3711	Plant Identification	4	C. Conservation Enforcement Studies			
Biol	4711	Animal Ecology	4	40			
EaSc	3010	Environmental Geology	3	Comm	2620	Public Relations	3
Geog	4220	Geographic Info. Systems I	3	CJ	1000	Introduction to Criminal Justice	3
Geog	4291	Conservation of Nat. Resources	3	CJ	2300	Criminal Law	3
Elective from the following				CJ			
Biol	3222	Ornithology	4	3303			
Biol	4210	Ichthyology	4	Criminal Procedure			
Biol	4221	Mammalogy	4	3			
Biol	4232	Herpetology	4	CJ			
Biol	4312	Entomology	4	4302			
Departmentally Approved Electives				Criminal Evidence			
(see Chair or advisor)				3			
				Elective from the following			
				Comm			
				1520			
				Elements of News Reporting			
				3			
				Comm			
				4415			
				Screenplay Writing			
				3			
				Elective from the following			
				Biol			
				3222			
				Ornithology			
				4			
				Biol			
				4210			
				Ichthyology			
				4			
				Biol			
				4221			
				Mammalogy			
				4			
				Biol			
				4232			
				Herpetology			
				4			
				Biol			
				4312			
				Entomology			
				4			
				Departmentally approved electives			
				(see Chair or Advisor)			
				18			

MINOR NOT REQUIRED

GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the functional major, Biol 1111, Biol 1112, Chem 1131, and Chem 1132 are allowed to fulfill 7 s.h. of Div. II A; ICap 4222 fulfills 3 s.h. of Div. IV B)	38
FREE ELECTIVES	9-10
MINIMUM TOTAL	124

MEDICAL TECHNOLOGY Functional Major, B.S. Degree

(43 000384)

The graduate with a Medical Technology Functional Major, Bachelor of Science Degree will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (managing information)
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety. (technology)
- Think logically within the scientific parameters of professional biologists. (higher-order thinking)
- Use the language and concepts of Biology to communicate effectively in oral and written form; to follow instructions precisely and to function in independent and collaborative settings. (communicating and interacting)
- Exhibit the ethical use of knowledge, materials and procedures that demonstrates an impact on society. (valuing)
- Challenge the licensure exam of the National Accrediting Agency for Clinical Laboratory Scientists (NAACLS) to become a certified Medical Technologist(ASCP) or Clinical Laboratory Scientist (ASCP) after completing a 12-month clinical rotation at an affiliated hospital.
- Be eligible to apply for graduate/professional training in nearly all medical fields.

				Sem. Hours			
FUNCTIONAL MAJOR REQUIREMENTS				59.5			
Biol	1000	The Discipline of Biology	0.5	Chem	1132	General Chemistry II	5
Biol	1111	Biology I	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	4	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 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

GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the functional major, Math 1111 fulfills 3 s.h. of Div. I C; Biol 1111, Biol 2511, Chem 1131, and Chem 1132 are allowed to fulfill 7 s.h. of Div. II A)	38
MINIMUM TOTAL	127.5

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 1111 Biology I (4) Examination of basic biological principles including the scientific method; macromolecules of life; cellular structure, function, and replication; and plant form, function and diversity. Laboratory included. An additional fee is associated with this course.

Biol 1112 Biology II (4) Introduction to the evolution and classification of the metazoa with emphasis on the form and function of selected invertebrate and vertebrate animals. Prerequisites: Biology 1000, Biology 1111. An additional fee is associated with this course.

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 2020 General Ecology (3) An introduction to the major concepts of ecology in the context of evolution and the ecology of populations, communities, and ecosystems. Prerequisite: Biol 1112.

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. An additional fee is associated with this course.

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. An additional fee is associated with this course.

Biol 2511 Genetics (4) Hereditary principles and their application to classical and molecular genetics. Laboratories emphasize inquiry-based learning applied to exercises using Mendelian genetics and DNA technology. Prerequisites: Biol 1111 and Biol 1112 or Chem 1131 and Chem 1132. An additional fee is associated with this course.

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. Prerequisite: Biol 1112.

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 1111, Biol 1112 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 1111, Biol 1112 and Biol 2020. An additional fee is associated with this course.

Biol 3213 Embryology of Vertebrates (3) Germ cells, fertilization, and development of systems, organs, and tissues of vertebrate embryos. Prerequisites: Biol 1111 and Biol 1112 or Biol 2402; and Chem 1104 or Chem 1131. An additional fee is associated with this course.

Biol 3222 Ornithology (4) An examination of the biology of birds with special emphasis on the field study of locally occurring species. Prerequisites: Biol 1111 and Biol 1112. An additional fee is associated with this course.

Biol 3310 Invertebrate Zoology (4) Classification, comparative morphology, physiology and evolution of invertebrates. Prerequisites: Biol 1111 and Biol 1112.

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

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laboratory techniques for immunological screening.

Prerequisite: Biol 2401 or Biol 3431.

Biol 3414 Histology (3) The functional morphology of selected tissues at the light microscopic level. Laboratory involves practice in slide reading. Prerequisite: Biol 3211 or Biol 2402 or Biol 3431. An additional fee is associated with this course.

Biol 3431 Animal Physiology (4) Animal functions in terms of their needs for oxygen, food, energy, temperature, water, movement, information, and integration. Prerequisites: Biol 1111 and 1112 or Agri 3410; and Chem 1104 or Chem 1131. An additional fee is associated with this course.

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 1112 or Biol 2402; and Chem 1104 or Chem 1131. An additional fee is associated with this course.

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 1111 and Biol 1112.

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 1111 and Biol 1112. An additional fee is associated with this course.

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 1111 and Biol 1112.

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. An additional fee is associated with this course.

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. An additional fee is associated with this course. Prerequisites: Chem 1131 and 14 hours of biology including Biol 1112.

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.

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Prerequisites: Biol 1111 and Biol 1112. An additional fee is associated with this course.

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. An additional fee is associated with this course.

Biol 4312 Entomology (4) An introduction to the systematics, morphology, physiology, evolution, and ecology of insects. Prerequisites: Biol 1111 and Biol 1112. An additional fee is associated with this course.

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. An additional fee is associated with this course.

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. An additional fee is associated with this course.

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. An additional fee is associated with this course.

BIOL 4514 Molecular Biology (3) This course emphasizes how biological molecules interact to express cellular phenotypes. Transcriptional and translational controls of gene expression and the latest biotechnological advances are discussed. Prerequisite: BIOL 2511.

BIOL 4515 Molecular Technology Laboratory (2) This course emphasizes the proper use of laboratory equipment, molecular techniques, experimental design, and data analysis. Questions and experiments encountered in molecular biology are addressed. Prerequisite: Biol 4514 with a grade of C or better or concurrent enrollment with consent of instructor. An additional fee is associated with this course.

Biol 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 Biol 4794 during the Professional Semester. *Not available for graduate credit.

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 1111 and 1112. An additional fee is associated with this course.

Biol 4794 Methods of Teaching Science* (2)
Prerequisites: admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with Biol 4520 during the Professional Semester. *Not available for graduate credit.

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. An additional fee is associated with this course.

Biol 4953 Ecology Field Course (1-6)* Advanced field methods and analysis of the physical, chemical, and ecological aspects of diverse marine ecosystems. On a rotating basis, the field course may focus on marine, northern temperate woods, and alpine systems. *May be repeated for credit as topics vary.* Prerequisite: consent of instructor. *Not available for graduate credit.

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)

The graduate with a Bachelor of Arts degree in Earth Science will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (managing information)
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety. (technology)
- Think logically within an earth science framework and be receptive to new ideas and concepts. (higher-order thinking)
- Use the language and concepts of earth science to communicate effectively in oral and written form, to follow instructions precisely and to function in independent and collaborative settings. (communicating and interacting)
- Exhibit the ethical use of knowledge, materials and procedures that demonstrates an impact on society. (valuing)

		Sem. Hours
MAJOR REQUIREMENTS		39
EaSc 1004	Intro. to the Sciences: Geology	4
EaSc 3010	Environmental Geology	3
EaSc 3110	Structural Geology	4
EaSc 2200	Historical Geology	4
EaSc 3501	Invertebrate Paleontology	4
Elective from the following		4
EaSc 3320	Mineralogy	4
EaSc 4301	Minerals & Rocks	4
Elective from the following		3
Geog 4210	Remote Sensing and Image Interpretation	3
Geog 4220	Geographic Info. Systems I	3
*Agri 2330	Intro. to Soil Science	3
Electives in Earth Science		13
MINOR REQUIREMENTS		18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--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		3-9
(Refer to Bachelor's Degree Requirements section for fulfillment options.)		
FREE ELECTIVES		10-23
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)

The graduate with a Earth Science Functional Major, Bachelor of Science in Education Degree will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems. (managing information)
- Use various field and laboratory techniques and/or instruments with understanding, accuracy, precision and safety. (technology)
- Develop demonstrations and experiments that illustrate earth science concepts or develop new concepts. Think logically within an earth science framework and be receptive to new ideas and concepts. (higher-order thinking)
- Use the language and concepts of the earth sciences to communicate effectively in oral and written form; to follow detailed instructions and to function in independent and collaborative settings. (communicating and interacting)
- Exhibit the ethical use of knowledge, materials and procedures that demonstrate an impact on society. (valuing)
- Manage an earth science secondary education program that has a laboratory emphasis with confidence, enthusiasm, efficiency and safety.

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						68-69	
EaSc	1004	Intro. to the Sciences: Geology	4	Biol	1004	Intro. to the Sciences: Ecology	4
EaSc	2200	Historical Geology	4	Biol	1111	Biology I	4
EaSc	3010	Environmental Geology	3	Biol	1112	Biology II	4
EaSc	3111	Geomorphology	3	Chem	1131	General Chemistry I	5
EaSc	3112	Astronomy	3	Chem	1132	General Chemistry II	5
EaSc	3114	Meteorology	3	*Phys	1101	College Physics I	4
EaSc	3115	Oceanography	3	*Phys	1102	College Physics II	4
EaSc	3501	Invertebrate Paleontology	4	Math	1150	Pre-Calculus Mathematics, 4 or	
EaSc	4010	Special Problems in Geology	1	Math	1131	Calculus for Bus. & Econ., 3	3-4
EaSc	3320	Mineralogy, 4 or		T&OE	2000	Technology & Change	3
EaSc	4301	Minerals & Rocks, 4	4				
*Students who want an endorsement in physics must take Phys 2121 and Phys 2122.							
MINOR NOT REQUIRED							
GENERAL EDUCATION REQUIREMENTS (page 48)--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; T&OE 2000 fulfills 2 s.h. of Div. II A; in the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. IV B)							
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. III.							
PROFESSIONAL EDUCATION REQUIREMENTS (see page 205)						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		12
EaSc	2200	Historical Geology	4			
GENERAL EDUCATION REQUIREMENTS (page 48) (In the minor, EaSc 1004 fulfills 4 s.h. of Div. II A)						

GEOLOGY Functional Major, B.S. Degree

(43 000388)

The graduate with a Functional Major Bachelor of Science degree in Geology will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems. (managing information)

- Use various field and laboratory techniques and/or instruments with understanding, accuracy, precision and safety. (technology)
- Think logically and apply knowledge within a geological framework to develop maps and cross-sections of the Earth. Be receptive to new ideas and concepts. (higher-order thinking)
- Use the language and concepts of geology to communicate effectively in oral and written form, to follow detailed instructions and to function in independent and collaborative settings. (communicating and interacting)
- Exhibit the ethical use of knowledge, materials and procedures that demonstrates an impact on society. (valuing)

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		Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS		68-75
EaSc 1004	Intro. to the Sciences: Geology	4
EaSc 2200	Historical Geology	4
EaSc 3110	Structural Geology	4
EaSc 3320	Mineralogy	4
EaSc 4325	Petrology	4
EaSc 4420	Sedimentary Petrology & Stratigraphy	5
Geog 4220	Geographic Information Systems I	3
Chem 1131	General Chemistry I	5
Chem 1132	General Chemistry II	5
Summer field course at an approved university		6
Elect three courses from the following		9-11
EaSc 2100	Engineering Geology	4
EaSc 3010	Environmental Geology	3
EaSc 3111	Geomorphology	3
EaSc 3400	Groundwater Geology	3
EaSc 3501	Invertebrate Paleontology	4
Electives from the following		8-10
Phys 1101	College Physics I	4
Phys 1102	College Physics II	4
or		
Phys 2121	University Physics I	5
Phys 2122	University Physics II	5
Electives from the following		7-10
Option 1		
(recommended for those students planning to attend graduate school):		
Math 1151	Calc. & Analytical Geometry I	5
Math 1152	Calc. & Analytical Geometry II	5
Option 2		
Math 1111	College Algebra	3
Math 1112	College Trigonometry	2
Math 1101	Intermediate Algebra	2
or		
Math 1150	Pre-calculus Mathematics	4
MINOR NOT REQUIRED		
GENERAL EDUCATION REQUIREMENTS (page 48)--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
FREE ELECTIVES		11-18
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. An additional fee is associated with this course.

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. An additional fee is associated with this course.

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. An additional fee is associated with this course.

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. An additional fee is associated with this course.

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. An additional fee is associated with this course.

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. An additional fee is associated with this course.

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. An additional fee is associated with this course.

EaSc 4325 Petrology (4) Igneous and metamorphic rocks. Includes consideration of processes of formation and

identification of rock types. Prerequisite: EaSc 3320. An additional fee is associated with this course.

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 3320. An additional fee is associated with this course.

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.

Prior to student teaching, all B.S. in Ed. Chemistry Functional majors are required to serve as a lab assistant or lab preparation assistant for one semester in partial fulfillment of Chem 4900.

CHEMISTRY Major, B.A. Degree

(42 000391)

The graduate with a Bachelor of Arts degree in Chemistry will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (*managing information*).
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety (*technology*).
- Think logically within a chemistry or physics framework and be receptive to new ideas and concepts (*higher-order thinking*).
- Use the language and concepts of chemistry or physics to communicate effectively in oral and written form, to follow detailed instructions, and to function in independent and collaborative settings (*communicating and interacting*).
- Exhibit the ethical use of knowledge, materials and procedures that demonstrate an impact on society (*valuing*).

				Sem. Hours
MAJOR REQUIREMENTS				38-39
Chem 1131	General Chemistry I	5	Chem 4421 Biochemistry	4
Chem 1132	General Chemistry II	5	Chem 3500 Elements of Physical Chemistry	4
Chem 3111	Intermediate Inorganic Chemistry	4	Elective from the following	3-4
Chem 3212	Quantitative Analysis	3	*Chem 4111 Advanced Inorganic Chemistry	4
Chem 3341	Organic Chemistry I	4	*Chem 4231 Instrumental Analysis	4
Chem 3342	Organic Chemistry II	4	*Chem 4313 Modern Organic Analysis	4
Chem 3920	Communication Skills in Chemistry	2	Chem 4910 Research in Chemistry	3-4
MINOR REQUIREMENTS				18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--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				10-24
MINIMUM TOTAL				124

*Course has prerequisite(s) not listed in the program.

CHEMISTRY Functional Major, B.S. Degree

(43 000393)

The graduate with a Bachelor of Science degree in Chemistry will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (*managing information*).
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety (*technology*).
- Think logically within a chemistry framework and be receptive to new ideas and concepts (*higher-order thinking*).
- Use the language and concepts of chemistry to communicate effectively in oral and written form, to follow detailed instructions, and to function in independent and collaborative settings (*communicating and interacting*).
- Exhibit the ethical use of knowledge, materials and procedures that demonstrate an impact on society (*valuing*).

				Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS				65-69
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 3111	Intermediate Inorganic Chemistry	4	Chem 4421 Biochemistry	4
Chem 3212	Quantitative Analysis	3	Chem 4531 Physical Chemistry I	4
Chem 4231	Instrumental Analysis	4	Chem 4532 Physical Chemistry II	4

Chem	3920	Communication Skills in Chemistry	2
Chem	4910	Research in Chemistry	4
Phys	1101	College Physics I	4
Phys	1102	College Physics II	4
Math	1151	Calculus & Analytic Geometry I	5
Math	1152	Calculus & Analytic Geometry II	5
*Elective from the following			0-4
Chem	4111		
Advanced Inorganic Chemistry			4
Chem	4313		
Modern Organic Analysis			4

*Four semester hours required for ACS-CPT approved degree.

MINOR NOT REQUIRED

GENERAL EDUCATION REQUIREMENTS (page 48)--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	17-21
MINIMUM TOTAL	124

CHEMISTRY Functional Major, B.S. in Ed. Degree

[Certification to teach chemistry in grades 9-12]

(41 000485)

The graduate with a Bachelor of Science in Education degree in Chemistry will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (*managing information*).
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety and develop experiments, demonstrations, and other hands-on activities (*technology*).
- Think logically within a chemistry framework and be receptive to new ideas and concepts (*higher-order thinking*).
- Use the language and concepts of chemistry to communicate effectively in oral and written form, to follow detailed instructions, and to function in independent and collaborative settings (*communicating and interacting*).
- Exhibit the ethical use of knowledge, materials and procedures that demonstrate an impact on society (*valuing*).
- Manage a secondary education program in chemistry or physics, that has a laboratory emphasis, with confidence, enthusiasm, efficiency, and safety.

		Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS		60
Chem	1131 General Chemistry I	5
Chem	1132 General Chemistry II	5
Chem	3111 Intermediate Inorganic Chemistry	4
Chem	3212 Quantitative Analysis	3
Chem	3341 Organic Chemistry I	4
Chem	3500 Elements of Physical Chemistry	4
Chem	4421 Biochemistry	4
Chem	4900 Chem. Research for Teachers	1-2
Biol	1003 Intro. to the Sciences: Ecology	3
Biol	1111 Biology I	4
EaSc	1004 Intro. to the Sciences: Geology	4
T&OE	2000 Technology & Change	3
Phys	1101 College Physics I, 4 or	
Phys	2121 University Physics, 5	4-5
Electives in science from following list. Hours of electives must bring the total in the major to 60 hours.		10-12
UNIFIED SCIENCE CERTIFICATION - The starred (*) courses must be taken as part of the elective credits for unified science certification in chemistry - certification to teach any of the beginning sciences (i.e., Biology I, Physics I, etc.) and all levels of chemistry, grades 9-12.		
Chem	3342 Organic Chemistry II	4
Chem	4231 Instrumental Analysis	4
Chem	3920 Comm. Skills in Chemistry	2
Chem	4910 Research in Chemistry	1-2
*Biol	1112 Biology II	4
Biol	2511 Genetics	3
Biol	2512 Cell Biology	3
Biol	3712 Field Natural History	4
EaSc	3010 Environmental Geology	3
EaSc	3112 Astronomy	3
*EaSc	3114 Meteorology	3
EaSc	3320 Mineralogy	4
*EaSc	4010 Special Problems in Geology	1
*Phys	1102 College Physics, 4 or	
*Phys	2122 University Physics II, 5	4-5
Phys	3511 Modern Physics	3
Phys	3611 Optics	3
Phys	4312 Electricity & Magnetism	3
Phys	3080 Advanced Physics Laboratory	1-2

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MINOR NOT REQUIRED

GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the functional major, EaSc 1004 fulfills 4 s.h. of Div. II A; Biol 1003 fulfills 3 s.h. of Div. II A; T&OE 2000 fulfills 2 s.h. of Div. II A; in the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. IV B) 36

Hist	1350	Div. II B or	PolS	1510	Div. II B (required)	3
Hist	1351	Div. II B (required)	Psy	4230	Psy. of Adolescence	3

Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. of Div. III.

PROFESSIONAL EDUCATION REQUIREMENTS (see page 205; Chem 4011 (3 s.h.) fulfills 2 s.h. of Special Methods in major field and 1 s.h. of Secondary Field Experience II in major field) 28

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				

GENERAL EDUCATION REQUIREMENTS (page 48) (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 4011 Methods of Teaching Physical Science (3) Provides the teacher education candidate with skills and resources for the teaching of science. Students will learn a variety of strategies for both laboratory and classroom instruction. Prerequisite: Admission to Teacher Education Program.

Inorganic

Chem 1103 Introduction to the Sciences: Chemistry (3) Beginning course emphasizing properties of inorganic materials, for those needing no additional chemical training. 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. An additional fee is associated with this course.

Chem 1130 Preparatory General Chemistry (3, 4) Preparatory course to enhance success in General Chemistry by exploring concepts of chemistry and further developing algebraic and logic skills to solve applied chemical problems.

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. An additional fee is associated with this course.

Chem 1132 General Chemistry II (5) A continuation of Chem 1131. Includes laboratory experience. Prerequisite: Chem 1131. An additional fee is associated with this course.

Chem 3111 Intermediate Inorganic Chemistry (4) An intermediate level inorganic course with emphasis on main group and organometallic chemistry. Laboratory included. Prerequisites: Chem 1132 and Chem 2650, or Chem 3342. An additional fee is associated with this course.

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. An additional fee is associated with this course.

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. An additional fee is associated with this course.

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. An additional fee is associated with this course. *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. An additional fee is associated with this course.

Chem 3342 Organic Chemistry II (4) A continuation of Chem 3341. Prerequisite: Chem 3341. An additional fee is associated with this course.

Chem 4313 Modern Organic Analysis* (4) A lecture and laboratory course emphasizing the instrumentation

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used for physical organic measurements and the identification of organic compounds. Prerequisites: Chem 4532 or concurrently and Chem 3342. An additional fee is associated with this course. *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. An additional fee is associated with this course. *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. An additional fee is associated with this course. *Not available for graduate credit.

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. An additional fee is associated with this course.

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) Faculty supervised project terminating in a written and oral report. One semester assisting in or preparing materials for a chemistry laboratory course, prior to student teaching, also recommended. Prerequisites: Chem 2650, Chem 3212, and consent. *Not available for graduate credit.

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. *Not available for graduate credit.

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.

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)

The graduate with a Bachelor of Arts degree in Physics will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (*managing information*).
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety (*technology*).
- Think logically within a chemistry or physics framework and be receptive to new ideas and concepts (*higher-order thinking*).
- Use the language and concepts of chemistry or physics to communicate effectively in oral and written form, to follow detailed instructions, and to function in independent and collaborative settings (*communicating and interacting*).
- Exhibit the ethical use of knowledge, materials and procedures that demonstrate an impact on society (*valuing*).

					Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS					63-64	
Phys	3012	Elec. Measurements Laboratory	2	Math 2153	Calculus & Analytic Geometry III	3
Phys	3080	Advanced Physics Lab	2-3	Math	Differential Equations	3
Phys	2121	University Physics I	5	CS	1100 Intro. to Computing I	3
Phys	2122	University Physics II	5	Departmentally approved electives		
Phys	3211	Analytical Mechanics I	2	from the following		
Phys	4212	Analytical Mechanics II	3	6		
Phys	3311	Electric Circuit Theory	3	Phys	2020 Analytical Methods for Physics	
Phys	4411	Thermodynamics	3	and Engineering		3
Phys	3511	Modern Physics I	3	Phys	4312 Electricity & Magnetism	3
Chem	1131	General Chemistry I	5	Phys	3512 Modern Physics II	3
Chem	1132	General Chemistry II	5	Phys	4512 Intro. to Quantum Mechanics	3
Math	1151	Calculus & Analytic Geometry I	5	Phys	4513 Solid State Physics	3
Math	1152	Calculus & Analytic Geometry II	5	Phys	3611 Optics	3
				Phys	4711 Atomic & Nuclear Physics	3

Students whose high school preparation is inadequate should take Phys 1101 during their first year at Central.

MINOR NOT REQUIRED

GENERAL EDUCATION REQUIREMENTS (page 48)--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)

MODERN LANGUAGE REQUIREMENT 3-9

(Refer to Bachelor's Degree Requirements section for fulfillment options.)

FREE ELECTIVES 16-23

MINIMUM TOTAL 124

PHYSICS Functional Major, B.S. Degree

(43 000397)

The graduate with a Bachelor of Science degree in Physics will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (*managing information*).
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety (*technology*).
- Think logically within a chemistry or physics framework and be receptive to new ideas and concepts (*higher-order thinking*).
- Use the language and concepts of chemistry or physics to communicate effectively in oral and written form, to follow detailed instructions, and to function in independent and collaborative settings (*communicating and interacting*).
- Exhibit the ethical use of knowledge, materials and procedures that demonstrate an impact on society (*valuing*).

					Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS					66-67	
Phys	3012	Elec. Measurements Laboratory	2	Phys	3311 Electric Circuit Theory	3
Phys	3080	Advanced Physics Lab	2-3	Phys	4312 Electricity & Magnetism	3
Phys	2121	University Physics I	5	Phys	4411 Thermodynamics	3
Phys	2122	University Physics II	5	Phys	3511 Modern Physics I	3
Phys	3211	Analytical Mechanics I	2	Phys	3512 Modern Physics II	3
Phys	4212	Analytical Mechanics II	3	Chem	1131 General Chemistry I	5

Chem 1132	General Chemistry II	5	Math 1151	Calculus & Analytic Geometry I	5
			Math 1152	Calculus & Analytic Geometry II	5
			Math 2153	Calculus & Analytic Geometry III	3
			Math 3151	Differential Equations, 3 or	
			Math 3160	Advanced Applied Calc., 3	3
			Departmentally approved electives from the following 6		
	Phys 2020	Analytical Methods for Physics and Engineering			3
	Phys 3611	Optics			3
	Phys 4512	Intro. to Quantum Mechanics			3
	Phys 4513	Solid State Physics			3
	Phys 4711	Atomic & Nuclear Physics			3

Students whose high school preparation is inadequate should take Phys 1101 during their first year at Central.
(Continued on next page)

(Continued from previous page)

MINOR NOT REQUIRED

GENERAL EDUCATION REQUIREMENTS (page 48)--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	19-20
MINIMUM TOTAL	124

PHYSICS Minor, B.S. Degree

(Central does not confer teacher certification for this minor; available only to mathematics majors)
(000479)

MINOR REQUIREMENTS		Sem. Hours
Phys 3080	Advanced Physics Lab	2-3
Phys 2121	University Physics I	5
Phys 2122	University Physics II	5
Phys 3511	Modern Physics I	3
Departmentally approved electives from the following		6
Phys 4312	Electricity & Magnetism	3
Phys 4411	Thermodynamics	3
Electives (continued)		
Phys 3512	Modern Physics II	3
Phys 4512	Intro. to Quantum Mechanics	3
Phys 4513	Solid State Physics	3
Phys 3611	Optics	3
Phys 4711	Atomic & Nuclear Physics	3

GENERAL EDUCATION REQUIREMENTS (page 48) (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

(Certification to teach physics in grades 9-12)
(41 000486)

The graduate with a Bachelor of Science in Education degree in Physics will use the knowledge and skills obtained in the program to:

- Collect, analyze and apply information to solve problems (*managing information*).
- Use various laboratory techniques and/or instruments with understanding, accuracy, precision and safety and develop experiments, demonstrations, and other hands-on activities (*technology*).
- Think logically within a chemistry or physics framework and be receptive to new ideas and concepts (*higher-order thinking*).
- Use the language and concepts of chemistry or physics to communicate effectively in oral and written form, to follow detailed instructions, and to function in independent and collaborative settings (*communicating and interacting*).
- Exhibit the ethical use of knowledge, materials and procedures that demonstrate an impact on society (*valuing*).
- Manage a secondary education program in physics, that has a laboratory emphasis, with confidence, enthusiasm, efficiency, and safety.

FUNCTIONAL MAJOR REQUIREMENTS		Sem. Hours
Phys 2121	University Physics I	5
Phys 2122	University Physics II	5
Phys 3080	Advanced Physics Lab	2-3
Phys 3511	Modern Physics I	3
Chem 4011	Methods of Teaching Physical Sci.	3
Chem 1131	General Chemistry I	5
Chem 1132	General Chemistry II	5
Biol 1004	Intro. to the Sciences: Ecology	4
Biol 1111	Biology I	4
EaSc 1004	Intro. to the Sciences: Geology, 4 or	
EaSc 3114	Meteorology, 3	3-4

Math	1151	Calculus & Analytic Geometry I	5
Math	1152	Calculus & Analytic Geometry II	5
Math	2153	Calculus & Analytic Geometry III	3
CS	1100	Intro. to Computing I	3
T&OE	2000	Technology & Change	3
Departmentally approved electives from the following - 8-9			
Phys	3211	Analytical Mechanics I	2
Phys	3512	Modern Physics II	3
Phys	3611	Optics	3
Phys	4312	Electricity & Magnetism	3
Phys	4411	Thermodynamics	3

MINOR NOT REQUIRED

GENERAL EDUCATION REQUIREMENTS (page 48)--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; T&OE 2000 fulfills 2 s.h. of Div. II A; in the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. IV B) 33

Hist	1350	Div. II B or	PolS	1510	Div. II B (required)	3
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Hist	1351	Div. II B (required)	Psy	4230	Psy. of Adolescence	3
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Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. of Div. III.

PROFESSIONAL EDUCATION REQUIREMENTS --28 s.h. (see page 205; Chem 4011 fulfills 2 s.h. of Special Methods in

the major field and 1 s.h. of Secondary Field Experience II in the major field) 25

MINIMUM TOTAL 124

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 the five-year program must apply for a degree audit at the close of the sophomore year indicating upon application 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				64	
Phys 3012	Elec. Measurements Laboratory	2	Comm 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 1100	Intro. to Computing I	3
Phys 4411	Thermodynamics	3	Grap 1110	Fundamentals of Drafting	3
Chem 1131	General Chemistry I	5	Econ 1010	Principles of Macroeconomics	3
Chem 1132	General Chemistry II	5	Econ 1011	Principles of Microeconomics	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					
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the functional major, Comm 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					
(Refer to Bachelor's Degree Requirements section for fulfillment options.)				3-9	
MINIMUM TOTAL AT CENTRAL				96	

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 3080 Advanced Physics Laboratory (1-3) Experimental activities in optics, solid state, atomic, and nuclear physics. Modern instrumentation and analysis methods. *May be repeated for a maximum of 6 semester hours.* Prerequisite: Phys 2122.

General

Phys 1101 College Physics I (4) Properties of matter, mechanics, sound, and heat. Laboratory required.

Prerequisites: Math 1111 or consent of the instructor. Phys 1104 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 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 I (3) Special and general relativity; quantized nature of energy and matter; structure and properties of the atom; matter waves; uncertainty principle; Schrödinger equation and its applications. Prerequisites: Phys 2122 and Math 2153 or concurrently; Phys 3080 concurrently.

Phys 3512 Modern Physics II (3) Applications of basic and intermediate level quantum physics to atoms, molecules, nuclei, solids, and elementary particles. Includes quantum statistical physics. Prerequisites: Phys 3511 and Math 2153; Phys 3080 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 3512; Phys 3080 concurrently.

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 (3) Wave optics, including the principles of superposition, interference, diffraction, polarization, and dispersion. Introduction to quantum optics. Prerequisites: Phys 2122 and Math 2153.; Phys 3080 concurrently.

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 3512.

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.*

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

Mission Statement

The Department of Communication embraces the traditions, study, and practice of symbolic interaction through a variety of communication genres, such as broadcast media, corporate communication, journalism, mass communication, public relations, rhetoric, and speech communication.

Students must make a 2.35 GPA in the following core courses: Comm 1100, Comm 1110, Comm 2100, Comm 2110, Comm 3100 and Comm 3110

Admissions

Students entering Central Missouri State University to pursue a degree in communication (Communication, B.A.; Broadcasting and Film, B.S.; Journalism, B.S.; Public Relations, B.S.) should indicate their intentions to become a 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 communication degree programs is conditional upon the completion of the following prerequisites:

1. Completion of the following General Education requirements with no grade lower than C: Comm 1000; Engl 1020 and Engl 1030, or Engl 1080.
2. Proficiency in keyboarding is required for all writing courses.

Application into the 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 completion of the 9 semester hours of course work in the appropriate category.

1. Broadcasting and Film Majors must obtain a 2.50 GPA in: Comm 1200, Comm 2400, Comm 2415.
2. Journalism Majors must obtain a 2.25 GPA in: Comm 1200, Comm 1520, Comm 2520.
3. Public Relations Majors must obtain a 2.25 GPA in: Comm 1520, Comm 2520, Comm 2620.

Course Work

1. Subsequent to initial enrollment as entering students, students majoring in 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 communication course without permission of the departmental Student Affairs Committee.
3. A student may not graduate with a degree in a communication major in which the grade of

record for any required communication course work is an F. Excluding Comm 1200, Comm 2400, Comm 2415, Comm 1520, Comm 2620, Comm 4500, a maximum of six semester hours in which the grade of record for any communication course is a D may be counted toward a degree with a communication major.

4. Course substitutions for the catalog requirements may be made only upon approval by the appropriate departmental advisor and department chair.
5. Some production or writing courses require participation in activities outside the class meeting hours. Students should be prepared to participate in these activities that 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 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 certain grade-point average for all course work in the major (see individual major descriptions for GPA requirements).

BROADCASTING AND FILM Major, B.S. Degree
(43 000342)

Broadcasting and Film Statement of Policy

Admissions

Students entering Central Missouri State University to pursue a Bachelor of Science degree in Broadcasting and Film should indicate their intentions to become a Broadcasting and Film major at the time of first enrollment and be assigned a departmental adviser. Department advisers can be obtained at the department office, Martin 136.

Application into the Broadcasting and Film major should be made during the freshman or sophomore 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.

Admission to the Broadcasting and Film program is conditional upon the completion of the following prerequisites:

1. Completion of the following General Education requirements with no grade lower than C: Comm 1000, Engl 1020 and Engl 1030, or Engl 1080.
2. Completion of the following Broadcasting and Film gateway courses: Comm 1200, Comm 2400, Comm 2415. Students must maintain a 2.50 grade point average with no course credit lower than a C in these courses.

Course Work

1. A first semester student majoring in Broadcasting and Film should meet with a departmental adviser before registering for additional classes.
2. Students will not be permitted to withdraw more than one time from each Broadcasting and Film course without permission of the departmental Broadcasting and Film Committee.
3. A student may not graduate with a degree in Broadcasting and Film in which the grade of record for any required communication course work is an F.
4. Excluding Comm 1200, Comm 2400, Comm 2415, a maximum of six semester hours in which the grade of record for any communication coursework is a D may be counted toward a Broadcasting and Film major.
5. Course substitutions for the catalog requirements may be made only upon approval by the appropriate departmental adviser and department chair.
6. 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.
7. 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.
8. In order to graduate with a degree in Broadcasting and Film, a student must attain a 2.25 (or above) grade-point average for all credit hours (completed at Central or elsewhere) and attain a 2.50 (or above) grade-point average for all course work in the major.

The graduate with a Bachelor of Science degree in Broadcasting and Film will use the knowledge and skills obtained in the program to:

- Demonstrate an understanding of the theories of communication through broadcast media.
- Demonstrate an understanding of how research is applied and critiqued in media industries.
- Demonstrate preparedness for the industries of mass media through practical knowledge of the process of production.
- Demonstrate an understanding of the history of and effects of electronic media in today's society.

	Sem. Hours
MAJOR REQUIREMENTS	45-57
Comm 1100 Intro. to Communication	1
Comm 1110 Communication Skills Lab	1
Comm 2100 Introduction to Communication Theory	3
Comm 2110 Intro. to Communication Theory Lab	1
Comm 3100 Communication Research Methods	3
Comm 3110 Resource and Methods Lab	1
Comm 1200 Intro. to Mass Communication	3
Comm 4250 Mass Communication Law	3
Comm 2400 Foundations of Broadcasting	3
Comm 2410 Multimedia I	3
Comm 2411 Audio I	3
Comm 2412 Video I	5
Comm 2415 Broadcast Copywriting	3
Comm 4490 Senior Capstone Seminar	2
Comm 3200 Practicum, 1-3 or	
Comm 4295 Internship, 1-3	1-3
Production*	
Electives from the following	3-9
Comm 3410 Audio II	3
Comm 3411 Video II	3
Comm 3413 Multimedia II	3

(electives continued)

Comm	3412	Single Camera Drama Prod.	3
Comm	4410	Video Production III	3
Comm	4470	Corp. & Org. Media Production	3

Industry Practice and Analysis*

Electives from the following	3-5
Comm 4240 Media Management	2
Comm 4245 Media Economics & Sales	3
Comm 3430 Broadcast Prog. & Operations	3
Comm 4415 Screenplay Writing	3
Comm 4475 New Media Technology	2
Comm 3640 Mass Media Advertising	3

Theory and Criticism*

Electives from the following	3-5
Comm 4200 Spec. Topics in Mass Media	1-6
Comm 4260 Comparative Media Systems	2
Comm 4280 Criticism of Mass Media	2
Comm 4285 Women & Minorities in Media	3
Comm 4290 Special Proj. in Mass Comm.	1-3
Comm 3400 History of American Film	3

*A minimum of 13 hours of these electives must be upper-level.

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MINOR REQUIREMENTS (see Statement of Policy)	18-25
GENERAL EDUCATION REQUIREMENTS (page 48)	48
Comm 1000 Div. I B (required)	3
Comm 3000 Div. II D (required)	3
Geog 3201 Div. II E (required)	3
Comm 3010 Div. III (required)	3
UPPER-LEVEL ELECTIVES	1-13
MINIMUM TOTAL	124

BROADCAST MEDIA Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)

(000343)

MINOR REQUIREMENTS	Sem. Hours
Comm 1200 Intro. to Mass Communication	3
Comm 4250 Mass Communication Law	3
Comm 2400 Foundations of Broadcasting	3
Comm 2411 Audio I	3
Comm 2412 Video I	5
Electives from the following	6
Comm 3200 Mass Media Practicum	1-3
Comm 4240 Media Management	2
Electives (continued)	23
Comm 4280 Criticism of Mass Media	2
Comm 2415 Broadcast Copywriting	3
Comm 3410 Audio II	3
Comm 3411 Video II	3
Comm 3412 Single Camera Drama Prod.	3
Comm 3430 Broadcast Prog. & Operations	3
Comm 4410 Video III	3

JOURNALISM Major, B.S. Degree

For admissions and classwork requirements, see Statement of Policy.

(43 000345)

The graduate with a Bachelor of Science degree in Journalism will use the knowledge and skills obtained in the program to:

- Understand newsgathering and reporting
- Appreciate photojournalism
- Understand media law and ethics.
- Edit writing for new value, style, grammar and writing quality.
- Appreciate electronic journalism.
- Understand mass media and society.
- Be able to conceptualize page design.

Sem. Hours

MAJOR REQUIREMENTS		52-54
Comm 1100	Introduction to Communication	1
Comm 1110	Communication Skills Lab	1
Comm 2100	Intro. to Communication Theory	3
Comm 2110	Intro. to Comm. Theory Lab	1
Comm 3100	Communication Research Methods	3
Comm 3110	Resources and Methods Lab	1
Comm 4210	Mass Media Practicum II	1
Comm 4250	Mass Communication Law	3
Comm 4280	Criticism of Mass Media	2
Comm 4295	Internship	1-3
Comm 1520	Elements of News Reporting	3
Comm 2520	Copy Editing & Layout	3
Comm 2550	Mass Media Practicum I	1
Comm 3500	Reporting Public Affairs	3
Comm 3525	Feature Writing	3
Comm 3530	Photo Journalism	3
Comm 4500	Heritage of American Journalism	3
Comm 4535	Advanced News Reporting	3
Comm 4555	Advanced Editing	3
Departmentally approved upper-level electives from one of the areas listed below. A listing of courses is available from the Chair of the Department		9
Area 1 Print Journalism		
Area 2 Broadcast Journalism		
Area 3 Newspaper and Magazine Editing		
Proficiency in typing is required (see Statement of Policy).		
MINOR REQUIREMENTS (see Statement of Policy)		18-25
GENERAL EDUCATION REQUIREMENTS (page 48)		48
Comm 1000	Div. I B (required)	3
Comm 3000	Div. II D (required)	3
Comm 3010	Div. III (required)	3
I Gen 3232	Div. IV A or	
I Gen 3224	Div. IV A (required for Area 3)	3
FREE ELECTIVES		0-4
MINIMUM TOTAL		124

JOURNALISM Minor, B.S. in Ed. Degree
(Certification to teach journalism in grades 9-12)
(000346)

The graduate with a Bachelor of Science in Education degree with a Journalism minor will use the knowledge and skills obtained in the program to:

- Understand newsgathering and reporting.
- Appreciate photojournalism.
- Demonstrate management and business skills for publication advisors.
- Appreciate electronic journalism.
- Understand mass media and society.
- Be able to conceptualize page design.

MINOR REQUIREMENTS		Sem. Hours
.....		33
Comm 1100	Intro to Communication	1
Comm 1110	Communication Skills Lab	1
Comm 3280	Sports Writing	3
Comm 4250	Mass Communication Law	3
Comm 1520	Elements of News Reporting	3
Comm 2520	Copy Editing and Layout	3
Comm 3505	Introduction to High School Video Production	1
Comm 3525	Feature Writing	3
Comm 3535	Broadcast Journalism	3
Comm 4500	Heritage of American Journalism	3
Comm 4522	Desktop Design for Teachers	3
Comm 4555	Advanced Editing	3
Comm 4571	Methods of Teaching Journalism	3

JOURNALISM Minor for a Bachelor's Degree
(Except for a B.S. in Ed. Degree)
(200008)

MINOR REQUIREMENTS		Sem. Hours
.....		23-26
Comm 1100	Intro to Communication	1
Comm 1110	Communication Skills Lab	1
Comm 4250	Mass Communication Law	3
Comm 1520	Elements of News Reporting	3

150 **Communication**

Comm 2520	Copyediting & Layout	3
Comm 3500	Reporting of Public Affairs, 3 or	
Comm 3525	Feature Writing, 3	3
Comm 4500	Heritage of American Journalism	3
Comm 4555	Advanced Editing	3

Electives from the following	3-6	
Comm 3200	Mass Media Practicum	1-2
Comm 3280	Sports Writing	3
Comm 4280	Criticism of Mass Media	2
Comm 3530	Photo Journalism	3
Comm 3535	Broadcast Journalism	3
Comm 3525	Feature Writing	3
Comm 4520	Editorial & Interp. Writing, 3 or	
Comm 4535	Advanced News Reporting, 3	3

COMMUNICATION Major, B.A. Degree

For admissions and classwork requirements, see Statement of Policy.
(42 000348)

- The graduate with a Bachelor of Arts degree in Communication will use the knowledge and skills obtained in the program to:
- Demonstrate a general knowledge and appreciation of mass and/or speech communication theories.
 - Demonstrate ability to critique and/or apply various research methods and/or approaches.
 - Demonstrate preparedness for professional life and/or further academic study.
 - Demonstrate a basic knowledge of the combined disciplines of mass and speech communication through each of the following core areas: production, criticism, classical rhetoric, survey, and relational dynamics.

	Sem. Hours
MAJOR REQUIREMENTS	39-47
Comm 1100 Introduction to Communication 1	(electives continued)
Comm 1110 Communication Skills Lab 1	Comm 4415 Screen Play Writing 3
Comm 2100 Introduction to Communication Theory 3	Comm 1520 Elements of News Reporting . . 3
Comm 2110 Intro. to Communication Theory Lab . . 1	Comm 2410 Multimedia I, 3 or
Comm 3100 Communication Research Methods . . . 3	Comm 2411 Audio Production, 3 or
Comm 3110 Resources and Methods Lab 1	Comm 2412 Video Production I, 3 3
Comm 1200 Introduction to Mass Communication . . 3	Survey*
Comm 2325 Improving Listening Skills 2	Electives from the following 3
Comm 3327 Improving Interviewing Skills 2	Comm 2320 Found. of Rhetorical Theory . . 3
Comm 4335 Gender Communication 3	Comm 2400 Foundations of Broadcasting . . 3
Comm 4350 Contemporary Public Communication 2	Comm 3400 History of American Film . . . 3
Comm 3200 Mass Media Practicum, 1 or	Comm 4500 Heritage of Am. Journalism . . . 3
Comm 3390 Forensics 1	Comm 2620 Pubic Relations 3
Departmentally approved upper-level electives in communication 3-6	Relational*
Criticism*	Electives from the following 2-3
Electives from the following 2-3	Comm 3325 Nonverbal Communication. . . 2
Comm 3000 Film Appreciation 3	Comm 3340 Intercultural Communication . . 3
Comm 4260 Comparative Media Systems . . . 2	Comm 4330 Theories of Interpersonal Communication 3
Comm 4280 Criticism of Mass Media 2	Classical*
Comm 3320 Audience Adaptation 3	Electives from the following 3
Comm 3355 Speech Writing and Criticism . . . 3	Comm 2340 Argument and Debate 3
Production*	Comm 4320 Persuasion 2
Electives from the following 3-6	Comm 4340 Classical Rhetorical Theory . . 3
Comm 3350 Prin. of Presentational Speaking 3	Comm 4345 Modern Rhetorical Theory . . . 3
Comm 2415 Broadcast Copywriting 3	
*A minimum of 7 hours of these electives must be upper-level Proficiency in typing is required (see Statement of Policy).	
MINOR REQUIREMENTS (see Statement of Policy)	18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (The Modern Language Requirement fulfills 3 s.h. of Div. II C)	45
Comm 1000 Div. I B (required) 3	Comm 3010 Div. III (required) 3
Comm 3000 Div. II D (required) 3	IGen 4224 Div. IV A or
Anth 1820 Div. II E or	IGen 3232 Div. IV A or
Geog 3201 Div. II E or	IGen 3224 Div. IV A (required) 3
WS 2000 Div. II E (required) 3	
MODERN LANGUAGE REQUIREMENT	6
(Refer to Bachelor's Degree Requirements section for fulfillment options.)	
UPPER-LEVEL ELECTIVES	8-16
MINIMUM TOTAL	124

COMMUNICATION Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)
(000349)

	Sem. Hours
MINOR REQUIREMENTS	20
Comm 1200 Intro. to Mass Communication 3	Comm 1520 Elem. of News Reporting 3
Comm 4260 Comparative Media Systems 2	Departmentally approved electives in mass communication 7
Comm 4280 Criticism of Mass Media 2	
Comm 2411 Audio I 3	

PUBLIC RELATIONS Major, B.S. Degree

For admissions and classwork requirements, see Statement of Policy.
(43 000351)

- The graduate with a Bachelor of Science degree in Public Relations will use the knowledge and skills obtained in the program to:
- Demonstrate public relations driven knowledge and application of communication theories/concepts.
 - Demonstrate ability to effectively evaluate and utilize research for public relations purposes.
 - Demonstrate preparedness for professional life and/or further academic study.
 - Demonstrate strategic management/decision-making abilities.

		Sem. Hours
MAJOR REQUIREMENTS		42
Comm 1100	Introduction to Communication 1	Electives from the following 6
Comm 1110	Communication Skills Lab 1	Comm 3200 Mass Media Practicum 1-3
Comm 2100	Introduction to Communication Theory 3	Comm 4200 Spec. Topics in Mass Media 1-6
Comm 2110	Intro. to Communication Theory Lab . . 1	Comm 4280 Criticism of Mass Media 2
Comm 3100	Communication Research Methods . . . 3	Comm 4295 Internship 1-3
Comm 3110	Resources and Methods Lab 1	Comm 2415 Broadcast Copywriting 3
Comm 1200	Intro. to Mass Communication 3	Comm 4470 Instr. & Corp. Television 3
Comm 4250	Mass Communication Law 3	Comm 3525 Feature Writing 3
Comm 1520	Elements of News Reporting 3	Comm 3530 Photo Journalism 3
Comm 2520	Copy Editing & Layout 3	Comm 4520 Editorial & Inter. Writing 3
Comm 4510	Magazine Design & Production 3	Comm 3640 Mass Media Advertising 3
Comm 2620	Public Relations 3	Grap 1010 Intro. to Desktop Pub. & Printing 3
Comm 4680	Publicity 3	Phot 1210 Elementary Photography 3
Comm 4685	Case Studies in Public Relations 2	
Comm 4690	Campaigns 3	
Proficiency in typing is required (see Statement of Policy).		
MINOR REQUIREMENTS (see Statement of Policy)		18-25
GENERAL EDUCATION REQUIREMENTS (page 48)		48
Comm 1000	Div. I B (required) 3	IGen 4224 Div. IV A or
Comm 3000	Div. II D (required) 3	IGen 3232 Div. IV A or
Comm 3010	Div. III (required) 3	IGen 3224 Div. IV A (required) 3
UPPER-LEVEL ELECTIVES		16-24
MINIMUM TOTAL		124

ORGANIZATIONAL COMMUNICATION Major, B.S. Degree

(43 000356)

The graduate with a Bachelor of Science degree in Organizational Communication will use the knowledge and skills obtained in the program to:

- Demonstrate a general knowledge and application of communication theory within an organizational context.
- Demonstrate ability to critique and apply various research methods and/or approaches within an organizational context.
- Demonstrate preparedness for professional life and/or further academic study.

Statement of Policy

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 the degree program is contingent upon the completion of the following prerequisites:

1. Successful completion of the department foundation courses with a 2.50 grade-point average.
2. A cumulative grade-point average of 2.50.

Application to the program should be made as soon as all ten hours of the Foundation courses have been completed.

Permission to proceed with the internship requirement is contingent upon the student presenting grades of "C" or better in the pre-internship requirements.

Transfer students without Communication 3010 equivalency must take COMM 3010 – Interpersonal Communication.

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		Sem. Hours
MAJOR REQUIREMENTS		46
Foundations Courses		
Comm 1000	Public Speaking	3
Comm 1100	Introduction to Communication	1
Comm 1110	Communication Skills Lab	1
Comm 2100	Introduction to Communication Theory	3
Comm 2110	Intro. to Communication Theory Lab ..	1
Comm 3100	Communication Research Methods	3
Comm 3110	Research and Methods Lab	1
Professional Courses		
Comm 2325	Improving Listening Abilities	2
Comm 3350	Principles of Presentational Speaking	3
Comm 4475	New Media Technologies	2
Comm 2620	Public Relations	3
Comm 3730	Communication Conflict Management	3
Comm 4783	Communication Training	3
Pre-Internship Requirements		
Comm 2330	Small Group Communication	3
Comm 2380	Intro to Organizational Comm	3
Comm 3327	Improving Interviewing Skills	2
Comm 4780	Advanced Theories of Organizational Communication	3
Internship		
Comm 4785	Internship in Speech Comm.	3-6
(If a 3 hour internship is selected, one additional 3 semester hour upper-level course must be selected from the Professional Courses category)		
MINOR REQUIREMENTS		18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the major, Comm 1000 fulfills 3 s.h. of Div. I B)		
Anth 1820	Div. II D or	I Gen 4224 Div. IV A or
Geog 3201	Div. II D or	I Gen 3232 Div. IV A or
WS 2000	Div. II D (required)	3 I Gen 3224 Div. IV A (required)
Comm 3010	Div. III (required)	3
UPPER-LEVEL ELECTIVES		8
FREE ELECTIVES		0-7
MINIMUM TOTAL		124

SPEECH COMMUNICATION Major, B.A. Degree
(42 000358)

The graduate with a Bachelor of Arts degree in Speech Communication will use the knowledge and skills obtained in the program to:

- Formulate appropriate communication strategies for dealing with potential conflict situations within and between specific cultures.
- Implement appropriate communication strategies for reducing existing conflicts within and between specific cultures.
- Communicate appropriately and ethically within culturally diverse contexts.
- Communicate effectively yet ethically in goal-relevant situations involving diverse cultures.
- Articulate/present significant principles of international/intercultural communication gained from direct, personal interaction with members of diverse ethnic, racial and cultural backgrounds.
- Analyze organizational and family structures in terms of cultural influences, which affect the relationships.

		Sem. Hours
MAJOR REQUIREMENTS		35
Comm 1000	Public Speaking	3
Comm 3010	Interpersonal Communication	3
Comm 2100	Foundations of Comm. Theory	3
Comm 2320	Foundations of Rhetorical Theory	3
Comm 2325	Improving Listening Abilities	2
Comm 2330	Small Group Communication	3
Comm 3340	Intercultural Communication	3
Comm 4330	Theories of Interpersonal Communication	3
Comm 4335	Gender Communication	3
Comm 4340	Classical Rhetorical Theory	3
Comm 3730	Communication Conflict Mgt.	3
Comm 3320	Audience Adaptation, 3 or	
Comm 4345	Modern Rhetorical Theory, 3	3
MINOR REQUIREMENTS		18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the major, Comm 1000 fulfills 3 s.h. of Div. I B; the Modern Language Requirement fulfills 3 s.h. of Div. II C; in the major, Comm 3010 fulfills 3 s.h. of Div. II E)		
Anth 1820	Div. II D or	I Gen 4224 Div. IV A or
Geog 3201	Div. II D or	I Gen 3232 Div. IV A or
WS 2000	Div. II D (required)	3 I Gen 3224 Div. IV 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)

The graduate with a Bachelor of Science degree in Speech Communication will use the knowledge and skills obtained in the program to:

- Demonstrate a general knowledge and application of communication theories/concepts.
- Demonstrate ability to effectively evaluate and utilize research.
- Demonstrate preparedness for professional life and /or further academic study.

		Sem. Hours
MAJOR REQUIREMENTS		45-52
Comm 1100	Introduction to Communication 1	Electives in social influence* 7-9
Comm 1110	Communication Skills Lab 1	Comm 1200 Intro. to Mass Communication 3
Comm 2100	Introduction to Communication Theory 3	Comm 4250 Mass Communication Law . . 3
Comm 2110	Intro. to Communication Theory Lab . 1	Comm 4260 Comparative Media Systems 2
Comm 3100	Communication Research Methods . . 3	Comm 4280 Criticism of Mass Media 2
Comm 3110	Resources and Methods Lab 1	Comm 2340 Argumentation and Debate . . 3
Comm 2320	Foundations of Rhetorical Theory . . . 3	Comm 3320 Audience Adaptation 3
Comm 2325	Improving Listening Abilities 2	Comm 4500 Heritage of American Journalism 3
Comm 2330	Small Group Communication 3	Phil 2300 Ethics 3
Comm 3350	Principles of Presentational Speaking 3	PolS 2550 Political Parties & Pressure Groups 3
Comm 4320	Persuasion 2	PolS 3550 Public Opinion & Mass Media 3
Electives in applied communication* 2-3		Rel 2310 World Views and Values 3
Comm 3327	Improving Interviewing Skills 2	Electives in rhetorical studies* 5-6
Comm 3355	Speech Writing and Criticism 3	Comm 4340 Classical Rhetorical Theory. . . 3
Comm 3390	Forensics 1-3	Comm 4345 Modern Rhetorical Theory . . 3
Electives in interaction skills* 2-3		Comm 4350 Contemporary Communication 2
Comm 3325	Nonverbal Communication 2	Departmentally approved upper-level electives 6-8
Comm 3340	Intercultural Communication 3	
Comm 4330	Theories of Interpersonal Comm. . . . 3	
Comm 4335	Gender Communication 3	
Comm 3730	Comm. Conflict Management 3	
*A minimum of 14 credit hours of these electives must be upper-level		
MINOR REQUIREMENTS		18-25
GENERAL EDUCATION REQUIREMENTS (page 48)		48
Comm 1000	Div. I B (required) 3	Comm 3010 Div. III (required) 3
Comm 3000	Div. II D (required) 3	IGen 4224 Div. IV A or
Anth 1820	Div. II D or,	IGen 3232 Div. IV A or
Geog 3201	Div. II D or,	IGen 3224 Div. IV A (required) 3
WS 2000	Div. II D (required) 3	
UPPER-LEVEL ELECTIVES		0-13
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
Comm 1000	Public Speaking 3	Comm 2330 Small Group Communication . . . 3
Comm 3010	Interpersonal Communication 3	Electives in speech communication 12
GENERAL EDUCATION REQUIREMENTS (page 48) (In the minor, Comm 1000 fulfills 3 s.h. of Div. I B; Comm 3010 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	Comm 2330 Small Group Communication . . . 3
Thea 1600	Stagecraft & Lighting 3	Comm 2340 Argumentation & Debate 3
Thea 3700	Directing 3	Comm 3325 Nonverbal Communication 2
Comm 2100	Foundations of Comm. Theory 3	Comm 3390 Forensics 1

(Options are listed on next page)

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Speech Communication Major Option, B.S. in Ed. Degree

The graduate with a Bachelor of Science in Education degree in Speech & Theatre (with a Speech Communication Major Option) will use the knowledge and skills obtained in the program to:

- Demonstrate knowledge and application of the fundamentals of communication.
- Demonstrate knowledge and application of public speaking concepts and principles.
- Demonstrate knowledge and application of the theory and practice of argumentation and debate.
- Demonstrate an understanding of communication ethics.
- Demonstrate knowledge and application of the theory and practice of interpersonal and group communication.
- Demonstrate knowledge and application of school forensics through experiential co-curricular activities.
- Demonstrate knowledge and application of mass communication concepts, principles and basic techniques.

		Sem. Hours
MAJOR REQUIREMENTS		36
Core Requirements	21	
Comm 3010 Interpersonal Communication	3	Comm 3350 Prin. of Presentational Speaking 3
Comm 3320 Audience Adaptation	3	Thea 4400 Lit. & History of the Theatre I, 3 or
		Thea 4420 Lit. & History of the Theatre II, 3
		Electives in SpCm, Thea, or MCom 3
MINOR REQUIREMENTS		18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the major, Comm 3010 fulfills 3 s.h. of Div. III; in the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. IV B)		
Students must have one course in a physical or earth science and one in a biological science in Div. II A.		
Comm 1000 Div. I B (required)	3	Thea 2400 Div. II C (required) 3
Hist 1350 Div. II B or		Anth 1820 Div. II D or
Hist 1351 Div. II B (required)	3	Geog 3201 Div. II D or
PoIS 1510 Div. II B (required)	3	WS 2000 Div. II D (required) 3
Comm 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 page 205)		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.

SpCm 4281 Assessment of Organizational

Communication (2) The assessment and measurement of human interaction within professional settings.

Comm 1000 Public Speaking (3) A study and practice of basic principles involved in discovering, arranging, delivering, and evaluating ideas in speech situations.

Comm 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 General Education requirement.

Comm 3010 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.

Comm 1100 Introduction to Communication Studies

(1) This course introduces the student to communication and the way it impacts the social, economic and political lives of consumers and how they can have impact upon the media.

Comm 1110 Communication Skills Lab (1) This course provides the fundamentals essential for a student to communicate effectively in various written formats used by communication practitioners.

Comm 2100 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.

Comm 2110 Foundations of Communication Theory Lab (1) Through structured learning activities this lab supports the application/practice of the objectives and

outcomes of Comm 2100 (Foundations of Communication Theory).

Comm 3100 Communication Research Methods (3)

Use of research techniques applied to the study of communication, with stress upon those factors affecting the mass media.

Comm 3110 Resources and Methods Lab (1) Through structured learning activities this lab supports the application/practice of the objectives and outcomes of Communication 3100 (Introduction to Communication Research).

Comm 1200 Introduction to Mass Communication

(3) Theory of mass communication, roles and functions of mass media in a contemporary society.

Comm 3200 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 Comm 4295.* Prerequisite: consent of instructor.

Comm 3280 Sports Writing (3) Develops sports writing skills, both news and column writing. Prerequisite: Comm 2520.

Comm 4200 Special Topics in Mass Media (1-9)

Departmentally selected topics of contemporary interest in mass media or specialized areas of the media; variable content. *May be repeated for a maximum of 9 semester hours (only 6 hours will apply to the major).*

Comm 4210 Mass Media Practicum II (1) Provides hands-on experience at the *Muleskinner*. Prerequisite: Comm 3500.

Comm 4240 Media Management (2) Elements involved in the organization and successful operation of mass media enterprises; special emphasis upon interpersonal problems.

Comm 4245 Media Economics and Sales (3) Business aspects of mass media in a competitive economy, including techniques for selling advertising space and time.

Comm 4250 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.

Comm 4260 Comparative Media Systems (2) Role of mass media in major countries and in developing areas; sociopolitical, economic, cultural and historical perspective.

Comm 4280 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.

Comm 4285 Women and Minorities in Media (3) The study of women and minorities, their contributions and images, in a variety of media. Prerequisite: Comm 1200 or Comm 3010 or consent of instructor.

Comm 4290 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.

Comm 4295 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 Comm 3200.* 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.

Comm 2320 Foundations of Rhetorical Theory (3)

Nature and functions of rhetoric across various communication situations.

Comm 2325 Improving Listening Abilities (2)

Theories and principles for improving listening in a variety of communication situations.

Comm 2330 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.

Comm 2340 Argumentation and Debate (3) Principles of analysis, evidence, reasoning, briefing, refutation, case construction, preparing and evaluating arguments. Practical experience with different types of debate.

Comm 2380 Intro to Organizational Communication

(3) Examines human communication within an organizational context. Contemporary approaches, the enduring processes, and emergent communication processes facing contemporary organizations are considered.

Comm 3320 Audience Adaptation (3) Audience dimensions and their relationship to communicative acts. Prerequisite: Comm 1000.

Comm 3325 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.

Comm 3327 Improving Interviewing Skills (2) Theory and purposes of interviewing, emphasizing the principles and practice of interviewing skills.

Comm 3340 Intercultural Communication (3)

Communication between and among cultures, including enculturation and relational implications of cross-cultural communication across a variety of contexts. Prerequisite: Comm 2320 or Geog 2212 or consent of instructor.

Comm 3350 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: Comm 1000.

Comm 3355 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.

Comm 3370 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.

Comm 3390 Forensics (1) Participation in intercollegiate forensics--debate, oratory, extemporaneous speaking, discussion, and oral interpretation. *May be repeated for a maximum of 3 semester hours.*

Comm 4300 Special Projects in Speech

Communication (1-3) *May be repeated for a maximum of 6 semester hours.* Prerequisite: written approval of department chair.

Comm 4320 Persuasion (2) Emotive, cognitive, and behavioral sources of persuasive appeal.

Comm 4330 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.

Comm 4335 Gender Communication (3) Gender as it influences communication processes in intrapersonal, interpersonal, group, public and mediated contexts. Prerequisite: Comm 3010 or consent of instructor.

Comm 4340 Classical Rhetorical Theory (3) Foundations and development of rhetorical theory during the Classical Period with special emphasis given to Plato, Aristotle, Cicero, and Quintillian.

Comm 4345 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.

Comm 4390 Contemporary Communication (2) Public address as it functions in contemporary society in a variety of traditional and mass media settings.

Comm 2400 Foundations of Broadcasting (3) Legal, historical, economic, societal and technological foundations of broadcasting. Prerequisite: Comm 1200 or consent.

Comm 2410 Multimedia I (3) Principles and practices of designing multimedia for the Broadcast industries. The course covers both hardware and software appropriate to the discipline, including hands-on experience. Prerequisite: Comm 2400.

Comm 2411 Audio I (3) Techniques of vocal skills and operation of audio equipment used in broadcasting.

Comm 2412 Video I (5) Basic techniques and studio procedures used in performance and production of interviews and news programs most commonly found in television stations. Prerequisite: Comm 2411.

Comm 2415 Broadcast Copywriting (3) A survey course of different styles of broadcast writing and practical applications.

Comm 3400 History of American Film (3) Development of the American film from the silent era to the present.

Comm 3410 Audio II (3) Techniques of digital-audio post-production and practical studio performance applications. Prerequisite: Comm 2411.

Comm 3411 Video II (3) Intermediate course in digital video production/performance covering electronic field production, electronic news gathering, producing, directing, shooting and editing techniques. Prerequisite: Comm 2412.

Comm 3412 Single Camera Dramatic Production (3) Production of dramatic programs shot on 16mm film or digital video. Topics include scripting, directing, shooting, non-linear editing and animation. Prerequisite: Comm 2412.

Comm 3413 Multimedia II (3) Advanced multimedia applications, including audio/video, animation, and incorporation of moving images, two-dimensional images and text to create interactive, multi-media environments. Prerequisite: Comm 2410.

Comm 3430 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: Comm 2400.

Comm 4410 Video III (3) Preparation and production of short programs, with emphasis on advanced shooting and

editing techniques. Prerequisite: Comm 3411 or Comm 3412.

Comm 4415 Screenplay Writing (3) Principles, techniques and formats of dramatic screenwriting for film and television.

Comm 4470 Corporate and Organizational Media Production (3) Production of instructional, training and informational videos for use within corporations and other organizations. Prerequisite: Comm 2412.

Comm 4475 New Media Technologies (2) Technological developments and their uses (existing and potential) as information distribution systems.

Comm 4490 Senior Capstone Seminar (2) Preparation of a portfolio and résumé tape representing the student's best work; in addition, students will participate in assisting and tutoring students in lower-level courses in the major. Prerequisite: instructor's permission.

Comm 1520 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 General Education Div. I A.

Comm 2520 Copy Editing and Layout (3) Copyediting, rewriting, headline writing, and page make-up. Laboratory work on campus newspaper. Prerequisite: Comm 1520.

Comm 2550 Mass Media Practicum I (1) Practical experience at the department's media outlets.

Comm 3500 Reporting Public Affairs (3) Techniques of reporting city, county, state, and federal government, as well as boards of education and other governmental entities. Prerequisites: Comm 2520 and Comm 2550 or consent of instructor.

Comm 3505 Introduction to High School Video Production (1) The high school journalism teacher will learn about single camera operation, lighting, graphics, talent position, voice, body and performance. Prerequisite: admission to the journalism minor, B.S. in Ed.

Comm 3525 Feature Writing (3) Advanced course in writing special articles for newspapers and magazines. Prerequisites: Comm 2520 and completion of General Education Div. I A.

Comm 3530 Photo Journalism (3) Effective use of photography in journalism communication. Prerequisites: Grap 1210.

Comm 3535 Broadcast Journalism (3) Philosophy and techniques of radio and television journalism. Prerequisite: Comm 1520.

Comm 4500 Heritage of American Journalism (3) Development of the American press from colonial days to modern times; factors affecting the shape and contents of the press in contemporary society.

Comm 4510 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: Comm 1520.

Comm 4520 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: Comm 3525.

Comm 4522 Desktop Design for Teachers (3) Instructs students in the use of QuarkXpress for

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newspaper design and makeup. Prerequisite: Comm 2520 or newspaper/supervisory experience.

Comm 4535 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: Comm 3525.

Comm 4555 Advanced Editing (3) Provides advanced editing skills for news media. Emphasis on news judgment, language use, copy improvement, headline and outline writing, wire services, photo editing, page layout and design. Prerequisite: Comm 2520.

Comm 4571 Methods of Teaching Journalism (3) Practical methods in the teaching of journalism. Prerequisite: admission to the journalism minor, B.S. in Ed.

Comm 2620 Public Relations (3) Public relations communications, principles, and techniques in historical perspective, including research and report writing. Prerequisite: completion of General Education Div. I A.

Comm 3640 Mass Media Advertising (3) The techniques and roles of advertising in the mass media.

Comm 4680 Publicity (3) Overview of the publicity process including written, spoken, and/or videotaped messages using the mass media as a public relations tool. Prerequisites: Comm 2520 and Comm 2620.

Comm 4685 Case Studies in Public Relations (2) Public relations problems of individual business and civic organizations; analysis of actual and proposed solutions. Prerequisite: Comm 2620.

Comm 4690 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: Comm 4680.

Comm 3730 Communication Conflict Management (3) An examination of communication factors which contribute to conflicts and an analysis of their resolution.

Comm 4780 Advanced Theories of Organizational Communication (3) A consideration of theories and principles of communication structures and systems within organizations.

Comm 4783 Communication Training (3) Communication as the coupling that holds organizations together and the agent of change that 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 training. Prerequisites: Comm 3327, Comm 3350, and Comm 3320 or Comm 2340 or consent of instructor.

Comm 4785 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.

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 among 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 General Education Div. II A.

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/Family and Consumer Sciences, 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	
*Comm 4335 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.

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)

The graduate with a Bachelor of Arts in English degree will use the knowledge and skills obtained in the program to:

- Appreciate the aesthetics of literature; understand its origins, trends, critical approaches, classifications, and limitations; and evaluate significant patterns of meaning found in its study.
- Write and speak with clarity, originality, grammatical correctness, and logic, demonstrating rhetorical skills necessary for successful communication.
- Accomplish primary and secondary research, incorporating the results into formal written and oral presentations.
- Understand language diversity as well as language uses, the relationship between spoken and written language, historical developments and social/cultural adaptations.
- Understand the relationship between a work of literature and the historical/cultural milieu in which it was written.

	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
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 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
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	3
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
GENERAL EDUCATION 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)

The graduate with a Bachelor of Science in Education degree in English will use the knowledge and skills obtained in the program to:

- Appreciate the aesthetics of literature; understand its origins, trends, critical approaches, classifications, and limitations; and evaluate significant patterns of meaning found in its study.
- Write and speak with clarity, originality, grammatical correctness, and logic, demonstrating rhetorical skills necessary for successful communication.
- Accomplish primary and secondary research, incorporating the results into formal written and oral presentations.
- Understand language diversity as well as language uses, the relationship between spoken and written language, historical developments and social/cultural adaptations, and particular and universal linguistic features.
- Understand the relationship between a work of literature and the historical/cultural milieu in which it was written.
- Identify the components of a sound language arts curriculum at the secondary school level.
- Understand and apply currently accepted teaching theory and practice.
- Develop a personal philosophy and teaching style that accounts for diverse student backgrounds, needs, and abilities and that reflects growing teacher expertise.

	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
<u>British Literature</u>	
Select British Literature Area A or B	9
<u>British Literature Area A</u>	
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
<u>British Literature Area B</u>	
Engl 2215 British Lit. 1798 to Present	3
<u>American Literature</u>	
Select American Literature Area A or B	9
<u>American Literature Area A</u>	
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
<u>American Literature Area B</u>	
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
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. IV 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
Hist 1351 Div. II B (required)	3
PolS 1510 Div. II B (required)	3
Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. in Div. III.	
PROFESSIONAL EDUCATION REQUIREMENTS (see page 205)	28
MINIMUM TOTAL	130

ENGLISH Functional Major, B.S. in Ed. Degree

(Certification to teach English in grades 9-12)

(41 000313)

The graduate with a Bachelor of Science in Education degree in English will use the knowledge and skills obtained in the program to:

- Appreciate the aesthetics of literature; understand its origins, trends, critical approaches, classifications, and limitations; and evaluate significant patterns of meaning found in its study.
- Write and speak with clarity, originality, grammatical correctness, and logic, demonstrating rhetorical skills necessary for successful communication.
- Accomplish primary and secondary research, incorporating the results into formal written and oral presentations.
- Understand language diversity as well as language uses, the relationship between spoken and written language, historical developments and social/cultural adaptations, and particular and universal linguistic features.
- Understand the relationship between a work of literature and the historical/cultural milieu in which it was written.
- Identify the components of a sound language arts curriculum at the secondary school level.
- Understand and apply currently accepted teaching theory and practice.
- Develop a personal philosophy and teaching style that accounts for diverse student backgrounds, needs, and abilities and that reflects growing teacher expertise.

	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	
GENERAL EDUCATION REQUIREMENTS (page 48)--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	Engl 2220 Div. II C (required)
	3
Hist 1351 Div. II B (required)	Psy 4230 Psychology of Adolescence
	3
PolS 1510 Div. II B (required)	
	3
Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. in Div. III.	
PROFESSIONAL EDUCATION REQUIREMENTS (see page 205)	
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	
GENERAL EDUCATION REQUIREMENTS (page 48) (Engl 2220, Div. IICD 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	
GENERAL EDUCATION REQUIREMENTS (page 48) (Engl 2220, Div. IICD required)		

CREATIVE WRITING Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)
(000490)

		Sem. Hours
MINOR REQUIREMENTS		21
Engl 2050	Creative Writing 3	
Electives from the following 3-6		
Engl 3051	Advanced Poetry Writing 3	
Engl 3052	Advanced Fiction Writing 3	
Electives from the following 3-6		
Engl 4051	Writing Poetry for Publication 3	

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- Engl 4052 Writing Fiction for Publication
3
- Engl 4053 Writing Non-fiction for Publication 3

- Electives from the following 9-12
- English (at least 3 hours must be
3000 or 4000 level) 3-12
- Comm 4415 Screenplay Writing 3
- Thea 4800 Playwriting 1-3

Rhetoric and Composition

NOTE: Students desiring preparatory courses to Engl 1020 should see "Academic Enrichment" 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: Engl 1020 or equivalent.

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 3051 Advanced Poetry Writing (3) Poetry writing at advanced level; written and oral analysis of students' creative work; preparation of individualized portfolio (may include research); workshops. Prerequisites: Engl 2050 or consent of instructor.

Engl 3052 Advanced Fiction Writing (3) Fiction writing at advanced level; written and oral analysis of students' creative work; preparation of individualized portfolio (may include research); workshops. Prerequisites: Engl 2050 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. *Not available for graduate credit.

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 4051 Writing Poetry for Publication (3) Poetry writing at advanced level; written and oral analysis of published works and of students' submissions; preparation of individualized portfolio; individualized research into publishing. Prerequisites: Engl 2050, Engl 3051,3052 or consent of instructor.

Engl 4052 Writing Fiction for Publication (3) Fiction writing at advanced level; written and oral analysis of published works and of students' submissions; preparation of individualized portfolio; individualized research into publishing. Prerequisites: Engl 2050 and one of the following: Engl 3051 or 3052, or consent of instructor.

Engl 4053 Writing Non-fiction for Publication (3) Non-fiction prose writing at advanced level; written and oral analysis of published works and of students' submissions; preparation of individualized portfolio; individualized research into publishing. Prerequisites: Engl 2050 and one of the following: Engl 3051 or 3052, or consent of instructor.

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.

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. Prerequisites: Engl 1020 and Engl 1030, or Engl 1080, or equivalents.

Engl 2205 American Literature 1865 to Present (3) An introduction to major American authors and works from the Civil War to the present. Prerequisites: Engl 1020 and Engl 1030, or Engl 1080, or equivalents.

Engl 2210 British Literature to 1798 (3) An introduction to major British authors and works from 700 to 1798. Prerequisites: Engl 1020 and Engl 1030, or Engl 1080, or equivalents.

Engl 2215 British Literature 1798 to Present (3) An introduction to major British authors and works from 1798 to the present. Prerequisites: Engl 1020 and Engl 1030, or Engl 1080, or equivalents.

Engl 2220 World Masterpieces (3) Major works of world literature, excluding British and American.

Prerequisites: Engl 1020 and Engl 1030, or Engl 1080, or equivalents.

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.

English Literature Before 1500

Engl 4310 Chaucer (3) Life and times of Chaucer with extensive reading in his major works. Prerequisite for English majors: Engl 2215.

Engl 4340 Old and Middle English Literature (3) Literary genres and contributions from *Beowulf* to 1500 (excluding Chaucer). Prerequisite for English majors: 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 for English majors: 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 for English majors: Engl 2210 or Engl 2215.

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 for English majors: Engl 2215.

Engl 4460 The Age of Pope and Johnson (3) Fiction, poetry, essays and drama during the times of Pope and Johnson. Prerequisite for English majors: Engl 2215.

English Literature From 1800 to 1900

Engl 4500 Nineteenth Century English Novel (3) Representative novels from Austen through Gaskell. Prerequisite for English majors: Engl 2210.

Engl 4510 Romantic Poets and Essayists (3) Major poets and essayists of the English Romantic period. Prerequisite for English majors: Engl 2210.

Engl 4540 The Victorian Poets and Essayists (3) Major poets and essayists of the English Victorian period. Prerequisite for English majors: Engl 2210.

Engl 4560 British Women Writers (3) Study of major works by British women writers, with an introduction to feminist criticism. Prerequisite for English majors: Engl 2210.

American Literature From Its Beginnings to 1914

Engl 4610 American Renaissance (3) The works of Emerson, Hawthorne, Thoreau and Melville. Prerequisite for English majors: Engl 2205.

Engl 4620 Early American Literature (3) Major figures of colonial, federal, and early 19th century literature. Prerequisite for English majors: Engl 2205.

Engl 4640 American Realists and Naturalists (3) Works of Twain, Howells, James, Dreiser, Chopin, and Crane. Prerequisite for English majors: Engl 2200.

Engl 4660 Women Writers of the United States (3) Prerequisite for English majors: 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 for English majors: 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 for English majors: Engl 2200 or Engl 2205.

Modern Literature

Engl 4700 British Fiction 1890 to Present (3) Representative fiction by major British authors from 1890 to the present. Prerequisite for English majors: Engl 2210.

Engl 4710 Modern American Fiction (3) Prerequisite for English majors: Engl 2200.

Engl 4720 Modern British Poetry (3) British poetry of the twentieth century. Prerequisite for English majors: Engl 2210.

Engl 4730 Modern American Poetry (3) American poetry of the twentieth century. Prerequisite for English majors: 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 4820 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 Engl 4890 during the Professional Semester. *Not available for 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 4890 Methods of Teaching English* (2)

Prerequisites: admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with Engl 4820 during the Professional Semester. *Not available for graduate credit.

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.*

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

GENERAL EDUCATION REQUIREMENTS (page 48) (In the minor, Phil 1000 fulfills 3 s.h. of Div. II C; Phil 2300 fulfills 3 s.h. of Div. III)

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.

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.

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.

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.

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.*

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)

The graduate with a Bachelor of Arts in History degree will use the knowledge and skills obtained in the program to:

- Learn and judge the basis of historical knowledge in references, documents, archives, artifacts, and electronic media.
- Differentiate between fact and interpretation, logic and bias; effectively communicate this knowledge in written and technological formats.
- Recognize conceptual frameworks and apply a point-of-view.
- Determine cause-and-effect relationships in the past.
- Read history critically for alternatives.
- Learn lessons from the past by applications to the present.
- Respect the past as prologue to the present.
- Integrate historical knowledge with other fields of study.

						Sem. Hours	
MAJOR REQUIREMENTS						39	
Hist	1350	History of the U. S. to 1877	3	Hist	2402	Hist. of the Modern World	3
Hist	1351	History of the U. S. from 1877	3	SoSc	3010	Writing in Social Sciences	3
Hist	2400	History of the Early World	3				
Hist	2401	Hist. of the Early Modern World	3				

IGen 4231 Myth, Memory & Realities	3
Upper-level electives in American history	6
Upper-level electives in world history	9
A minimum of three hours of world history must be non-western history, or Hist 4452 or Hist 4453.	
Upper-level elective in history	3
MINOR REQUIREMENTS	18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--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. IV 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)

The graduate with a Bachelor of Science in History degree will use the knowledge and skills obtained in the program to:

- Learn and judge the basis of historical knowledge in references, documents, archives, artifacts, and electronic media.
- Differentiate between fact and interpretation, logic and bias; effectively communicate this knowledge in written and technological formats.
- Recognize conceptual frameworks and apply a point-of-view.
- Determine cause-and-effect relationships in the past.
- Read history critically for alternatives.
- Learn lessons from the past by applications to the present.
- Respect the past as prologue to the present.
- Integrate historical knowledge with other fields of study.

				Sem. Hours
MAJOR REQUIREMENTS				39
Hist 1350	History of the U. S. to 1877	3	IGen 4231 Myth, Memory & Realities	3
Hist 1351	History of the U. S. from 1877	3	Upper-level electives in American history	6
Hist 2400	History of the Early World	3	Upper-level electives in world history	9
Hist 2401	History of the Early Modern World	3	A minimum of three hours of world history must be non-western history, or Hist 4452 or Hist 4453.	
Hist 2402	History of the Modern World	3	Upper-level elective in history	3
SoSc 3010	Writing in Social Sciences	3		
MINOR REQUIREMENTS				18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--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. IV 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	
GENERAL EDUCATION REQUIREMENTS (page 48) (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

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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 During the Era of the Cold War (3) Emphasizes political, social, economic, and foreign policy developments from the end of WW II (1945) to the end of the Cold War (1992).

Hist 4324 Truman and Civil Rights (3) This course analyzes the civil rights record of President Harry S. Truman.

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 4327 African American Women, Gender, and Girlhood (3) This course focuses on the history and development of black women and girls from their African origins 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.

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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.*

World History: Surveys

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 1800. Special attention will be given to industrialization, democratization, imperialism, global wars, and modernization of the non-western world.

Hist 2410 Introduction to Africana Studies (3) Examines the rise of African world civilizations, with emphasis on the development of complex empires and the influence of African cultures in the Western Hemisphere.

Western World History

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 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 4417 Intellectual History of Modern Europe (3)

Political, social, and religious ideas shaping the culture, society, and institutions of Europe.

Hist 4418 War and Modern Society (3) This course will explore the relationship between warfare and society from the advent of gunpowder weaponry to the 21st century.

Hist 4422 England to 1689 (3) 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 4431 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 4432 The Holocaust (3) Examines the Holocaust within the context of historical anti-Semitism and the chronology of Nazism's rise, World War II, the Final Solution, and the legacy.

Hist 4442 Modern Russia and the Soviet Union (3)

Russia and its place in world affairs since the eighteenth century.

Hist 4441 The Rise of Imperial Russia (3) This course will explore the history of Imperial Russia from Kievan Rus' through the end of the reign of Tsar Alexander II.

Hist 4451 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 4452 Modern Latin America (3) Latin American history from the independence movement of the eighteenth century to the present.

Hist 4453 History of Mexico (3) A survey of the political, social, economic and cultural history of Mexico from pre-Columbian civilizations to the present.

Non-Western World History

Hist 4461 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 4462 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 4463 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 4471 The African Diaspora (3) Examines the global dispersal of Africans with particular emphasis on the rise and abolition of the Trans-Saharan and Atlantic slave trades.

Hist 4472 African History (3) Examines the African continent, its development and its place in world affairs

since prehistory, from complex societies to independence in the twentieth century.

Hist 4473 History of South Africa (3) This course is a survey of South African History from the pre-1800's to the present.

Hist 4481 Traditional Middle East (3) The history of West Asia and the Eastern Mediterranean from Muhammad to Napoleon, with special emphasis on the rise and expansion of Islam, including its principles, the Arab and Persian empires, and the impact of the Mongols, the Turks, and the Crusades.

Hist 4482 The Modern Middle East (3) The course will focus on western Asia, north Africa, and the Eastern Mediterranean region since the Napoleonic invasion of Egypt, with special emphasis on the decline of the Ottoman Empire, the impact of the great powers, and the effects of nationalism, oil, and the religious dynamic.

Integrative Studies General

IGen 4231 Myth, Memory and Realities* (3) Examines a selected topic in American or World history and literature to understand how interpretations of the past have been constructed to explain the present. *Not available for graduate credit.

Anthropology

ANTHROPOLOGY Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)

(000424)

The graduate with a Bachelor's degree that includes a Minor in Anthropology will use the knowledge and skills obtained in his/her minor program to:

- Judge the basis of anthropological knowledge through the study of primates, fossils, artifacts, tools, customs, beliefs, and languages.
- Apply the concept of cultural adaptation to the environment, from prehistory into the diverse present.
- Recognize that all cultures meet the common goals of provision, protection, interaction and reproduction through different strategies.
- Convey multicultural lessons and mutual respect through the comparison of cultures.
- Understand that interacting with other cultures contributes to life-long learning.

Sem. Hours

MINOR REQUIREMENTS 20

Anth 1810	Human Prehistory	3	Electives (continued)	
Anth 1820	Cultural Anthropology	3	Elective in sociology	3
Electives from the following		14	Electives in Anthropology	8-14
Engl 4110	Linguistics	3		

GENERAL EDUCATION REQUIREMENTS (page 48) (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 4830 Archaeological Field Research (3) Field experience in which students learn archaeological methods of surveying, recording and excavation, as well as how and why we investigate and preserve sites.

Anth 4840 Historical Archaeology (3) The study of artifacts, architecture, and other material culture to address anthropological topics, such as race, gender, and class, within historic North America.

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)

The graduate with a Bachelor of Science in Education degree with a functional major in Social Studies will use the knowledge and skills obtained in the program to:

- Explain the methodologies and themes of the disciplines comprising the social sciences.
- Write competency-based objectives that state the learning and performance outcomes expected of secondary school students.
- Apply content learned in university social science courses to develop social studies lessons based upon NCSS (National Council for the Social Studies) themes for secondary school students.
- Plan, develop, and write a complete social studies teaching unit for social science courses taught at the secondary school level.
- Demonstrate through the use of questioning strategies and learning activities the ability to teach higher order thinking skills.
- Present controversial issues to secondary school students so that different points of view are properly represented and fairly evaluated.

				Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS				60	
SoSc	3010	Writing in the Social Sciences	3	Electives from the following	6
SoSc	4050	The Social Studies	3	Hist 2400 History of the Early World	3
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	or	
PolS	1510	American Government	3	Hist 2401 History of the Early Modern World	3
PolS	2511	State Government	3	Hist 2402 History of the Modern World	3
Geog	2212	World Geography	3	Upper-level elective in Soc or Anth	3
Econ	1010	Principles of Macroeconomics	3	Upper-level electives in American history	6
Soc	1800	General Sociology	3	Upper-level elective in world history	6
				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

GENERAL EDUCATION REQUIREMENTS (page 48)--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)

Hist	1350	Div. II B or	Psy	4230	Psy. of Adolescence	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. III 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 205)

Psy	4200	Psy. of Except. Children (required)	2
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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

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	Econ 1010 Principles of Macroeconomics, 3 or
Hist	1351	History of the U. S. from 1877	3	Econ 1011 Principles of Microeconomics, 3 . 3
Hist	2402	History of the Modern World	3	Upper-level elective in American history
PolS	1510	American Government	3	Upper-level elective in world history
Geog	2212	World Geography, 3 or		2000-4000 level elective in Geog,
Geog	3201	The Cultural Landscape, 3	3	PolS, Soc, or Anth

GENERAL EDUCATION REQUIREMENTS (page 48) (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 General Education Div. I A.

SoSc 4020 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 SoSc 4074 during the Professional Semester. *Not available for graduate credit.

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 4074 Methods of Teaching Social Studies* (2) Prerequisites: admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with SoSc 4020 during the Professional Semester. *Not available for graduate credit.

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, 4-Discrete Mathematics, 5-Actuarial Science, 6-General Education, 7-Modern Algebra, 8-Mathematics Education, 9-Research and Special Problems.

ACTUARIAL SCIENCE AND MATHEMATICS Functional Major, B.S. Degree

(43 000475)

A graduate with a Bachelor of Science degree in Actuarial Science and Mathematics will use the knowledge and skills obtained in the program to:

- Interpret and utilize precise mathematical language involving definitions, statements, and proofs.
- Examine, describe, and represent functions of various types using analysis techniques.
- Solve a variety of mathematics problems and applications using analytic, numeric, and graphing techniques.
- Apply a variety of mathematical models in the solution of problems and applications.
- Think logically, develop algorithms, implement the algorithms in an appropriate computer language, and solve problems with the algorithms.
- Value mathematics and computer science for their diverse and related contributions to mathematically based disciplines.
- Establish a career in mathematics, computer science, or actuarial science and prepare for entry-level positions in business, industry, government, or public education.
- Prepare for graduate study in mathematics, computer science, or related fields.
- Succeed in careers needing the methods of reasoning and model building procedures of mathematics in the physical sciences, behavioral sciences, banking, engineering, industry, government, insurance, law, medicine, education and others.
- Develop an aptitude for problem solving and be able to apply his/her skills in the actuarial area.
- Achieve a score of at least 3 on the Society of Actuaries Course 1 exam and prepare to complete successfully additional SOA exams required for associateship certification.
- Integrate and apply his/her knowledge in the areas of mathematics, statistics, finance, economics, and computer science.

NOTE:

Candidates for this degree must: (1) achieve a score of 3 or above in course 1 of the Actuarial Examination Series and (2) possess a 3.00 grade-point average overall and in the major.

		Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS		63-64
Math	1151 Calculus & Analytic Geometry I 5	Econ 3010 Intermediate Macroeconomics 3
Math	1152 Calculus & Analytic Geometry II 5	Fin 3861 Financial Management I 3
Math	2153 Calculus & Analytic Geometry III 3	Fin 4803 Risk Mgt.--Property & Liability Ins. 3
Math	2310 Applied Statistics 3	Fin 4817 Managing Fin. Derivatives 3
Math	3311 Introduction to Mathematical Statistics 3	Electives from the following 6-7
Math	4312 Probability Models 3	Math 3151 Differential Equations 3
Math	2410 Discrete Mathematics 3	Math 3160 Advanced Applied Calculus 3
Math	4501 Actuarial Exam Review Problem Set I 1	Math 4180 Advanced Calculus 3
Math	4510 Mathematics of Finance 3	Math 4450 Introduction to Graph Theory 3
Math	4511 Actuarial Exam Review Problem Set II 1	Math 3720 Algebraic Structures 2
Math	4520 Life Contingencies 3	CS 2300 Data Structures 3
Math	3710 Linear Algebra 3	CS 4400 Numerical Analysis I 3
CS	1100 Intro. to Computing I 3	Econ 3030 Intermediate Microeconomics 3
CS	1110 Intro. to Computing II 3	CIS 3655 COBOL Programming 3
CS	4410 Operations Research 3	

GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the functional major, Math 1151 is allowed to fulfill 3 s.h. of Div. I C)	45
Econ 1010 Div. II B (required)	3
ICap 4245 Div. IV B (required)	3
FREE ELECTIVES	15-16
MINIMUM TOTAL	124

MATHEMATICS Major, B.A. Degree

(42 000453)

A graduate with a Bachelor of Arts degree in Mathematics will use the knowledge and skills obtained in the program to:

- Interpret and utilize precise mathematical language involving definitions, statements, and proofs.
- Examine, describe, and represent functions of various types using analysis techniques.
- Solve a variety of mathematics problems and applications using analytic, numeric, and graphing techniques.
- Apply a variety of mathematical models in the solution of problems and applications.
- Think logically, develop algorithms, implement the algorithms in an appropriate computer language, and solve problems with the algorithms.
- Value mathematics and computer science for their diverse and related contributions to mathematically based disciplines.
- Establish a career in mathematics, computer science, or actuarial science and prepare for entry-level positions in business, industry, government, or public education.
- Prepare for graduate study in mathematics, computer science, or related fields.
- Succeed in careers needing the methods of reasoning and model building procedures of mathematics in the physical sciences, behavioral sciences, banking, engineering, industry, government, insurance, law, medicine, education and others.

					Sem. Hours
MAJOR REQUIREMENTS					34
Math 1151	Calculus & Analytic Geometry I	5	Math 2410	Discrete Mathematics	3
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
GENERAL EDUCATION REQUIREMENTS (page 48)--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
ICap 4233 Div. IV B (required)		3			
MODERN LANGUAGE REQUIREMENT					3-9
(Refer to Bachelor's Degree Requirements section for fulfillment options)					
FREE ELECTIVES					14-27
MINIMUM TOTAL					124

MATHEMATICS Major, B.S. Degree

(43 000454)

A graduate with a Bachelor of Science degree in Mathematics will use the knowledge and skills obtained in the program to:

- Interpret and utilize precise mathematical language involving definitions, statements, and proofs.
- Examine, describe, and represent functions of various types using analysis techniques.
- Solve a variety of mathematics problems and applications using analytic, numeric, and graphing techniques.
- Apply a variety of mathematical models in the solution of problems and applications.
- Think logically, develop algorithms, implement the algorithms in an appropriate computer language, and solve problems with the algorithms.
- Value mathematics and computer science for their diverse and related contributions to mathematically based disciplines.
- Establish a career in mathematics, computer science, or actuarial science and prepare for entry-level positions in business, industry, government, or public education.
- Prepare for graduate study in mathematics, computer science, or related fields.
- Succeed in careers needing the methods of reasoning and model building procedures of mathematics in the physical sciences, behavioral sciences, banking, engineering, industry, government, insurance, law, medicine, education and others.

					Sem. Hours
MAJOR REQUIREMENTS					41
Math 1151	Calculus & Analytic Geometry I	5	Math 2221	Foundations of Geometry	3
Math 1152	Calculus & Analytic Geometry II	5	Math 2410	Discrete Mathematics	3
Math 2153	Calculus & Analytic Geometry III	3			

Math 3710	Linear Algebra	3
Math 3720	Algebraic Structures	2
CS 1100	Intro. to Computing I	3
CS 1110	Intro. to Computing II	3
Upper-level electives in Math or CS		11
MINOR REQUIREMENTS		18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the major, Math 1151 is allowed to fulfill 3 s.h. of Div. I C)		45
I Cap 4233 Div. IV B (required)		3
FREE ELECTIVES		13-20
MINIMUM TOTAL		124

MATHEMATICS Major, B.S. in Ed. Degree

(Certification to teach mathematics in grades 9-12)
(41 000459)

A graduate with a Bachelor of Science in Education degree in Mathematics will use the knowledge and skills obtained in the program to:

- Interpret and utilize precise mathematical language involving definitions, statements, and proofs.
- Examine, describe, and represent functions of various types using analysis techniques.
- Solve a variety of mathematics problems and applications using analytic, numeric, and graphing techniques.
- Apply a variety of mathematical models in the solution of problems and applications.
- Think logically, develop algorithms, implement the algorithms in an appropriate computer language, and solve problems with the algorithms.
- Value mathematics and computer science for their diverse and related contributions to mathematically based disciplines.
- Establish a career in mathematics, computer science, or actuarial science and prepare for entry-level positions in business, industry, government, or public education.
- Prepare for graduate study in mathematics, computer science, or related fields.
- Teach mathematics to a diverse population of 9 – 12 learners by applying relevant learning theories, using a variety of teaching strategies, and incorporating materials, technology, and resources.
- Communicate his/her mathematical thinking coherently, analyze and evaluate the mathematical thinking of others, and use the language of mathematics to express mathematical ideas precisely.
- Use representations to model and interpret physical, social, and mathematical phenomena.
- Understand how mathematical ideas interconnect and build on one another to produce a coherent whole and apply mathematics in contexts outside of mathematics.

MAJOR REQUIREMENTS		Sem. Hours
Math 1151	Calculus & Analytic Geometry I	5
Math 1152	Calculus & Analytic Geometry II	5
Math 2221	Foundations of Geometry	3
Math 2410	Discrete Mathematics	3
Math 3720	Algebraic Structures	2
Math 4710	Real Number System	2
Math 1850	Orientation Seminar	0.5
Math 3850	Strategies in Teaching	
	Secondary Mathematics	3
Math 4851	Prob. & Stat. for Mid/HS Math	3
CS 1100	Intro. to Computing I	3
I Cap 4233	The Scientific, Historical, and Sociological Impact of Mathematics	3
Electives from the following or as approved by department		3
Math 2153	Calc. & Analytic Geom. III	3
Math 3151	Differential Equations	3
Math 3221	College Geometry	3
Math 4211	Introduction to Topology	3
Math 3311	Intro. Mathematical Statistics	3
Math 4312	Probability Models	3
Math 4450	Introduction to Graph Theory	3
Math 4510	Mathematics of Finance	3
Math 3710	Linear Algebra	3
Math 4711	Modern Algebra I	3
Math 4730	Set Theory & Math. Logic	3
Math 4741	Intro. to Theory of Numbers	3
CS 1110	Intro. to Computing II	3
CS 3310	Introduction to Combinatorics	3

MINOR REQUIREMENTS 18-25
 GENERAL EDUCATION REQUIREMENTS (page 48)--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. IV 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 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. in Div. III.
 PROFESSIONAL EDUCATION REQUIREMENTS (see page 205) 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)

A graduate with a Bachelor of Science in Education degree in Mathematics will use the knowledge and skills obtained in the program to:

- Interpret and utilize precise mathematical language involving definitions, statements, and proofs.
- Examine, describe, and represent functions of various types using analysis techniques.
- Solve a variety of mathematics problems and applications using analytic, numeric, and graphing techniques.
- Apply a variety of mathematical models in the solution of problems and applications.
- Think logically, develop algorithms, implement the algorithms in an appropriate computer language, and solve problems with the algorithms.
- Value mathematics and computer science for their diverse and related contributions to mathematically based disciplines.
- Establish a career in mathematics, computer science, or actuarial science and prepare for entry-level positions in business, industry, government, or public education.
- Prepare for graduate study in mathematics, computer science, or related fields.
- Teach mathematics to a diverse population of 9 – 12 learners by applying relevant learning theories, using a variety of teaching strategies, and incorporating materials, technology, and resources.

(Continued on next page)

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- Communicate his/her mathematical thinking coherently, analyze and evaluate the mathematical thinking of others, and use the language of mathematics to express mathematical ideas precisely.
- Use representations to model and interpret physical, social, and mathematical phenomena.
- Understand how mathematical ideas interconnect and build on one another to produce a coherent whole and apply mathematics in contexts outside of mathematics.

Sem. Hours

FUNCTIONAL MAJOR REQUIREMENTS 53.5						
Math	1151	Calculus & Analytic Geometry I	5	CS	1100 Intro. to Computing I	3
Math	1152	Calculus & Analytic Geometry II	5	ICap	4233 The Scientific, Historical, and Sociological Impact of Mathematics	3
Math	2153	Calculus & Analytic Geometry III	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	2410	Discrete Mathematics	3	Phys	1102 College Physics II	4
Math	3720	Algebraic Structures	2	or		
Math	4710	Real Number System	2	Phys	2121 University Physics I	5
Math	1850	Orientation Seminar	0.5	Phys	2122 University Physics II	5
Math	3850	Strategies in Teaching Secondary Mathematics	3	Upper-level electives in Math or CS 5-7		
Math	4851	Prob. & Stat. for Mid/HS Math	3			

MINOR NOT REQUIRED

GENERAL EDUCATION REQUIREMENTS (page 48)--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. IV 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
 PoIS 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. III.
 PROFESSIONAL EDUCATION REQUIREMENTS (see page 205) 28
 FREE ELECTIVES 3.5-4.5

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)

A graduate with a Mathematics Minor for a Bachelor of Science in Education degree will use the knowledge and skills obtained in the program to:

- Teach mathematics to a diverse population of 5-9 learners by applying relevant learning theories, using a variety of teaching strategies, and incorporating materials, technology, and resources.
- Understand the appropriate use of calculators and computers as tools for representing mathematical ideas, investigating patterns, testing conjectures, and representing data.
- Communicate his/her mathematical thinking coherently, analyze and evaluate the mathematical thinking of others, and use the language of mathematics to express mathematical ideas precisely.
- Use representations to model and interpret physical, social, and mathematical phenomena.
- Understand how mathematical ideas interconnect and build on one another to produce a coherent whole and apply mathematics in contexts outside of mathematics.

				Sem. Hours
MINOR REQUIREMENTS				24-25
Math	1800	Introduction to Teaching Elementary & Middle School Mathematics	2	
Math	2802	Concepts & Methods in Middle School Mathematics	3	
Math	3840	Strategies in Teaching Middle School Mathematics	3	
Math	4821	Elements of Algebra	3	
Math	4822	Elements of Geometry	3	
Math	4823	Introduction to Infinite Processes	5	
Math	4871	Algebraic Concepts for Teachers	3	
Elective from the following or as approved by department				2-3
Math	4851	Prob & Stat for Mid/HS Math ..	3	
Math	4861	Math. Modeling in Mid. School2		

*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				24
Math	1151	Calculus & Analytic Geometry I	5	
Math	1152	Calculus & Analytic Geometry II	5	
Math	2410	Discrete Mathematics	3	
Math	3710	Linear Algebra	3	
Math	3720	Algebraic Structures	2	
Electives from the following or as approved by department				6
Math	2153	Calc. & Analytic Geometry III ..	3	
Math	3311	Intro. to Math. Statistics	3	
CS	1100	Intro. to Computing I	3	

GENERAL EDUCATION REQUIREMENTS (page 48) (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 credit in basic algebra or AE 1030. Placement according to University policy applies.

Math 1111 College Algebra (3) Continuation of algebra including such topics as linear and quadratic equations, linear and quadratic inequalities, second degree relations and functions, systems of equations and inequalities, and

exponential and logarithmic functions. Prerequisite: high school program including advanced algebra or Math 1101.

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 3160 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 4180 Advanced Calculus (3) A rigorous approach to the fundamental concepts of differential calculus, integral calculus, and infinite series. Prerequisites: Math 2153 and Math 3710.

Geometry

Math 1201 Introduction to Euclidean Geometry (2) 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.

Statistics

Math 2310 Applied Statistics (3) Applied statistical models and methods with an emphasis on regression analysis, time series analysis and forecasting. Prerequisite: Math 1152.

Math 3311 Introduction to Mathematical Statistics (3) Basic concepts of probability and statistics. Prerequisite: Math 1152 and Math 2410.

Math 4312 Probability Models (3) An in-depth study of probability theory and stochastic processes with their applications in fields such as computer science, management science, social science, and operations research. Prerequisites: Math 2153 and Math 3311.

Discrete Mathematics

Math 2410 Discrete Mathematics (3) Basic concepts of logic, mathematical proof techniques, sets and relations, functions, mathematical induction and recursive algorithms, principles of counting, permutations and combinations, discrete probability theory, integers and algorithms. Prerequisite: high school program including advanced algebra or Math 1111.

Math 4450 Introduction to Graph Theory (3) Basic graph theory concepts: connectivity, trees, matchings, graph coloring, Eulerian and Hamiltonian graphs, distance, planarity, and network flows. Prerequisite: Math 2410.

Actuarial Science

Math 4501 Actuarial Exam Review–Problem Set I (1) Problems from calculus, analytic geometry, and probability that apply to actuarial science. Prerequisite: Math 4312.

Math 4510 Mathematics of Finance (3) The basic measures of interest, annuities, discounted cash flow analysis, and their applications. Prerequisite: Math 1152.

Math 4511 Actuarial Exam Review–Problem Set II (1) Problems from math of finance, financial management, and micro- and macroeconomics. Prerequisites: Math 4510, Fin 3861, Fin 4817, and Econ 1010.

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.

General Education

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.

Modern Algebra

Math 3710 Linear Algebra (3) An introduction to matrices, determinants, vector spaces and linear transformations. Prerequisite: Math 2410.

Math 3720 Algebraic Structures (2) Basic mathematical systems: groups, rings and fields. Prerequisite: Math 2410.

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.

Mathematics Education

Math 1800 Introduction to Teaching Elementary and Middle School Mathematics (2) A six-week course focusing on the concepts and methods of teaching mathematics in both elementary and middle school. Prerequisite: Math 1620.

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 2801 Concepts and Methods in Elementary School Mathematics (3) A nine-week course focusing on the concepts and methods of teaching mathematics in grades K-5. Prerequisite: Math 1800.

Math 2802 Concepts and Methods in Middle School Mathematics (3) A nine-week course focusing on the concepts and methods of teaching mathematics in grades 5-9. Prerequisite: Math 1800.

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 2802.

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 2410.

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 4820 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 Math 4870 during the Professional Semester. *Not available for graduate credit.

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 2802.

Math 4822 Elements of Geometry (3) Concepts and relationships of geometry adapted to the needs of elementary/middle school teachers. Available for graduate credit to elementary teachers only. Prerequisite: Math 2802.

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 and middle school/junior high education majors in the B.S. in Ed. and Master of Science in Education degrees. Prerequisites: Math 4821 and Math 4822.

Math 4851 Probability and Statistics for Middle/High School Mathematics (3) A course focusing on the concepts and methods of teaching probability and statistics in the middle and high school mathematics program. Not available for graduate credit for M.S. Mathematics. Prerequisites: Math 4821 and Math 4822 or Math 1151.

Math 4861 Mathematical Modeling in the Middle School (2) Emphasis on the teaching and learning of mathematical modeling and problem solving skills in grades 5-9 including resources, current theories, and National Standards. Prerequisite: Math 4821.

Math 4870 Methods of Teaching Mathematics* (2) Prerequisites: admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with Math 4820 during the Professional Semester. *Not available for graduate credit.

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 2801 or Math 2802 or Math 3890.

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 offerings 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 (3-8) 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.

Integrative Studies Capstone

ICap 4233 The Scientific, Historical, and Sociological Impact of Mathematics* (3) Provides an opportunity to experience and understand the importance of mathematics in human development. Prerequisite: 15 semester hours of college mathematics. *Not available for graduate credit.

ICap 4245 Actuarial Science Capstone Experience* (3) Integration of actuarial science topics and skills with topics from various other disciplines, including actuarial ethics, social roles, and the Code of Professional Conduct. Prerequisite: Math 4520. *Not available for graduate credit.

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-Research and Special Problems, 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)

A graduate with a Bachelor of Science degree in Computer Science and Mathematics will use the knowledge and skills obtained in the program to:

- Interpret and utilize precise mathematical language involving definitions, statements, and proofs.
- Examine, describe, and represent functions of various types using analysis techniques.
- Solve a variety of mathematics problems and applications using analytic, numeric, and graphing techniques.
- Apply a variety of mathematical models in the solution of problems and applications.
- Think logically, develop algorithms, implement the algorithms in an appropriate computer language, and solve problems with the algorithms.
- Value mathematics and computer science for their diverse and related contributions to mathematically based disciplines.
- Establish a career in mathematics, computer science, or actuarial science and prepare for entry-level positions in business, industry, government, or public education.
- Prepare for graduate study in mathematics, computer science, or related fields.
- Stay abreast of advancements in the area of computer science.

				Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS				62-63	
CS	1100	Intro. to Computing I	3	Math 2410 Discrete Mathematics	3
CS	1110	Intro. to Computing II	3	Math 3710 Linear Algebra	3
CS	3100	Programming Languages	3	Electives from the following or as approved	
CS	2200	Intro. to Computer Systems & Organization	2	by department	
CS	2300	Data Structures	3	CS 3110 Object-Oriented Prog.	2
CS	3310	Introduction to Combinatorics	3	CS 4300 Analysis of Algorithms	3
CS	4400	Numerical Analysis I	3	CS 4310 Theory of Computation	3
CS	4410	Operations Research	3	CS 4700 Artificial Intelligence	3
CS	4500	Operating Systems	3	CS 3800 Math. Computer Graphics	3
CS	4600	Database Theory & Applications	3	Math 3151 Differential Equations	3
CS	4900	Compiler Construction	3	Math 3160 Advanced Applied Calculus	3
Math	1151	Calculus & Analytic Geometry I	5	Math 4180 Advanced Calculus	3
Math	1152	Calculus & Analytic Geometry II	5	Math 4312 Probability Models	3
Math	2153	Calculus & Analytic Geometry III	3	Math 4450 Intro. to Graph Theory	3
Math	3311	Introduction to Math. Statistics	3	Math 3720 Algebraic Structures	2

MINOR NOT REQUIRED

GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the functional major, Math 1151 is allowed to fulfill 3 s.h. of Div. I C)

ICap 4225 Div. IV B (required)	3	
FREE ELECTIVES		16-17
MINIMUM TOTAL		24

COMPUTER SCIENCE AND MATHEMATICS Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)

(000449)

MINOR REQUIREMENTS		Sem. Hours
CS 1100	Intro. to Computing I	3
CS 1110	Intro. to Computing II	3
Math 1151	Calculus & Analytic Geometry I	5
Math 1152	Calculus & Analytic Geometry II	5
Electives from the following or as approved by department		4-6
CS 3100	Programming Languages	3
CS 3110	Object-Oriented Programming	2
GENERAL EDUCATION REQUIREMENTS (page 48) (In the minor, Math 1151 is allowed to fulfill 3 s.h. of Div. I C)		
Electives (continued)		
CS 2200	Intro. to Computer Systems & Organization	2
CS 2300	Data Structures	3
CS 4410	Operations Research	3
CS 3800	Math. Computer Graphics	3
Math 3311	Intro. to Math. Statistics	3

Research and Special Problems

CS 4000 Special Problems in Computer Science (1-3)
Individual reading and research on some topics not included in the regular offerings of the department. *May be repeated for a maximum of 3 semester hours.*
Prerequisite: CS 2300 or consent.

CS 4020 Internship in Computer Science (3-8)
Opportunity for students to gain knowledge in areas of computer science, both theoretical and applied, that would not normally be included as 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.
Prerequisites: consent of department Internship Committee and if taken for graduate credit, approval of graduate adviser.

Programming Languages

CS 1100 Introduction to Computing (3) Emphasis on techniques of problem analysis, structured algorithm and program development, and program design. Prerequisite: three units of high school mathematics or Math 1101.

CS 1110 Introduction to Computing II (3) A
continuation of CS 1100. Topics include functions, arrays, structures, and pointers. Prerequisite: CS 1100.

CS 3100 Programming Languages (3) An overview of the main features of major programming languages. Various programming languages 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. Topics include objects, classes, inheritance, polymorphism, dynamic binding, and system design from an object-oriented viewpoint. Prerequisite: CS 1110 or CIS 3655.

Architecture

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.

Algorithms and Data Structures

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. Prerequisite: CS 1110 or CIS 3655.

CS 3310 Introduction to Combinatorics (3) Basic concepts of graphs and trees, principles of enumeration, mathematical induction, integer functions, advanced binomial coefficients, inclusion-exclusion principle, recurrence relations, and generating functions. Prerequisite: Math 2410.

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.

Numerical and Symbolic Computation

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.

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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 3655 and Fin 2801.

Operating Systems

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.

Database and Information Retrieval

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.

Artificial Intelligence and Robotics

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.

Human-Computer Communication

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.

Software Engineering and Professional Issues

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.

Integrative Studies Capstone

ICap 4225 Computer Science Capstone Experience* (3) Integration of computer science topics from other disciplines, including studies in computer ethics, the social impact of computing, and the psychological issues of computer/human interfaces. Prerequisite: Senior standing in Computer Science. *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)

The graduate with a Bachelor of Arts in French will use the knowledge and skills in the program to:

- Use the modern language of his/her major (French, Spanish or German) orally and in writing in a variety of informal and formal situations
- Comprehend a variety of authentic materials in the modern language of his/her major (French, Spanish or German) for personal and/or professional use
- Demonstrate knowledge of linguistic elements, pronunciation and intonation, grammar, forms of discourse, and vocabulary to satisfy a variety of everyday tasks
- Engage in socially appropriate forms of communication
- Demonstrate an understanding of the target cultures in his/her geographical and historical contexts, including perspectives, practices, and products.

		Sem. Hours
MAJOR REQUIREMENTS		42
Fren 1201	Elementary French I	3
Fren 1202	Elementary French II	3
Fren 1203	Intermediate French I	3
Fren 1204	Intermediate French II	3
Fren 2223	French Composition	3
Fren 2243	French Conversation	3
Fren 2261	French Civilization & Lit. I	3
Fren 2262	French Civilization & Lit. II	3
Fren 3223	Advanced French Composition	3
Fren 3243	Advanced French Conversation	3
Fren 3263	French Phonetics	3
Fren 3265	The Contemporary French-Speaking World	3
Electives in French at 3000 level (Students must take 12 hours at 3000 level in their major)		6
MINOR REQUIREMENTS		18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (The major fulfills 3 s.h. of Div. II C)		45
MODERN LANGUAGE REQUIREMENT (fulfilled by major)		
FREE ELECTIVES		12-19
MINIMUM TOTAL		124

FRENCH Major, B.S. Degree
(43 000319)

The graduate with a Bachelor of Science in French will use the knowledge and skills in the program to:

- Use the modern language of his/her major (French, Spanish or German) orally and in writing in a variety of informal and formal situations
- Comprehend a variety of authentic materials in the modern language of his/her major (French, Spanish or German) for personal and/or professional use
- Demonstrate knowledge of linguistic elements, pronunciation and intonation, grammar, forms of discourse, and vocabulary to satisfy a variety of everyday tasks
- Engage in socially appropriate forms of communication
- Demonstrate an understanding of the target cultures in his/her geographical and historical contexts, including perspectives, practices, and products.

		Sem. Hours
MAJOR REQUIREMENTS		42
Fren 1201	Elementary French I	3
Fren 1202	Elementary French II	3
Fren 1203	Intermediate French I	3
Fren 1204	Intermediate French II	3
Fren 2223	French Composition	3
Fren 2243	French Conversation	3
Fren 2261	French Civilization & Lit. I	3
Fren 2262	French Civilization & Lit. II	3
Fren 3223	Advanced French Composition	3
Fren 3243	Advanced French Conversation	3
Fren 3263	French Phonetics	3
Fren 3265	The Contemporary French-Speaking World	3
Electives in French at 3000 level (Students must take 12 hours at 3000 level in their major)		6
MINOR REQUIREMENTS		18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (The major fulfills 3 s.h. of Div. II C)		45
FREE ELECTIVES		12-19

MINIMUM TOTAL 124

FRENCH Major, B.S. in Ed. Degree
(Certification to teach French in grades K-12)
(41 000334)

- The graduate with a Bachelor of Science in Education in French will use the knowledge and skills in the program to:
- Use the modern language of his/her major (French, Spanish or German) orally and in writing in a variety of informal and formal situations
 - Comprehend a variety of authentic materials in the modern language of his/her major (French, Spanish or German) for personal and/or professional use
 - Demonstrate knowledge of linguistic elements, pronunciation and intonation, grammar, forms of discourse, and vocabulary to satisfy a variety of everyday tasks
 - Engage in socially appropriate forms of communication
 - Demonstrate an understanding of the target cultures in his/her geographical and historical contexts, including perspectives, practices, and products.
 - Teach essential elements of the modern language of his/her major (French, Spanish or German) at elementary and secondary school levels.

		Sem. Hours
MAJOR REQUIREMENTS		42
Fren 1201	Elementary French I	3
Fren 1202	Elementary French II	3
Fren 1203	Intermediate French I	3
Fren 1204	Intermediate French II	3
Fren 2223	French Composition	3
Fren 2243	French Conversation	3
Fren 2261	French Civilization & Lit. I	3
Fren 2262	French Civilization & Lit. II	3
Fren 3223	Advanced French Composition ..	3
Fren 3243	Advanced French Conversation ..	3
Fren 3263	French Phonetics	3
Fren 3265	The Contemporary French-Speaking World	3
Electives in French at 3000 level (Students must take 12 hours at 3000 level in their major) ...		6
MINOR REQUIREMENTS		18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--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. IV 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	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 B.		
PROFESSIONAL EDUCATION REQUIREMENTS (see page 205)		28
MINIMUM TOTAL		130

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)

		Sem. Hours
MINOR REQUIREMENTS		27
Fren 1201	Elementary French I	3
Fren 1202	Elementary French II	3
Fren 1203	Intermediate French I	3
Fren 1204	Intermediate French II	3
Fren 2223	French Composition	3
Fren 2243	French Conversation	3
Fren 3265	The Contemporary French-Speaking World	3
Fren 2261	French Civilization & Lit. I, 3 or	3
Fren 2262	French Civilization & Lit. II, 3 ...	3
Elective in French at 2000 or 3000 level		3
GENERAL EDUCATION REQUIREMENTS (page 48) (In the minor, 3 s.h. of Div. II C are fulfilled)		

GERMAN Major, B.A. Degree
(42 000321)

This program has been placed in abeyance. See the Department Chair for more information.

GERMAN Major, B.S. Degree

(43 000322)

This program has been placed in abeyance. See the Department Chair for more information.

GERMAN Major, B.S. in Ed. Degree

(Certification to teach German in grades K-12)

(41 000335)

This program has been placed in abeyance. See the Department Chair for more information.

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 1304	German Readings	3
Ger 2301	Advanced German Readings	3
Ger 2323	German Conversation & Comp.	3
Ger 2362	German Civilization	3
Electives in 2000 level or higher German courses		6
GENERAL EDUCATION REQUIREMENTS (page 48) (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 1304	German Readings	3
Ger 2301	Advanced German Readings	3
Ger 2323	German Conversation & Comp.	3
Ger 2362	German Civilization	3
Ger 3371	Survey of German Lit. I	3
Ger 3372	Survey of German Lit. II	3
GENERAL EDUCATION REQUIREMENTS (page 48) (In the minor, 3 s.h. of Div. II C are fulfilled)		

SPANISH Major, B.A. Degree

(42 000338)

The graduate with a Bachelor of Arts in Spanish will use the knowledge and skills in the program to:

- Use the modern language of his/her major (French, Spanish or German) orally and in writing in a variety of informal and formal situations
- Comprehend a variety of authentic materials in the modern language of his/her major (French, Spanish or German) for personal and/or professional use
- Demonstrate knowledge of linguistic elements, pronunciation and intonation, grammar, forms of discourse, and vocabulary to satisfy a variety of everyday tasks
- Engage in socially appropriate forms of communication
- Demonstrate an understanding of the target cultures in his/her geographical and historical contexts, including perspectives, practices, and products.

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		Sem. Hours
MAJOR REQUIREMENTS		42
Span 1601	Elementary Spanish I	3
Span 1602	Elementary Spanish II	3
Span 1603	Intermediate Spanish I	3
Span 1604	Intermediate Spanish II	3
Span 2603	Spanish Conversation I	3
Span 2623	Spanish Composition	3
Span 2643	Spanish Conversation II	3
Span 2661	Spanish Civilization & Literature	3
Span 2662	Spanish American Civilization & Literature	3
Span 3623	Advanced Spanish Composition ..	3

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Span	3643	Advanced Readings & Oral Expression	3	
Electives from the following			9	
Span	3650	Introduction to Spanish for Business	3	
Span	3665	Culture and Issues in the Contemporary Spanish-Speaking World	3	
Span	3671	Cinema of the Spanish-Speaking World	3	
Span	3690	Twentieth Century Literature of the Spanish-Speaking World	3	
MINOR REQUIREMENTS				18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (The major fulfills 3 s.h. of Div. II C)				45
MODERN LANGUAGE REQUIREMENT (fulfilled by major)				
FREE ELECTIVES				12-19
MINIMUM TOTAL				124

SPANISH Major, B.S. Degree
(43 000339)

The graduate with a Bachelor of Arts in Spanish will use the knowledge and skills in the program to:

- Use the modern language of his/her major (French, Spanish or German) orally and in writing in a variety of informal and formal situations
- Comprehend a variety of authentic materials in the modern language of his/her major (French, Spanish or German) for personal and/or professional use
- Demonstrate knowledge of linguistic elements, pronunciation and intonation, grammar, forms of discourse, and vocabulary to satisfy a variety of everyday tasks
- Engage in socially appropriate forms of communication
- Demonstrate an understanding of the target cultures in his/her geographical and historical contexts, including perspectives, practices, and products.

			Sem. Hours	
MAJOR REQUIREMENTS				42
Span	1601	Elementary Spanish I	3	
Span	1602	Elementary Spanish II	3	
Span	1603	Intermediate Spanish I	3	
Span	1604	Intermediate Spanish II	3	
Span	2603	Spanish Conversation I	3	
Span	2623	Spanish Composition	3	
Span	2643	Spanish Conversation II	3	
Span	2661	Spanish Civilization & Literature	3	
Span	2662	Spanish American Civilization & Literature	3	
Span	3623	Adv. Spanish Composition	3	
Span	3643	Advanced Readings & Oral Expression	3	
Electives in 2000 level or higher Spanish courses			9	
Span	3650	Introduction to Spanish for Business	3	
Span	3665	Culture & Issues in the Contemporary Spanish-Speaking World	3	
Span	3671	Cinema of the Spanish-Speaking World	3	
Span	3690	Twentieth Century Literature of the Spanish-Speaking World	3	
MINOR REQUIREMENTS				18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (The major fulfills 3 s.h. of Div. II C)				45
FREE ELECTIVES				12-19
MINIMUM TOTAL				124

SPANISH Major, B.S. in Ed. Degree
(Certification to teach Spanish in grades K-12)
(41 000337)

The graduate with a Bachelor of Science in Education in Spanish will use the knowledge and skills in the program to:

- Use the modern language of his/her major (French, Spanish or German) orally and in writing in a variety of informal and formal situations
- Comprehend a variety of authentic materials in the modern language of his/her major (French, Spanish or German) for personal and/or professional use

- Demonstrate knowledge of linguistic elements, pronunciation and intonation, grammar, forms of discourse, and vocabulary to satisfy a variety of everyday tasks

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- Engage in socially appropriate forms of communication
- Demonstrate an understanding of the target cultures in his/her geographical and historical contexts, including perspectives, practices, and products.
- Teach essential elements of the modern language of his/her major (French, Spanish or German) at elementary and secondary school levels.

		Sem. Hours
MAJOR REQUIREMENTS		42
Span 1601	Elementary Spanish I	3
Span 1602	Elementary Spanish II	3
Span 1603	Intermediate Spanish I	3
Span 1604	Intermediate Spanish II	3
Span 2603	Spanish Conversation I	3
Span 2623	Spanish Composition	3
Span 2643	Spanish Conversation II	3
Span 2661	Spanish Civilization & Literature	3
Span 2662	Spanish American Civilization & Literature	3
Span 3623	Adv. Spanish Composition	3
Span 3643	Advanced Readings and Oral Expression	3
Electives from the following		9
Span 3650	Introduction to Spanish for Business	3
Span 3665	Culture & Issues in the Contemporary Spanish-Speaking World	3
Span 3671	Cinema of the Spanish-Speaking World	3
Span 3690	Twentieth Century Literature of the Spanish-Speaking World	3
MINOR REQUIREMENTS		18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--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. IV B)		
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
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 B.		
PROFESSIONAL EDUCATION REQUIREMENTS (see page 205)		28
MINIMUM TOTAL		130

SPANISH Minor for a Bachelor's 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) (200015)

		Sem. Hours
MINOR REQUIREMENTS		27
Span 1601	Elementary Spanish I	3
Span 1602	Elementary Spanish II	3
Span 1603	Intermediate Spanish I	3
Span 1604	Intermediate Spanish II	3
Span 2603	Spanish Conversation I	3
Span 2623	Spanish Composition	3
Span 2643	Spanish Conversation II	3
Span 2661	Span. Civilization & Literature ,3 or	3
Span 2662	Spanish American Civilization & Literature, 3	3
Elective from the following		3
Span 3623	Advanced Spanish Comp.	3
Span 3643	Advanced Readings & Oral Expressions	3
Span 3650	Introduction to Spanish for Business	3
Span 3665	Culture & Issues in the Contemporary Spanish-Speaking World	3
Span 3671	Cinema of the Spanish-Speaking World	3
Span 3690	Twentieth Century Literature of the Spanish-Speaking World	3
GENERAL EDUCATION REQUIREMENTS (page 48) (In the minor, 3 s.h. of Div. II C are fulfilled)		

General

ML 1040 Special Projects in Modern Languages (1-3)
Small-group instruction at the introductory level.

ML 2010 Foreign Studies in Language (1-6) Credit
granted for study in a departmentally-approved program in a foreign country. *May be repeated for a maximum of 12 semester hours.*

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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 4020 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 ML 4054 during the Professional Semester. *Not available for graduate credit.

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.

ML 4054 Methods of Teaching Foreign Languages* (2) Prerequisites: admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with ML 4020 during the Professional Semester. *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 1203.

Fren 2261 French Civilization and Literature I (3) From the origins to the eighteenth century. Prerequisite: Fren 1204 or equivalent.

Fren 2262 French Civilization and Literature II (3) From the eighteenth century to 1945. Prerequisites: Fren 1204 or equivalent.

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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 3265 The Contemporary French-Speaking World (3) An overview of contemporary France and other French-speaking nations. Prerequisites: Fren 2261 or Fren 2262, or equivalent.

Fren 3286 French Literature of the Nineteenth Century (3) Romanticism, realism, and naturalism. Analysis of texts and literary theories. Prerequisite: 6 semester hours of 2000 level French courses.

Fren 3287 French Literature of the Twentieth Century (3) Symbolism, surrealism, and existentialism in prose, poetry and theatre. Prerequisite: 6 semester hours of 2000 level French courses.

Fren 3288 French Translation (3) Commercial and technical translation from French into English and English into French. Prerequisite: Fren 3223.

Fren 3289 Cinema of the French-Speaking World (3) A survey of films from the French-speaking world with emphasis on the cultural contexts in which the films are produced and viewed. Prerequisites: 6 semester hours of 2000 level French courses.

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 I (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 Intermediate Spanish II (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 2603 Spanish Conversation I (3) Conversational Spanish using culture-based materials emphasizing the four skills: speaking, listening, reading, and writing.

Prerequisites: Span 1603 and Span 1604.

Span 2623 Spanish Composition (3) Review of grammar, oral-aural training, and special study of the subjunctive mood. Prerequisite: Span 1604 or equivalent.

Span 2643 Spanish Conversation II (3) Oral practice in everyday Spanish, discussion, idiomatic usage, listening comprehension, speaking. Prerequisite: Span 2603.

Span 2661 Spanish Civilization and Literature (3) The social, cultural, literary, and political history of Spain. Prerequisite: Span 1604 or equivalent.

Span 2662 Spanish American Civilization and Literature (3) The social, cultural, literary, 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 Readings and Oral Expression (3) Emphasis on advanced readings and oral-aural practice in Spanish. Prerequisite: Span 2643.

Span 3650 Introduction to Spanish for Business (3) Enhances linguistic and cultural knowledge of Spanish for business and will be conducted primarily in Spanish. Prerequisites: Two 2000 level courses in Spanish.

Span 3665 Culture and Issues in the Contemporary Spanish-Speaking World (3) An exploration of contemporary political, economic and societal issues affecting Spanish-speaking cultures with emphasis on further developing language skills through discussions and written assignments. Prerequisite: Span 2661 or Span 2662.

Span 3671 Cinema of the Spanish-Speaking World (3) A survey of Latin American, Spanish and Latino films with emphasis on the cultural contexts in which the films are produced and viewed. Prerequisite: 6 semester hours of 2000 level Spanish courses.

Span 3690 Twentieth Century Literature of the Spanish-Speaking World (3) Literary texts of the 20th century from Spain and Spanish America with emphasis on developing language skills through discussions and written assignments. Prerequisite: 6 semester hours of 2000 level Spanish courses.

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) Fundamental principles of pronunciation, vocabulary and idiomatic expressions of spoken Mandarin Chinese. Not open to native speakers or advanced students without permission of department chair.

Chin 1702 Elementary Chinese II (3) Continuation of Chin 1701. Not open to native speakers or advanced

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students without permission of department chair.

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 encouraged to participate in ensembles to broaden their general musical background and further develop their performance abilities and listening skills. Each degree program includes specific ensemble requirements noted under the course listing for those programs.

MUSIC Major, B.A. Degree (42 000436)

The graduate with a Bachelor of Arts degree in music will use the knowledge and skills obtained in the program to:

- Understand the basic elements and structures of music history, theory, and performance literature.
- Understand music's relationship to the other arts, and how the arts relate to mankind.
- Use technology in appropriate music applications.
- Communicate the intellectual (thinking), emotional, and aesthetic (valuing) qualities of music to a diverse society.
- Perform with appropriate tone, technique, and musicality in his/her primary performance medium.

		Sem. Hours
MAJOR REQUIREMENTS		37
Mus 1000	Recital Attendance	0
Mus 1111	Theory I	3
Mus 1112	Theory II	3
Mus 1121	Aural Training I	1
Mus 1122	Aural Training II	1
Mus 2111	Theory III	3
Mus 2121	Aural Training III	1
Mus 2221	Intro. to Music Literature I	2
Mus 2222	Intro. to Music Literature II	2
Mus 3211	Music History to 1800	3
Mus 3212	Music History 1800-Present	3
Major instrument or voice, 1000 level		4
Major instrument or voice, 3000 level		6
Large vocal or instrumental ensemble		3
Elective in Music		2
MINOR REQUIREMENTS		18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--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
Gen 4234	Div. IV 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)

The graduate with a Bachelor of Music degree will use the knowledge and skills obtained in the program to:

- Understand the basic elements and structures of music history, theory, and performance literature.
- Understand music's relationship to the other arts, and how the arts relate to mankind.
- Use technology in appropriate music applications.
- Communicate the intellectual (thinking), emotional, and aesthetic (valuing) qualities of music to a diverse society.
- Perform at the highest possible level in his/her primary performance medium.
- Articulate essential elements of music and music performance.
- Demonstrate functional piano performance skills.

		Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS		79-84.5
Mus 1000	Recital Attendance	0
Mus 3060	Junior Recital	1
Mus 1111	Theory I	3
Mus 1112	Theory II	3
Mus 1121	Aural Training I	1
Mus 1122	Aural Training II	1
Mus 2111	Theory III	3
Mus 2112	Theory IV	3
Mus 2121	Aural Training III	1
Mus 2122	Aural Training IV	1
Mus 4125	Form & Analysis	3
Mus 3211	Music History to 1800	3
Mus 3212	Music History 1800-Present	3
Mus 2400	Conducting	2
	Major instrument or voice, 1000 level	8
	Major instrument or voice, 3000 level	10.5
	Major large instrumental or vocal ensemble	6
	Departmentally approved electives to complete an emphasis in one of the following areas	26.5-32
	Area 1 Instrumental Music	
	Area 2 Jazz-Commercial Music	
	Area 3 Piano	
	Area 4 Piano Pedagogy	
	Area 5 Voice	
	*Area 6 Music Technology	

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

GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the functional major, Mus 3211 and Mus 3212 are allowed to fulfill 3 s.h. of Div. II C)

Mus 1225	Div. II D (required)	3	I Gen 4234	Div. IV A (required)	3
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For piano pedagogy emphasis, Psy 1100 Div. II B is required.

For voice emphasis, Fren 1201 or Ger 1301 Div. II C is required.

For music technology emphasis, Econ 1010 Div. II B is required.

MINIMUM TOTAL		124
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*In the music technology emphasis, Mus 2040, Mus 2045, Mus 3040, Mus 4045 and 4 s.h. of Mus 4049 will substitute for Mus 3060, 4 s.h. of major instrument or voice, 1000 level, and major instrument or voice, 3000 level.

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 1111	Theory I	3
Mus 1112	Theory II	3
Mus 1121	Aural Training I	1
Mus 1122	Aural Training II	1
Mus 3212	Music History 1800-Present	3
Mus 2221	Intro. to Music Literature I, 2 or	2
Mus 2222	Intro. to Music Literature II, 2	2
	Major instrument or voice	4
	Major large ensemble	6

MUSIC EDUCATION Functional Major, B.M.E. Degree

The graduate with a Bachelor of Music Education degree will use the knowledge and skills obtained in the program to:

- Understand the basic elements and structures of music history, theory, and performance literature.
- Understand music's relationship to the other arts, and how the arts relate to mankind.
- Use technology in appropriate music applications.
- Communicate the intellectual (thinking), emotional, and aesthetic (valuing) qualities of music to a diverse society.
- Teach essential elements of music and music performance at elementary and secondary school levels.
- Perform with appropriate tone, technique, and musicality in his/her primary performance medium.

- Demonstrate functional piano performance skills.

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INSTRUMENTAL Functional Major Option, B.M.E. Degree (45 000440)

(Certification to teach instrumental music in grades K-12) Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS 60-64

Mus 1000	Recital Attendance	0	Mus 2802	Woodwind Class II	1
Mus 1111	Theory I	3	Mus 2901	Brass Class I	1
Mus 1112	Theory II	3	Mus 2902	Brass Class II	1
Mus 1121	Aural Training I	1	Mus 2950	Percussion Class	1
Mus 1122	Aural Training II	1	Major instrument, 1000 level		4
Mus 2111	Theory III	3	Major instrument, 3000 level		4.5
Mus 2112	Theory IV	3	Major large instrumental ensemble		10.5
Mus 2121	Aural Training III	1	Wind/Percussion students must complete seven (7)		
Mus 2122	Aural Training IV	1	separate semesters of major large instrumental		
Mus 4115	Instrumentation	3	ensemble to include:		
Mus 3211	Music History to 1800	3	4.5 semester hours in Mus 1005,		
Mus 3212	Music History 1800-Present	3	3.0 semester hours in Mus 3000 and/or Mus 1010, &		
Mus 3306	Music Education II	3	3.0 semester hours in one of the following:		
Mus 3308	Marching Band Techniques	1	Mus 1005 (an additional 1.5 hours maximum),		
Mus 2400	Conducting	2	Mus 1010, Mus 1081, Mus 3000, Mus 3025, or		
Mus 3420	Instrumental Conducting	3	Mus 3081.		
Mus 1701	String Class	2	Piano		0-4
Mus 2801	Woodwind Class I	1			

Keyboard majors choose band or orchestra for major ensemble.
 Keyboard competency is demonstrated by passing Mus 2502 (Piano Class IV) with a "C" or better and an additional hour of piano, or passing the piano proficiency exam.

MINOR NOT REQUIRED

GENERAL EDUCATION REQUIREMENTS (page 48)--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. IV 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)	Psy 4230	Psy. of Adolescence	3
PolS 1510	Div. II B (required)			

Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. of Div. II B.

PROFESSIONAL EDUCATION REQUIREMENTS (see page 205) 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) Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS 61-65

Mus 1000	Recital Attendance	0	Mus 2222	Introduction to Music Literature II	2
Mus 1111	Theory I	3	Mus 3211	Music History to 1800	3
Mus 1112	Theory II	3			
Mus 1121	Aural Training I	1			
Mus 1122	Aural Training II	1			
Mus 2111	Theory III	3			
Mus 2112	Theory IV	3			
Mus 2121	Aural Training III	1			
Mus 2122	Aural Training IV	1			
Mus 4130	Choral Arranging	2			
Mus 2221	Introduction to Music Literature I	2			

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Mus	3212	Music History 1800-Present	3
Mus	4230	Choral Literature	2
Mus	3305	Music Education I	3
Mus	4320	Music in Junior High	2
Mus	2400	Conducting	2
Mus	3410	Choral Conducting	2
Mus	3415	Choral Techniques	2
Mus	1610	Voice I	4
Mus	1615	Opera Theatre	1
Mus	3610	Voice II	4.5
Large vocal ensemble			10.5
Piano			0-4

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

GENERAL EDUCATION REQUIREMENTS (page 48)--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. IV B)

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
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 B.

PROFESSIONAL EDUCATION REQUIREMENTS (see page 205)

MINIMUM TOTAL

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 1045 Seminar in Music Technology (1) Studies and practical applications in music recording and MIDI production. *May be repeated.*

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 2040 Music Technology I (3) An introduction to the theory and usage of audio recording/reproduction components. Laboratory included. Prerequisites: completion of Mus 1040 with a grade of C or better. An additional fee is associated with this course.

Mus 2045 Music Technology II (3) Intermediate audio production including live and studio recording, overdubbing and application of informed musical judgment to the mixing process. Laboratory included. Prerequisites: completion of Mus 2040 with a grade of C or better. An additional fee is associated with this course.

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 3040 Music Technology III (3) Advanced audio production and theory. Includes in-depth study of major components of the recording studio, physical properties of sound related to music production and MIDI implementation. Laboratory included. Prerequisites: completion of Mus 2045 with a grade of C or better. An additional fee is associated with this course.

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 4040 Music Business Practices (3) Covers copyright, performance rights, client management and interaction. Prerequisite: Econ 1010.

Mus 4045 Music Technology IV (3) Advanced MIDI implementation, mastering and historic origins of computer and electro-acoustic music. Laboratory included. Prerequisites: completion of Mus 3040 with a grade of C or better. An additional fee is associated with this course.

Mus 4049 Internship in Music Technology (1-6) Field application of music industry theories and practices in professional music production or recording arts fields. *May be repeated for a maximum of 6 semester hours.* Prerequisite: consent of the music technology coordinator.

Mus 4060 Senior Recital* (2) Full length public recital. Prerequisite: consent of instructor. *Not available for 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 principles, 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.

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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.

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.

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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.

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 Mus 4310.

Mus 4310 Methods of Teaching Music* (2)

Prerequisites: admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with Mus 4350 during the Professional Semester. *Not available for graduate credit.

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 4350 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 Mus 4310 during the Professional Semester. *Not available for graduate credit.

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.

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.

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.

200 Music

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.

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.

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.

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)

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:

202 Music

successful completion of lower level credit as determined by departmental examination.

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)

The graduate with a Bachelor of Arts degree in Political Science will use the knowledge and skills obtained in the program to:

- Understand individual rights and responsibilities in a democratic system
- Understand and explain the complexities of politics in an international community
- Comprehend alternative perspectives on political values and behavior, political cultures, institutions, policy making, theory, jurisprudence, and civil liberties and rights
- Think critically and to construct logical arguments concerning institutions and processes of government and contemporary public policy issues
- Communicate effectively about politics in both written and oral forms
- Prepare for successful careers in public, private and non-profit service sector
- Qualify for post-graduate education.

				Sem. Hours
MAJOR REQUIREMENTS				33
PolS	2520	Comp. Government & Politics	3	PolS 3560 Research Methods in Pol. Sci. 3
PolS	2530	International Relations	3	PolS 4570 Public Administration 3
PolS	2580	Public Law & Judicial Process	3	Electives in political science 15
PolS	3540	Survey of Political Theory	3	
MINOR REQUIREMENTS				18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. [Students majoring in Political Science must take PolS1500 which fulfills 3 s.h. in Div. II B & PolS 1510 which fulfills state law requirements, Section 170.11 RSMO Supp (1988).]				42
MODERN LANGUAGE REQUIREMENT (Refer to Bachelor's Degree Requirements section for fulfillment options.)				3-9
FREE ELECTIVES				15-18
MINIMUM TOTAL				124

POLITICAL SCIENCE Major, B.S. Degree

(43 000426)

The graduate with a Bachelor of Science degree in Political Science will use the knowledge and skills obtained in the program to:

- Understand individual rights and responsibilities in a democratic system
- Understand and explain the complexities of politics in an international community
- Comprehend alternative perspectives on political values and behavior, political cultures, institutions, policy making, theory, jurisprudence, and civil liberties and rights
- Think critically and to construct logical arguments concerning institutions and processes of government and contemporary public policy issues
- Communicate effectively about politics in both written and oral forms
- Prepare for successful careers in public, private and non-profit service sector
- Qualify for post-graduate education.

				Sem. Hours
MAJOR REQUIREMENTS				33
PolS	2520	Comp. Government & Politics	3	PolS 3560 Research Methods in Pol. Sci. 3
PolS	2530	International Relations	3	PolS 4570 Public Administration 3
PolS	2580	Public Law & Judicial Process	3	Electives in political science 15
PolS	3540	Survey of Political Theory	3	
MINOR REQUIREMENTS				18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. [Students majoring in Political Science must take PolS1500 which fulfills 3 s.h. in Div. II B & PolS 1510 which fulfills state law requirements, Section 170.11 RSMO Supp (1988).]				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 2520 Comp. Government & Politics	3
PoIS 2530 International Relations	3
PoIS 2580 Public Law & Judicial Process	3
GENERAL EDUCATION REQUIREMENTS (page 48) [Students minoring in Political Science must take PoIS 1510 which fulfills state law requirements, Section 170.11 RSMO Supp (1988)]	
PoIS 3540 Survey of Political Theory	3
Electives in political science	8

INTERNATIONAL STUDIES Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)
(000489)

MINOR REQUIREMENTS	Sem. Hours	24
One modern (foreign) language	6	
Electives from the following	6	
Anth 4870 Comparative Cultures	3	
Geog 2212 World Geography	3	
Rel 3210 Comparative World Religions	3	
Comm 3340 Intercultural Communication, 3 or		
Engl 4120 Language & Culture, 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	
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.

GENERAL EDUCATION REQUIREMENTS (page 48) (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, among others.

PoIS 2530 International Relations (3) Introduction to international relations with specific focus on the nature and causes of war, conflict resolution, political, social, economic, and military issues in international politics.

PoIS 2550 Political Parties and Interest 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) Examination of the nature of law, the organization and

staffing of courts, judicial policymaking, the Supreme Court's decision-making process, statutory and constitutional interpretation, and the impact of judicial decisions.

PoIS 3520 Asian Government and Politics (3) A comparative study of the major political systems of Asia, focusing on political institutions, policy-making, domestic and foreign policy as well as persistent policy issues, challenges and political dynamics.

PoIS 3521 Latin American Government and Politics (3) A comparative study of the political system of the Latin American countries.

PoIS 3522 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.

PoIS 3530 International Organizations (3) The role of international organizations in international relations and collective security with specific emphasis on the United Nations, the European Union and other regional organizations.

PoIS 3540 Survey of Political Theory (3) Examines concepts such as justice, civil disobedience, equality, liberty, etc., and how they are defined by major political theorists from Plato to the present.

PoIS 3541 Civil Society and Democratic Theory (3) Examines recent debates about the meaning of democracy, citizenship, civil society, and community in the contemporary era of increasingly diverse and interconnected nation-states.

PoIS 3550 Public Opinion and Mass Media (3) Examines the forces that shape, and techniques used to

measure, public opinion, also focusing on the media as a link between public opinion and government.

PoIS 3551 Race and Ethnic Politics in the United States (3) Survey of the political mobilization, participation, and issues facing Latinos, African Americans, Asian Americans, Native Americans, and European ethnic groups in U.S. politics.

PoIS 3560 Research Methods in Political Science (3) This course will acquaint students with a wide variety of research methods used to analyze political phenomena, concentrating on those approaches that are both quantitative and nonquantitative, including case studies, interviewing, field research, and a lab component utilizing packaged computer programs for statistical analysis.

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 4521 Culture and Politics of the Middle East (3) The influence of culture on the politics, political systems and issues of the Middle East.

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 of the United States with specific focus on the policy authority of the American President, the Congress, the Courts, United States foreign policies toward Russia, Europe and the Middle East are considered.

PoIS 4532 International Relations of East Asia (3) Study of contemporary regional politics of East Asia focusing on political culture, nationalism, the foreign policies of the United States, Russia, China, Japan and the challenge of East Asia to the Western industrial powers.

PoIS 4550 The European Union (3) An examination of the theory, history, politics and institutions of the European Union with special emphasis on the socioeconomic factors that influenced the formation and subsequent expansions of the EU, particularly the regional differences and concerns over sovereignty.

PoIS 4552 Legislative Politics (3) The major functions, roles, powers, processes and development of the national and state legislatures. Special attention is given to legislative elections, leadership and decision-making.

PoIS 4553 Twentieth Century African-American Politics (3) Examines the political, economic and social aspects of African American politics in the 20th Century.

PoIS 4555 The American Presidency (3) The constitutional origins of the presidency, its powers, selection process, and the presidents' relations with the public, the media, political parties, and the other major institutions of government. Particular emphasis is on the presidency as an institution of leadership. Prerequisite: PoIS 1510.

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 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 4592 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 6 semester hours.*

GEOGRAPHY Major, B.A. Degree

(42 000429)

The graduate with a Bachelor of Arts degree in Geography will use the knowledge and skills obtained in the program to:

- Appreciate the depth, breadth, and value of geography as both a theoretical and applied science through the study of the basic traditions: earth science, culture-environment, location, and area/regional analysis
- Identify, describe, and analyze patterns of human distribution, movement, interaction, and environmental impact.
- Identify, describe, and analyze physical forms and processes in both classroom and field settings.
- Read, interpret, and produce maps using traditional and electronic methods.
- Communicate in written and spatial form the geographic concepts, theories, and information/data that underlay the cultural and physical diversity of world realms and regions.
- Understand and appreciate patterns and landscapes of global cultural diversity.
- Use library resources and electronic media to explore/collect geographic information from texts, databases, and remotely-sensed images.
- Be familiar with the major themes and approaches in current geographic research and be able to employ basic geographic tools for research and analysis.
- To think creatively and critically about geographic factors in case studies, field settings, and real world scenarios.

				Sem. Hours
MAJOR REQUIREMENTS				33
Geog	2212	World Geography	3	Electives from the following, including two courses
Geog	2246	Economic Geography	3	in regional geography
Geog	3270	Research Methods in Geography	3	EaSc 1004 Intro. to the Sci.: Geology ..
Geog	3275	Climatology	3	EaSc 3111 Geomorphology
Geog	4201	Cartography	3	Electives in geography
				18
MINOR REQUIREMENTS				18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--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)				
EaSc 1004, if elected, fulfills 4 s.h. of Div. II A.				42
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)

The graduate with a Bachelor of Science degree in Geography will use the knowledge and skills obtained in the program to:

- Appreciate the depth, breadth, and value of geography as both a theoretical and applied science through the study of the basic traditions: earth science, culture-environment, location, and area/regional analysis
- Identify, describe, and analyze patterns of human distribution, movement, interaction, and environmental impact.
- Identify, describe, and analyze physical forms and processes in both classroom and field settings.
- Read, interpret, and produce maps using traditional and electronic methods.
- Communicate in written and spatial form the geographic concepts, theories, and information/data that underlay the cultural and physical diversity of world realms and regions.

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- Understand and appreciate patterns and landscapes of global cultural diversity.
- Use library resources and electronic media to explore/collect geographic information from texts, databases, and remotely-sensed images.
- Be familiar with the major themes and approaches in current geographic research and be able to employ basic geographic tools for research and analysis.
- To think creatively and critically about geographic factors in case studies, field settings, and real world scenarios.

				Sem. Hours
MAJOR REQUIREMENTS				33
Geog	2212	World Geography	3	Electives from the following, including two courses
Geog	2246	Economic Geography	3	in regional geography
Geog	3270	Research Methods in Geography	3	EaSc 1004 Intro. to the Sci.: Geology ..
Geog	3275	Climatology	3	EaSc 3111 Geomorphology
Geog	4201	Cartography	3	Electives in geography
				18
MINOR REQUIREMENTS				18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--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
Geog 2246	Economic Geography	3
Geog 3270	Research Methods in Geography	3
Geog 3275	Climatology	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

GENERAL EDUCATION REQUIREMENTS (page 48) (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.

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 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.

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 economic 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.

Geog 3225 Geography of Latin America (2) South America and Central America including Mexico and the Caribbean.

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 fundamental basis the physics of the atmosphere, hydrosphere, and lithosphere requisite to an understanding of the cultural implications of climate.

Geog 4201 Cartography (3) Techniques and tools of map construction including gathering, manipulation, and

representation of geographic data. Emphasis on thematic mapping and maps as communication. Traditional and electronic technologies stressed. Prerequisite: Geog 2212 or EaSc 1004 or consent of instructor.

Geog 4205 Computer Cartography (3) Implementation of mapping software, map design, problems and opportunities associated with computer mapping. Content includes obtaining data in a computer context (e.g., Cyberspace). Prerequisite: Geog 4201 or equivalent or consent of instructor.

Geog 4210 Remote Sensing and Image Interpretation (3) Use of electromagnetic spectrum to obtain information on our environment. Emphasis includes visible spectrum (air photography), thermography, radar, and satellite imagery. Prerequisite: Geog 2212 or EaSc 1004 or consent of instructor.

Geog 4220 Geographic Information Systems I (3) Automated procedures for storage, analysis, and display of spatial information. Data bases, procurement of spatial information, data manipulation and display techniques, software systems and management issues.

Geog 4230 Geography of Asia (3) A systematic and regional approach to the several Asian landscapes. Emphasis is on physical geography and cultural regions.

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.

Geog 4240 Geography of Missouri (2) A description and analysis of the systematic and regional geography of Missouri.

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.

Geog 4265 Urban Geography (3) Location of cities as related to other geographic phenomena. Urban units are analyzed with respect to general location theory.

- Geog 4270 World Political Geography (3)** The historical development of the political organization of area. Theoretical aspects of political geography are emphasized.
- 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.

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)

The graduate with a minor in Religious Studies will use the knowledge, experience, and skills obtained when this program is completed to:

- Recognize differences between the academic study of religions and the personal or corporate practice of religions.
- Reflect upon personal values and value systems in a global environment by using symbolic approaches to describe problems, identify alternative solutions, and make reasoned choices among those solutions.
- Compare and contrast definitions of religion and the opinions of scholars within the fields of Religious Studies.
- Demonstrate awareness and recollection of a wide variety of religious beliefs and practices within a global, pluralistic, non-racist, and non-sexist perspective.
- Recognize conflicts within and between value systems that may have their roots within religious traditions.
- Comprehend a variety of methodologies used in the study of religions which will help to develop skills in problem solving, analyzing, and interpreting data.
- Interpret primary religious texts and experiences by summarizing, evaluating, and articulating a point of view.
- Consider multiple perspectives, recognize biases, and cope with ambiguous points of view while listening carefully and thoughtfully to the ideas of others.
- Develop a vocabulary rooted in the study of religions that will facilitate understanding of literatures, themes, and influences upon our society and the world.
- Converse in an intelligent manner about a variety of cultures, beliefs, rituals, religious literatures, world systems, and ethical issues with people from around the globe.

		Sem. Hours
MINOR REQUIREMENTS		21
Rel 2210	Religions in America, 3 or	Electives from the following
Rel 3210	Comparative World Religions, 3	or other approved electives
Rel 2310	World Views & Values, 3 or	6
Rel 2510	Gender & Religions, 3	Art 1815 Art History Survey I
Rel 4410	Modern Religious Thought, 3 or	Art 1825 Art History Survey II
Rel 4520	Legal Issues & Religion, 3	*Engl 4450 The Age of Milton
Rel 3900	Special Projects in Religion	*Engl 4620 Early American Literature ...
Elective from the following	3	Phil 3710 Philosophy of Religion
Rel 1130	The Bible as Literature	Hist 4412 Era of Renaissance
Rel 2110	Images of Jesus of Nazareth ...	& Reformation
Rel 1510	Exploring Religion	Thea 4400 Lit. & History of Theatre I ...
		Thea 4420 Lit. & History of Theatre II ...
		Soc 4885 Sociology of Religion

GENERAL EDUCATION REQUIREMENTS (page 48) (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 2410 Exploring Religions of Africa, the Caribbean and African-Americans in the U.S.A. (3) Explores the diversity and religious traditions in Africa, the Caribbean and among African-Americans in the U.S., emphasizing beliefs, rituals and ethical constraints.

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 000362)

						Sem. Hours
CORE REQUIREMENTS						21
Thea	1500	Acting	3	Comm	2330	Small Group Communication . . . 3
Thea	1600	Stagecraft & Lighting	3	Comm	2340	Argumentation & Debate 3
Thea	3700	Directing	3	Comm	3325	Nonverbal Communication 2
Comm	2100	Foundations of Comm. Theory	3	Comm	3390	Forensics 1

Theatre Major Option, B.S. in Ed. Degree

The graduate with a Speech Communication and Theatre Bachelor of Science in Education degree (with a Theatre Major Option) will use the knowledge and skills obtained in the program to:

- Teach essential elements of speech communication and theatre at secondary school levels.
- Communicate and collaborate effectively in the interactive and creative process of theatre.
- Demonstrate a working knowledge of the historical, cultural, and stylistic dimensions of drama and theatre.
- Utilize critical thinking skills in order to analyze and interpret a script for the purpose of developing a concept and systematic plan for the production of a play.
- Form, communicate, and defend value judgments about quality and aesthetics in works of theatre.
- Demonstrate technical proficiency in the areas of acting and directing in order to create and present theatrical performances.
- Demonstrate a basic proficiency in the areas of theatre design and technology in order to create and present theatrical productions.
- Technical direct and direct one-act plays for public performance and successfully fulfill significant production assignments in the department's mainstage and/or children's theatre series.

						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 1
				Thea	4730	Studio Theatre II 1
				Electives in SpCm, Thea, or MCom		4
MINOR REQUIREMENTS						18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--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. IV 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) 3
Hist	1351	Div. II B (required)	3	Psy	4230	Psy. of Adolescence 3
PolS	1510	Div. II B (required)	3			
Secondary Education students will be allowed to substitute Psy 4230 to fulfill 3 s.h. in Div. III.						
PROFESSIONAL EDUCATION REQUIREMENTS (see page 205)						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	Comm	2100	Foundations of Comm. Theory . . 3
Thea	1600	Stagecraft & Lighting	3			
Thea	3700	Directing	3			

Comm 2330	Small Group Communication	3
Comm 2340	Argumentation & Debate	3
Elective in SpCm or Thea		3

THEATRE Major, B.A. Degree
(42 000364)

The graduate with a Bachelor of Arts in Theatre degree will use the knowledge and skills obtained in the program to:

- Communicate and collaborate effectively in the interactive and creative process of theatre.
- Demonstrate a working knowledge of the historical, cultural, and stylistic dimensions of drama and theatre.
- Utilize critical thinking skills in order to analyze and interpret a script for the purpose of developing a concept and systematic plan for the production of a play.
- Form, communicate, and defend value judgments about quality and aesthetics in works of theatre.
- Demonstrate technical proficiency in the areas of acting and directing in order to create and present theatrical performances.
- Demonstrate a basic proficiency in the areas of theatre design and technology in order to create and present theatrical productions.
- Technical direct and direct one-act plays for public performance and successfully fulfill significant production assignments in the department's mainstage and/or children's theatre series.

		Sem. Hours
MAJOR REQUIREMENTS		35
Thea 1100	Oral Interpretation	3
Thea 1400	Script Analysis	3
Thea 1500	Acting	3
Thea 1510	Stage Voice & Movement	3
Thea 1600	Stagecraft & Lighting	3
Thea 3600	Scene Design	3
Thea 3630	Studio Theatre I	1
Thea 3700	Directing	3
Thea 4730	Studio Theatre II	1
Thea 4400	Lit. & History of the Theatre I	3
Thea 4420	Lit. & History of the Theatre II	3
Electives in theatre		6
MINOR REQUIREMENTS		18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--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
lGen 4234	Div. IV 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)

The graduate with a Bachelor of Fine Arts degree in Theatre will use the knowledge and skills obtained in the program to:

- Communicate and collaborate effectively in the interactive and creative process of theatre.
- Demonstrate a working knowledge of the historical, cultural, and stylistic dimensions of drama and theatre.
- Utilize critical thinking skills in order to analyze and interpret a script for the purpose of developing a concept and systematic plan for the production of a play.
- Form, communicate, and defend value judgments about quality and aesthetics in works of theatre.
- Demonstrate technical proficiency in the areas of acting and directing in order to create and present theatrical performances.
- Demonstrate a basic proficiency in the areas of theatre design and technology in order to create and present theatrical productions.
- Technical direct and direct one-act plays for public performance and successfully fulfill significant production assignments in the department's mainstage and/or children's theatre series.

		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

Electives (continued)

Thea	4710	Advanced Directing	3
Electives from technical concentration listing			6-7

Technical

Thea	2600	Stage Drafting	2
Thea	2620	Theatrical Costume	3
Thea	3600	Scene Design	3
Thea	4600	Advanced Technical Theatre	3
Thea	4610	Adv. Stage Lighting & Sound	3

Electives from performance concentration listing			6-7
Departmentally approved supporting courses			9-10
Electives in theatre			0-3

MINOR NOT REQUIRED

GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the functional major, Thea 1100 fulfills 3 s.h. of Div. I B)			45
I Gen	4234	Div. IV 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)

MINOR REQUIREMENTS			Sem. Hours	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		
Thea	4420	Lit. & History of the Theatre II, 3		3
Electives in theatre				5

GENERAL EDUCATION REQUIREMENTS (page 48) (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.

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.

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.

214 Theatre

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 departmental 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 departmental 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 4920 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 Thea 4984 during the Professional Semester. *Not available for graduate credit.

Thea 4984 Methods of Teaching Speech and Theatre* (2) Prerequisites: admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with Thea 4920 during the Professional Semester. *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.

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
BE&O	1210	Essentials of Managing Information	2
Econ	1010	Principles of Macroeconomics	3
Econ	1011	Principles of Microeconomics	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.
 6. All students pursuing a Bachelor of Science in Business Administration must demonstrate competency in elementary calculus before they may be 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)

The graduate with a Bachelor of Science in Business Administration degree with a major in Accounting will use the knowledge and skill obtained in the program to:

- Read, listen, write, and speak at the level expected of a beginning accountant.
- Locate, obtain, and organize financial information.
- Identify and solve unstructured problems in a business setting.
- Work in groups and provide leadership.
- Integrate general knowledge of the flow of ideas and events in history, cultural differences, socio-political forces, mathematics, aesthetics, and economics into his/her everyday decisions.
- Understand organizations and how they change.
- Recognize the roles that technology and international commerce play in today's business environment.
- Use the common body of accounting knowledge to solve real-world accounting problems.
- Participate in the accounting profession and make value-based judgments in his/her business and professional lives.

						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	**Accounting and Business Elective			6
*Econ	1011	Principles of Microeconomics	3				
MINOR NOT REQUIRED							
GENERAL EDUCATION REQUIREMENTS (page 48)						48	
Comm	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
*BE&O	1210	Div. II A (required)	2	ICap	4357	Div. IV 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, BE&O 1210, Econ 1010, Econ 1011, Fin 2801, and Math 1111. See pages 180-181 for the Statement of Policy on Admission to a B.S. in Business Administration Degree program.

** Electives require approval of the department chair. At least one course must be outside accounting.

ACCOUNTING Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)

(000502)

						Sem. Hours
MINOR REQUIREMENTS						21

218 Accounting

Acct	2101	Principles of Financial Acct.	3
Acct	2102	Principles of Managerial Acct.	3
Acct	3111	Inter. Financial Accounting I	3
Acct	3112	Inter. Financial Accounting II	3

Acct	3130	Introduction to Income Tax	3
Acct	4100	Advanced Accounting	3
		Elective in accounting	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 BE&O 1210.

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 experience within a particular field of specialization. May be taken for pass/fail credit only. 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 and Acct 3111.
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.
 *Not available for graduate credit.

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 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 4165 Special Projects in Accounting (1-3) Individualized or group study under the supervision of departmental faculty. *May be repeated for a maximum of 6 semester hours.* Prerequisite: consent of instructor.

Computer and Office Information Systems

Computer Information Systems

COMPUTER INFORMATION SYSTEMS Functional Major, B.S. in Business Administration Degree (46 000534)

The graduate with a Bachelor of Science degree in Business Administration with a functional major in Computer Information Systems will use the knowledge and skills obtained in the program to:

- Demonstrate knowledge of professional and ethical expectations in the work place.
- Use productivity software (word processing, spreadsheet, and database) effectively and manage hardware and software resources by applying knowledge of operating systems and environments.
- Develop application software using skills in appropriate business programming languages (e.g. COBOL, Visual Basic, Java).
- Develop and maintain databases using theoretical and applied knowledge of relational database management systems (e.g. Oracle, DB2).
- Develop and maintain telecommunications networks using theoretical and applied knowledge of telecommunications (e.g. Novell, Windows/NT).
- Analyze business problems and develop solutions by applying critical thinking skills within the systems development process (e.g. The Systems Development Life Cycle [SDLC] and Information Engineering).
- Be a team player by applying group process skills; participate fully in group discussion and activities, lead/follow when appropriate; provide support and collaboration when needed.
- Access information resources and communicate effectively using a variety of methods: oral, written, and electronic.
- Design and construct client/server applications by using appropriate tools and architectures and develop effective graphical user interfaces (GUIs).

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						68	
CIS	1605	Microcomputer Application Software	2	Mgt	3315	Management of Organizations	3
CIS	2605	Appl. Dev. Using Visual Basic	3	Mgt	3325	Business Communications	3
CIS	2615	Introduction to JAVA	3	Mgt	3360	Production/Operations Mgt.	3
CIS	3605	Prin. of Data Comm. & LAN	3	Mkt	3405	Marketing Policy	3
CIS	3630	Management Information Systems	3	*BLaw	2720	Legal Environment of Business	3
CIS	3650	Database Management Systems	3	Electives from the following			6
CIS	3660	Anlys. & Des. of Comp. Infor. Sys.	3	CIS	3695	Intern. in Comp. Infor. Sys.	3-7
CIS	3655	COBOL Programming	3	CIS	4600	Programming in	
CIS	4660	Appl. Dev. Using JAVA	3			Generator Languages	3
CIS	4680	Client Server Computing	3	CIS	4620	Microcomputer Applications	3
*Acct	2101	Principles of Financial Acct.	3	CIS	4635	Seminar in Bus. Comp. Appl.	3
*Acct	2102	Principles of Managerial Acct.	3	CIS	4655	Software Engineering	3
*Econ	1011	Principles of Microeconomics	3	CIS	4665	Data Com. & Dist. Data Proc.	3
*Fin	2801	Business Statistics I	3	CIS	4667	Cont. Voice & Data Sys.	3
Fin	3801	Business Statistics II	3	CIS	4695	Adv. Prog. in C/C++	3
Fin	3850	Principles of Finance	3				
MINOR NOT REQUIRED							
GENERAL EDUCATION REQUIREMENTS (page 48)						48	
Comm	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
*BE&O	1210	Div. II A (required)	2	ICap	4357	Div. IV 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, BE&O 1210, Econ 1010, Econ 1011, Fin 2801, and Math 1111. See pages 180-181 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						23	
CIS	1605	Microcomputer Application Software	2	CIS	3670	Adv. COBOL Programming	3
CIS	3605	Principles of Data Communication & Local Area Networking	3	Acct	2101	Principles of Financial Acct.	3
				Acct	2102	Principles of Managerial Acct.	3
CIS	3620	Programming in C Language	3	BE&O	1210	Essentials of Managing Information	
CIS	3655	COBOL Programming	4		2		
GENERAL EDUCATION REQUIREMENTS (page 48) (In the minor, BE&O 1210 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 1601 Business Information Technology Institute (2) Provides information about information technology related careers, development of group/team building skills, communication skills, and hands-on experience in solving business problems using information technology. Prerequisite: enrollment in the Business Information Technology Career Institute.

CIS 1605 Microcomputer Application Software (2) Provides experience with a microcomputer based operating system/environment as well as word processing and database applications. Prerequisite: BE&O 1210. An additional fee is associated with this course.

CIS 2605 Applications Development Using Visual Basic (3) Graphic User Interface (GUI) client server applications development and data processing using Visual Basic. An additional fee is associated with this course.

CIS 2615 Introduction to JAVA (3) Fundamental principles for the design and implementation of programs using JAVA programming language to develop systems and applications programs. Flexibility portability/platform independence, support for object-orientation and the availability of classes to handle complex programming tasks make JAVA an ideal choice for software development. The course adopts a hands-on approach and entails extensive programming. Prerequisite: CIS 2605. An additional fee is associated with this course.

CIS 3605 Principles of Data Communications and Local Area Networking (3) 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: BE&O 1210.

CIS 3612 Assembler Language Programming (3) Use of BAL (Basic Assembler Language) in solving computer programming problems. Prerequisite: CIS 3655 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 3655 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: BE&O 1210, Acct 2102, Fin 2801, MGT 3315, and CIS 1605 or ACCT 2110.

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 2615. An additional fee is associated with this course.

CIS 3655 COBOL Programming (3) 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 3650.

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 2615. An additional fee is associated with this course.

CIS 3670 Advanced COBOL Programming (3) An extension of CIS 3655. Current version of COBOL is used. Other topics; DOS/VSE JCL, Utilities, VSAM, and CICS. Prerequisite: CIS 3655.

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. An additional fee is associated with this course.

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: BE&O 1210; 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 BE&O 1210.

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. An additional fee is associated with this course.

CIS 4660 Applications Development Using JAVA (3) Develop object-oriented web-based Graphical User Interface (GUI) applications for business using JAVA as the programming language. Prerequisites: CIS 2615 with a C grade or better and CIS 3605 and CIS 3650. An additional fee is associated with this course.

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: CIS 3605.

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. *Not available for graduate credit.

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 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 3605, CIS 3650 and admission to B.S. in Business Administration or Information Systems concentration in M.B.A. program. An additional fee is associated with this 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.

Economics and Finance

ECONOMICS Major, B.A. Degree

(42 000536)

The graduate with a Bachelor of Arts degree in Economics will use the knowledge and skills obtained in the program to:

- Use appropriate concepts and methods of analysis to identify and examine economic conditions and policies.
- Communicate effectively with consumers and producers of economic information and analysis.
- Select, collect, and manipulate data and interpret results.
- Consider the economic issues in the context of individual values, social values, and historical and global circumstances.

		Sem. Hours
MAJOR REQUIREMENTS		33-36
Econ 1010	Principles of Macroeconomics 3	Econ 3030 Intermediate Microeconomics . . . 3
Econ 1011	Principles of Microeconomics 3	Econ 4000 Portfolio Assessment 1
Econ 2010	Orientation to the Economics Major . . . 2	Electives in economics or related fields 18-21
Econ 3010	Intermediate Macroeconomics 3	

Students using Econ 1010 to fulfill 3 s.h. of Div. II B of General Education will take 21 elective hours in economics or related fields for a total of 36 s.h. in the major.

MINOR REQUIREMENTS	18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--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 General Education are required.	
Math 1111 Div. I C (required) 3	PoIS 1510 Div. II B (required) 3
MODERN LANGUAGE REQUIREMENT (Refer to Bachelor's Degree Requirements section for fulfillment options.)	3-9
FREE ELECTIVES	9-28
MINIMUM TOTAL	124

ECONOMICS Major, B.S. Degree

(43 000537)

The graduate with a Bachelor of Science degree in Economics will use the knowledge and skills obtained in the program to:

- Use appropriate concepts and methods of analysis to identify and examine economic conditions and policies.
- Communicate effectively with consumers and producers of economic information and analysis.
- Select, collect, and manipulate data and interpret results.
- Consider the economic issues in the context of individual values, social values, and historical and global circumstances.

		Sem. Hours
MAJOR REQUIREMENTS		36-41
Econ 1010	Principles of Macroeconomics 3	Fin 2801 Business Statistics I 3
Econ 1011	Principles of Microeconomics 3	Fin 3801 Business Statistics II 3
Econ 2010	Orientation to the Economics Major . . . 2	Econ 4015 Mathematical Economics I, 3 or
Econ 3010	Intermediate Macroeconomics 3	Math 1151 Calc. & Analytic Geometry I, 5 . . . 3-5
Econ 3030	Intermediate Microeconomics 3	Electives in economics or related fields 12-15
Econ 4000	Portfolio Assessment 1	

Students using Econ 1010 to fulfill 3 s.h. of Div. II B of General Education will take 15 elective hours in economics or related fields for a total of 39 s.h. in the major.

MINOR REQUIREMENTS	18-25
GENERAL EDUCATION REQUIREMENTS (page 48)	45-48
If Econ 1010 is used to fulfill 3 s.h. of Div. II B, 45 s.h. of General Education are required.	
Math 1111 Div. I C (required) 3	PoIS 1510 Div. II B (required) 3
FREE ELECTIVES	10-25
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 Macroeconomics 3	Electives in economics 14
Econ 1011	Principles of Microeconomics 3	
GENERAL EDUCATION REQUIREMENTS (page 48) (In the minor, Econ 1010 fulfills 3 s.h. of Div. II B)		

FINANCE Functional Major, B.S. in Business Administration Degree
(46 000540)

The graduate with a Bachelor of Science degree in Finance will use the knowledge and skills obtained in the program to:

- Take the initiative in identifying and pursuing opportunities for financial growth or improvement.
- Accurately use theoretical frameworks to analyze, solve, evaluate, and implement financial decisions in a systematic manner.
- Recognize international issues when evaluating/implementing financial decisions.
- Effectively communicate analyses/decisions to a wide variety of audiences, in a variety of professional contexts.
- Recognize and apply maximization principle: Maximize value of the firm/shareholders' wealth
- Examine risk and return impacts of the firm's investment and financing decisions
- Make sound financial decisions, using fundamental financial economic models, in a systematic manner
- Recognize function of international financial markets
- Comprehend role of financial intermediation
- Appreciate legal and ethical considerations

				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	Acct 4115 Financial Statement Analysis	3
+Fin	3861	Financial Management I	3	Electives from the following	
+Fin	3881	Financial Institutions and Markets	3	Fin 3835 Internship in Finance	3
+Fin	3891	Security Analysis	3	Fin 4862 Financial Management II	3
*Econ	1011	Principles of Microeconomics	3	Fin 4880 Bank Management	3
Econ	3020	Money & Banking	3	Fin 4803 Principles of Insurance	3
Econ	3030	Intermediate Microeconomics	3	Fin 4804 Emp. Benefits & Ret. Plan	3
*Acct	2101	Principles of Financial Acct.	3	Fin 4815 Investment Portfolio Admin.	3
*Acct	2102	Principles of Managerial Acct.	3	Fin 4817 Managing Financial	
CIS	1605	Microcomputer Application Software	2	Derivatives	3
CIS	3630	Management Information Systems	3	Fin 4820 International Finance	3
Mgt	3315	Management of Organizations	3	Business Elective	3
Mgt	3325	Business Communications	3		
Mgt	3360	Production/Operations Mgt.	3		
MINOR NOT REQUIRED					
GENERAL EDUCATION REQUIREMENTS (page 48) 48					
Comm	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
*BE&O	1210	Div. II A (required)	2	ICap 4357 Div. IV B (required)	3
*Econ	1010	Div. II B (required)	3		
ELECTIVES OUTSIDE OF THE HARMON COLLEGE OF BUSINESS ADMINISTRATION				5	
MINIMUM TOTAL				124	

+Fin 3850, Fin 3861, Fin 3881 and Fin 3891 must be completed with a grade of C or better to receive the B.S.B.A.-Finance degree.

*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, BE&O 1210, Econ 1010, Econ 1011, Fin 2801, and Math 1111. See pages 180-181 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

224 Economics and Finance

Fin 2801	Business Statistics I	3	Fin 3891	Security Analysis	3
Fin 3801	Business Statistics II	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

GENERAL EDUCATION REQUIREMENTS (page 48) (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. Successful completion of minor requirements satisfies the education requirements of the CERTIFIED FINANCIAL PLANNER™ certification.)
(000546)

MINOR REQUIREMENTS				Sem. Hours	
.....				18	
Fin 3811	Investments	3	Fin 4805	Adv. Personal Financial Planning	3
Fin 4803	Principles of 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 Macroeconomics (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 Microeconomics (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 2010 Orientation to the Economics Major (2) Familiarize economics majors with the CPI program, general outcomes, assessment activities (portfolio assessment), and future opportunities for economics majors. Prerequisite: Econ 1010 or Econ 1011.

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 be repeated with consent of department and internship director.* Available for Pass/Fail credit only. Prerequisite: 60 semester hours and overall GPA of 2.50 or above and consent of internship director.

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 4000 Portfolio Assessment* (1) Review and assess the major's overall portfolio that he/she has accumulated and engage in discussion of economic issues. Prerequisites: Econ 2010 and consent of department chair. *Not available for graduate credit.

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 4020 Natural Resource Economics (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. Prerequisites: Econ 1010 and Econ 1011.

Econ 4030 Directed Studies in Economics (1-3) Intensive study of significant economic topics. *May be repeated for a maximum of 9 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 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 4060 Game Theory Applications (3) Provides game theoretical tools used widely in economics to study situations in which various decision-makers interact. Applications include political science and biology. Prerequisites: Econ 1011 and Math 1111.

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.

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) An analysis of investment planning, decision-making and problem solving including investment policy statements, portfolio strategies, asset allocation, security selection, and performance monitoring. 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 be repeated with consent of department and internship director.* Available for Pass/Fail credit only. Prerequisites: 60 semester hours and overall GPA of 2.50 or above and consent of internship director.

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, or a declared major in Actuarial Science and Mathematics with completion of Math 4510.

Fin 3881 Financial Institutions and Markets (3) An analytic study of financial institutions, financial markets, and monetary policy. Prerequisite: Econ 3020 and FIN 3850 or consent of the instructor.

Fin 3891 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 4800 Special Projects in Finance* (1-3) Individualized or group study under the supervision of departmental faculty. *May be repeated for a maximum of 12 semester hours.* Prerequisite: consent of the instructor.

*Not available for graduate credit.

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 Principles of Insurance (3) Study of importance of risk in personal matters and various methods of treating risk. Includes property/lia insurance, life/health insurance, and insurance regulation. Prerequisite: Fin declared functional major in Actuarial Science and Mathematics with comple Math 4510 or concurrently Fin 3811.

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 client case scenarios. Emphasis on characteristics of the financial planning profession. Prerequisites: Acct 4136, Fin 3811, Fin 4802 and Fin 4804; or concurrently.

Fin 4815 Investment Portfolio Administration (3)

Application of security analysis and investment decision concepts to case pro and computer simulated investment situations. Additional readings in select portfolio management theories. Prerequisite: Fin 3891.

Fin 4817 Managing Financial Derivatives (3) Applied analysis of pricing and hedging techniques for managing investments in derivative con (forward, futures, options, and swap contracts) involving the application of con and strategies to case problems and computer simulations. Prerequisite: Fin 3850, or a declared major in Actuarial Science and Mathematics with completion of Math 4510.

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 4862 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. *Not available for graduate credit.

Fin 4880 Bank Management (3) Study and analysis of the problems of management of commercial banks with an emphasis on investment and loan portfolios. Prerequisite: Fin 3881 or concurrently.

Management and Business Communication

MANAGEMENT Functional Major, B.S. in Business Administration Degree (46 000543)

The graduate with a Bachelor of Science in Business Administration degree with a major in Management will use the knowledge and skills obtained in the program to:

- Evaluate risks and probabilities
- Use the common body of management knowledge to classify and analyze information to solve management problems
- Plan managerial objectives and select appropriate methods for achieving objectives
- Develop appropriate programs for implementation of selected alternatives and organize resources required
- Develop skills necessary to improve continuously one's knowledge and abilities
- Use text and graphics to communicate effectively ideas and information
- Use nonverbal communicative behavior and demonstrate proficiency in making oral presentations in a variety of contexts
- Contribute to a variety of work teams to accomplish tasks and fulfill the needs of the team and its members
- Apply the basic principles of leadership in terms of a strategic perspective
- Assume leadership role by establishing team goals and determining responsibility
- Evaluate the impact of the values of one's chosen profession on society and make professional decisions based on the results of this evaluation.

						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 Microeconomics 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						
GENERAL EDUCATION REQUIREMENTS (page 48)						48
Comm	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
*BE&O	1210	Div. II A (required)	2	ICap	4357	Div. IV 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, BE&O 1210, Econ 1010, Econ 1011, Fin 2801, and Math 1111. See pages 180-181 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)

This program has been placed in abeyance. See the Department Chair for more information.

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	BE&O	1210	Essentials of Managing Information
HRM	3920	Human Resource Management	3		2	
				Econ	1010	Principles of Macroeconomics . . . 3

GENERAL EDUCATION REQUIREMENTS (page 48) (In the minor, BE&O 1210 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. Take only for pass/fail credit. Prerequisites: 60 semester hours and overall GPA 2.50 or above or permission from internship director.

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) Basic principles and methods associated with Total Quality Management. Relationships between TQM theories and models studied in management. Prerequisite: Mgt 3360.

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 management skills. Prerequisite: Last semester senior management major or consent of department chair. *Not available for graduate credit.

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.

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.

Integrative Studies Capstone

ICap 4357 Organizational Policy and Strategy* (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: Admission to the B.S.B.A. program, Mgt 3315, Mgt 3325, Mkt 3405, Fin 3850, and senior standing. *Not available for graduate credit.

Marketing and Legal Studies

MARKETING Functional Major, B.S. in Business Administration Degree
(46 000511)

The graduate with a Bachelor of Science in Business Administration degree with a major in Marketing will use the knowledge and skills obtained in the program to:

- Understand the marketing concepts in consumer behavior, personal selling, marketing research, marketing analysis, strategy development and global decision-making.
- Communicate effectively in both individual and team situations using both oral and written communication.
- Interact effectively with others to analyze situations and solve marketing problems.
- Understand the valuing process as it relates to making optimal decisions in the global business environment.
- Apply analysis and problem solving skills to assess marketing situations and develop strategies for implementation.

					Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS					65
Mkt	3405	Marketing Policy	3	CIS	3630 Management Information Systems 3
Mkt	3430	Personal Selling	3	*Econ	1011 Principles of Microeconomics ... 3
Mkt	3480	Consumer Behavior	3	*Fin	2801 Business Statistics I
Mkt	4460	International Marketing	3	Fin	3801 Business Statistics II
Mkt	4470	Marketing Research	3	Fin	3850 Principles of Finance
Mkt	4490	Marketing Management	3	Mgt	3315 Management of Organizations ... 3
*BLaw	2720	Legal Environment of Business	3	Mgt	3325 Business Communications
*Acct	2101	Principles of Financial Acct.	3	Mgt	3360 Production/Operations Mgt. 3
*Acct	2102	Principles of Managerial Acct.	3	Departmentally approved electives in major (contact	
CIS	1605	Microcomputer Application Software ..	2	Department Chair for advisement and approval) ... 12	
MINOR NOT REQUIRED					
GENERAL EDUCATION REQUIREMENTS (page 48)					48
Comm	1000	Div. I B (required)	3	*Math	1111 Div. I C (required)
					3

*BE&O 1210	Div. II A (required)	2	Psy 1100	Div. II B or	
*Econ 1010	Div. II B (required)	3	Soc 1800	Div. II B (required)	3
			ICap 4357	Div. IV B (required)	3
ELECTIVES OUTSIDE OF THE HARMON COLLEGE OF BUSINESS ADMINISTRATION 8					
FREE ELECTIVES 3					
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, BE&O 1210, Econ 1010, Econ 1011, Fin 2801, and Math 1111. See pages 180-181 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)

MINOR REQUIREMENTS 22					
Mkt 3405	Marketing Policy	3	Econ 1011	Principles of Microeconomics	3
Mkt 3430	Personal Selling	3	Mkt 3410	Retail Management, 3 or	
Mkt 3480	Consumer Behavior	3	Mkt 3420	Principles of Advertising, 3	3
CIS 1605	Microcomputer Application Software	2	BE&O 1210	Essentials of Managing Information	
Econ 1010	Principles of Macroeconomics	3		2	
GENERAL EDUCATION REQUIREMENTS (page 48) (In the minor, BE&O 1210 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)

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 Macroeconomics	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	BE&O 1210	Essentials of Managing Info.	2
*Mkt 3405 can substitute for Mkt 3400.					
GENERAL EDUCATION REQUIREMENTS (page 48) (In the minor, if elected, BE&O 1210 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. Available for Pass/Fail Credit only. Prerequisites: admission to B.S.B.A., Mkt 3405, overall GPA 2.50 or above and consent of internship director.

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.

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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.

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.

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--General, 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 director of undergraduate studies in the department.

The Master's Degree is the recognized entry-level degree for both speech-language pathology or audiology in all employment settings. The primary purpose of the B.S. Degree in Speech Pathology is to prepare students for possible admission to graduate programs in either Speech-Language Pathology or Audiology. Completion of the B.S. Degree in Speech Pathology does not prepare students for employment as a speech-language pathologist or audiologist, nor does it guarantee admission to a graduate program in Speech-Language Pathology or Audiology; however, the undergraduate degree can lead to employment opportunities in a variety of other related fields.

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.
3. Any student who receives a grade below "C" in any CD course will receive a letter of warning. Students must obtain a grade of "C" or better in all CD courses taken prior to completing an undergraduate major in Speech Pathology. Students may enroll in any CD course a maximum of 2 times.

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.

- 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.

- 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.

SPEECH PATHOLOGY Functional Major, B.S. Degree
(43 000844)

The graduate with a Bachelor of Science degree with a functional major in Speech Pathology will use the knowledge and skills obtained in the program to:

- Provide diagnostic and treatment services in different types of settings.
- Access information systems, apply research to clinical situations and interpret research studies
- Use current word processing, data bases, and spreadsheet technologies in the treatment of data collection, communicating with external sources and accessing multiple information resources.
- Use routine aseptic procedures.
- Perform oral peripheral exams, traditional articulation tests, C-PAC, testing for language disorders, charting for data collection, pure-tone hearing screening, immittance hearing screening, basic otoscopy, pure-tone audiometry, and speech audiometry.
- Complete IPA transcription, case histories and oral-language samples.
- Conduct individual and groups therapy sessions, communicate results of therapy, plan individual/group therapy sessions, produce written summaries of individual/group therapy sessions, and produce written documentation of student teaching group therapy.

				Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS				48
CD	4101	Communication Disorders	CD 3304	Speech Science 3
		in the Schools 3	CD 4401	Language Development 3
CD	2301	American Phonetics 3	CD 3501	Intro. to Comm. Disorders 3
CD	3301	Anatomy & Neurology of Spch./Lang. 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	4
Psy	3340	Social Psychology	3
Psy	4310	Theories of Personality	3
Psy	4440	Abnormal Psychology	3
Psy	4770	Medical Aspects of Disability	3
Soc	3825	Race & Ethnic Relations	3
SoWk	2600	Intro. to Social Welfare & Social Work	3
EdSp	4300	Introduction to Students with Mental Retardation	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
Phys	1611	Physics of Sound	3
Engl	3110	English Grammar	3
CFD	3222	Early Childhood	3
AE	1450	Valuing Differences: Discovering Common Ground	1

MINOR NOT REQUIRED

(Continued on next page)

(Continued from previous page)

GENERAL EDUCATION REQUIREMENTS (page 48)--48 (In the professional education requirements, ICap 4468 fulfills			
3 s.h. of Div. III B)			45
Comm	1000	Div. I B (required)	3
Biol	1004	Div. II A (required)	4
Phys	1103	Div. II A (required)	3
Hist	1350	Div. II B or	
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 B.			
PROFESSIONAL EDUCATION REQUIREMENTS 24-25			
EdCl	2100	Foundations of Education & Field Experience	3
EdCl	4495	Student Tchg. Elementary I	5
Psy	2220	Child Psychology	3
EdCl	2240	Educational Psychology	3
EdSp	4140	Couns. Parents of Except. Children	2
ICap	4468	Student Tchg. Secondary II	4
EdCl	4210	Tchg. of Rdg. in the Sec. Sch., 2 or	
EdCl	3220	Tchg. of the Language Arts, 3	2-3
EdSp	2100	Ed. of the Exceptional Child, 2 or	
Psy	4200	Psy. of Except. Children, 2	2
FREE ELECTIVES			6-7
MINIMUM TOTAL			124

*Course has prerequisite(s) not listed in the program.

General

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

234 Communication Disorders

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.

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. Prerequisites: admission to the undergraduate functional major in speech pathology and a grade of "C" or better in CD 3503. CD 4504 may be taken concurrently with 3503 under exceptional circumstances with departmental approval. *Not available for graduate credit.

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. Prerequisites: admission to the undergraduate functional major in speech pathology and a grade of "C" or better in CD 3503. CD 4505 may be taken concurrently with CD 3503 under exceptional circumstances with departmental approval. *Not available for graduate credit.

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. *Not available for graduate credit.

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.

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. Prerequisites: admission to the undergraduate functional major in speech pathology or consent of department chair, overall GPA of 2.50, a grade of "C" or better in all previous CD courses, and 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 4803 cannot be taken concurrently with CD 4804. *Not available for graduate credit.

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. Prerequisites: admission to the undergraduate functional major in speech pathology or consent of department chair, overall GPA of 2.50, a grade of "C" or better in all previous CD courses, and 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 cannot be taken concurrently with CD 4803. *Not available for graduate credit.

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. Prerequisites: admission to the undergraduate functional major in speech pathology or consent of department chair, overall GPA of 2.50; CD 3503 and CD 4706. *Not available for graduate credit.

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.

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.

Department of Criminal Justice Statement of Policy

The program for the Criminal Justice B.S. Degree allows for 21 semester hours of departmentally approved electives. CMSU criminal justice majors may seek departmental approval for courses from the criminal justice program of the University of Glamorgan in Wales or from the social sciences program of the Vaxjo University in Sweden. Prior to enrolling for courses at the University of Glamorgan, the declared CMSU criminal justice major must obtain this approval from the CMSU Criminal Justice Department Chair. Typically the CMSU student should be in the junior year.

BIOLOGY Functional Major, B.S. Degree, Conservation Enforcement Studies option

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
				Soc	4846	Corrections & Preventions	3
CJ	4330	Criminal Justice & the Mental Health Systems	3				

CRIMINAL JUSTICE Major, B.S. Degree

(43 000842)

The graduate with a Bachelor of Science degree in Criminal Justice will use the knowledge and skills obtained in the program to:

- Discern the basic components of the criminal justice system and understand the interrelationship within and between these components.
- Specify how justice institutions operate within society, as well as how they differ.
- Read and utilize articles from academic journals.
- Recognize personal assumptions, as well as basic American assumptions in analyzing positions on justice issues.
- Communicate effectively both in written and oral form.
- Conduct and report basic research procedures in accord with the scholarly practices of the discipline of Criminal Justice, including the principles of documentation, the acquisition of on and offline resources and do so in line with the ACJS Code of Ethics.
- Create reasonable linkages between empirical evidence and theory utilizing both inductive and deductive forms of logic.
- Recognize the complexity, ambiguity, and uncertainty that are present in the use of knowledge to address crime problems.

						Sem. Hours	
MAJOR REQUIREMENTS						45	
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	3
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			18

MINOR REQUIREMENTS	14-25
GENERAL EDUCATION REQUIREMENTS (page 48)	48
FREE ELECTIVES	6-13
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	3006	Corrections	3

CJ	3010	Policing a Democratic Society	3
CJ	2300	Criminal Law	3

CJ	3303	Criminal Procedure	3
CJ	2700	Introduction to Juvenile Justice . .	3
Soc	3890	Criminology	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.

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 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.

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 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.

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.

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 semesters 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* (3) 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.

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.

Teacher Education Policies and Procedures

CERTIFICATION

The teacher certification program offered by Central is accredited nationally by the National Council for Accreditation of Teacher Education. Programs in education also meet 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 PRAXIS II subject assessment with a score no lower than a

minimum determined by the state of Missouri for each test ("exit test"); (6) completion of a student performance portfolio addressing state standards; (7) 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 with the portfolio (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
 Family and Consumer Science
 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. EdCl 2100, Foundations of Education and Field Experience.
 - B. EdCl 2240, Educational Psychology (or equivalent course)
 - C. Engl 1020, Composition I (or approved equivalent course emphasizing writing skills.)
 - D. College-level mathematics course (at the level of Math 1101, 1111, or 1620)
 - E. An oral communication course (Comm 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. Satisfactory criminal history background check. No student will be admitted to teacher education if he/she has been convicted of a felony. (Post-Baccalaureate students may contact the Office of Clinical Services and Certification to clarify admission requirements.)

NOTE: Any appeal regarding denial of Admission to the Teacher Education Program should be addressed in writing to the chair of the Teacher Education Council. Further appeal should be directed to the Dean of the College of Education and Human Services.

ADMISSION TO THE PROFESSIONAL EDUCATION SEMESTER AND STUDENT TEACHING

The professional education semester is generally the final semester of the program, and student teaching is the primary component.

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 request 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 computer proficiency. (A computer course may be taken for credit or the requirement may be met by a noncredit laboratory.)
7. A doctor's certificate or other evidence of good health, if required by the school system where the student is placed for student teaching.
8. 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 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 PRAXIS II specialty subject assessment that is applicable to the initial certificate endorsement being requested.

FEDERAL FINANCIAL AID

Students completing initial teacher certification as part of completion of the first bachelors or graduate degree may receive federal and state grant, loan and employment assistance in accordance with their calculated eligibility. Students pursuing teacher certification after completion of the first bachelors degree may receive only federal loan and work assistance. In both circumstances, the Free Application for Federal Student Aid (FAFSA) must be submitted to determine the student's eligibility for aid.

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 B-3 only with an elementary education functional major;
 available with no certification when used with other major areas.)
 (000723)

				Sem. Hours
MINOR REQUIREMENTS				28
EdCl	2830	Early Childhood Principles	2	
EdCl	2850	Dev. & Learning Through Play	3	
EdCl	4830	Early Childhood Curriculum	3	
PE	2410	Movement Skills & Activities for Primary Grades	2	
EdSp	3150	Community & Family Resources	2	
EdSp	3151	Community & Family Resources Practicum	1	
EdSp	4370	Screening, Diagnosing & Prescribing Instructions	3	
CFD	1220	Child Development	3	
CFD	1240	Pract. in Child Development	2	
CFD	3250	Org. & Adm. of Programs for Young Children	3	
D&N	2310	Early Childhood Nutr. & Health	2	
CD	2000	The Bases of Speech & Lang.	2	

Clinical Experiences for Teacher Education Students

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 educational foundations 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 EdCl 2100.

Early childhood, elementary and middle school majors have a field experience in EdCl 3210 (Methods of Reading Instruction). Early childhood majors have additional field experiences in EdSp 3151 (Community and Family Resources Practicum), EdCl 4830 (Early Childhood Curriculum) and EdCl 4400 (Classroom Management and Interactions). Elementary education majors have additional field experiences in EdCl 4250 (Practicum in Reading) and EdCl 4400 (Classroom Management and Interactions). Middle school majors have additional field experience in EdCl 4130 (The Middle School) and EdCl 4340 (Middle School Curriculum and Instruction).

Secondary majors, after the early two-course educational foundations block, complete their second field experience in EdCl 3550 (Practicum in Secondary Instruction) and their third in Secondary Field Experience II in their major field 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 Secondary Field Experience II in their major field, and EdCl 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. Elementary majors with a special education area of concentration/minor will be assigned two additional hours of student teaching.

Attendance at all professional education semester activities is required. Any exceptions must be approved by the Director of Clinical Services and Certification.

All teacher education students seeking initial certification will be able to demonstrate the knowledge and skills obtained in the program to meet the outcomes of Missouri Standards for Teacher Education Programs (MoSTEP). The graduate of a teacher education program will use the knowledge and skills obtained in the program to:

- Understand the central concepts, tools of inquiry and structures of the discipline(s) within the context of a global society and create learning experiences that make these aspects of subject matter meaningful for students.

- Understand how students learn and develop, and provide learning opportunities that support the intellectual, social, and personal development of all students.
- Understand how students differ in their approaches to learning and create instructional opportunities that are adapted to diverse learners.
- Recognize the importance of long-range planning and curriculum development and develop, implement, and evaluate curriculum based upon student, district, and state performance standards.
- Use a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.

(Continued on next page)

(Continued from previous page)

- Use an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.
- Model effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.
- Understand and use formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.
- Be a reflective practitioner who continually assesses the effects of choices and actions on others. This reflective practitioner actively seeks out opportunities to grow professionally and utilizes the assessment and professional growth to generate more learning for more students.
- Foster relationships with school colleagues, parents, and educational partners in the larger community to support student learning and well-being.

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 elementary 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			
EdCl	3210	Methods of Reading Instruction	3	Hed	3310	Health Ed. in the Elem. School	2
EdCl	3220	Teaching of the Language Arts	3	Hed	4330	First Aid & CPR for Educators	1
EdCl	2310	Computer/Technology in Ed.	2	Art	3910	Art for Elementary Schools	2
EdCl	4350	Elem. Science Tchg. Strategies	3	Math	1800	Introduction to Teaching Elementary & Middle School Mathematics	2
EdCl	3410	Children's Literature	2	Math	2801	Concepts & Methods in Elementary School Mathematics	3
EdCl	3420	Tchg. Social Studies & Economics in Elementary & Middle Schools	3	Mus	3301	Music for Elementary Schools	2
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the functional major, HEd 3310 and HEd 4330 will be allowed to fulfill 3 s.h. of Div. III; IGen 3468 fulfills 3 s.h. of Div. IV A)				42			
Comm	1000	Div. I B (required)	3	PolS	1510	Div. II B (required)	3
Math	1620	Div. I C (required)	3	Hist	1350	Div. II B or	
Science Choice Group I		Group I or Group II of Div. II A	7	Hist	1351	Div. II B (required)	3
EdCl	1320	Biology for Teachers	3	Geog	2212	Div. II B (required)	3
EaSc	1004	Div. II A or		Art	1800	Div. II C or	
Chem	1104	Div. II A or		Mus	1210	Div. II C (required)	3
Phys	1104	Div. II A (required)	4	Modern (Foreign) language		Div. II C (required)	3
or				EdCl	2110	Div. II D (required)	3
Science Choice Group II							
EdCl	1310	Physics for Teachers	3				
Biol	1004	Div. II A (required)	4				

Elementary Education functional majors will be allowed to substitute EdCl 1310 or EdCl 1320 to fulfill 3 s.h. of Div. II A.

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			
EdCl	3215	Tchg. Reading in Content Fields	3	EdCl	4250	Practicum in Reading	1
EdCl	4220	Analysis & Corr. of Rdg. Disabil.	2	PE	3420	Elem. School Phys. Ed. Activities	2

AREA OF CONCENTRATION REQUIREMENTS 21

An approved minor/area of concentration in a teaching/specialty area appropriate for elementary majors.
 Select one approved minor/area of concentration from the following list:: Art (27 s.h.), English (24 s.h.), Family and Consumer Science (25 s.h.) French (21 s.h.), Health Education (22 s.h.), Instructional Media Technology (23 s.h.), Mathematics (24-25 s.h.), Social Studies (26-27 s.h.), Speech Communications/Theatre (21 s.h.), Spanish (21 s.h.), Special Education (see office of Clinical Services & Certification).
 Note: Elementary majors with special education minor/area of concentration will be assigned two additional hours of student teaching.

GENERAL EDUCATION REQUIREMENTS (page 48 and listed for this program) 42

PROFESSIONAL EDUCATION REQUIREMENTS 31

EdCI	2100	Foundations of Education & Field Experience	3	IGen	3468	Community, School & Family Connections	3
EdCI	2101	Models of Teaching	2	EdCI	2240	Educational Psychology	3
EdCI	4400	Classroom Mgt. & Interactions	3	Psy	2220	Child Psychology, 3 or	
EdCI	4495	Student Tchg. Elementary I	6	Psy	3220	Lifespan Development, 3	3
EdCI	4496	Student Tchg. Elementary II	6	EdSp	2100	Ed. of the Exceptional Child, 2 or	
				Psy	4200	Psy. of Exceptional Children, 2	2

MINIMUM TOTAL 130
 (Additional option listed on next page)
 (Continued from previous page)

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 for Primary Grades	2
EdCI	2850	Dev. & Learning Through Play	3				
EdCI	4830	Early Childhood Curriculum	3	EdSp	3150	Community & Family Resources	2
CFD	1220	Child Development	3	EdSp	3151	Community & Family Resources Practicum	1
CFD	1240	Pract. in Child Development	2				
CFD	3250	Org. & Adm. of Programs for Young Children	3	EdSp	4370	Screening, Diagnosing & Prescribing Instructions	3
D&N	2310	Early Childhood Nutr. & Health	2	CD	2000	The Bases of Speech & Lang.	2

GENERAL EDUCATION REQUIREMENTS (page 48 and listed for this program) 42

PROFESSIONAL EDUCATION REQUIREMENTS 31

EdCI	2100	Foundations of Education & Field Experience	3	IGen	3468	Community, School & Family Connections	3
EdCI	2101	Models of Teaching	2	EdCI	2240	Educational Psychology	3
EdCI	4400	Classroom Mgt. & Interactions	3	Psy	2220	Child Psychology, 3 or	
EdCI	4493	Student Tchg. Early Childhood I	6	Psy	3220	Lifespan Development, 3	3
EdCI	4496	Student Tchg. Early Childhood II	6	EdSp	2100	Ed. of the Exceptional Child, 2 or	
				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	4130	The Middle School	3	HEd	4320	Teaching Sex Education in the School	3
EdCI	3210	Methods of Reading Instruction	3				
EdCI	3215	Tchg. Reading in the Content Fields	3	HEd	4330	First Aid & CPR for Educators	1
EdCI	3220	Teaching of the Language Arts	3	Engl	1020	Composition I	3
EdCI	4220	Analysis & Corr. of Rdg. Disabil.	2	Engl	1030	Composition II	3
EdCI	4250	Practicum in Reading	1	Math	3812	Mathematics in the Integrated Middle School Curriculum	3
EdCI	2310	Computer/Technology in Ed.	2				
EdCI	3440	Literature for the Middle Level	2	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 21-27

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Select one area of concentration from the following list: Art (27 s.h.), Business Education (21 s.h.), English (24 s.h.), Family and Consumer Science (25 s.h.), French (21 s.h.), Health Education (22 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.)

GENERAL EDUCATION REQUIREMENTS (page 48)--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. IV 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	
EdCl	1320	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			
Phys	1104	Div. II A (required)	4	EdCl	2110	Div. II C (required)	3
		or		Psy	4230	Div. II D (required)	3
Group II				Psy	3220	Psy. of Adolescence, 3 or	
EdCl	1310	Physics for Teachers	3			Lifespan Development, 3	3
Biol	1004	Div. II A (required)	4				

Middle School majors will be allowed to substitute EdCl 1310 or EdCl 1320 to fulfill 3 s.h. of Div. II A and to substitute Psy 4230 to fulfill 3 s.h. in Div. III.

PROFESSIONAL EDUCATION REQUIREMENTS 32-33

EdCl	2100	Foundations of Education & Field Experience	3	IGen	3468	Community, School & Family Connections	3
EdCl	2101	Models of Teaching	2	EdCl	2240	Educational Psychology	3
EdCl	4300	Ed. Measurement & Evaluation	2	EdSp	2100	Ed. of the Exceptional Child, 2 or	
EdCl	4340	Tchg. Strategies in the Middle School	3	Psy	4200	Psy. of Exceptional Children, 2	2
EdCl	4497	Student Tchg. Middle School I	6	A teaching methods course is required for each area of concentration or area of endorsement			
EdCl	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 or Psy 3220, Lifespan Development).

MAJOR OR FUNCTIONAL MAJOR REQUIREMENTS	30-67	Sem. Hours
Central offers certification as indicated under Certification (see page 201) in the College of Education and Human Services.		
MINOR REQUIREMENTS	0-25	
Central offers certification as indicated under Certification (see page 201) in the College of Education and Human Services.		
GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the professional education requirements, ICap 4468 fulfills 3 s.h. of Div. IV B)	45	
PROFESSIONAL EDUCATION REQUIREMENTS	28-29	
EdCl 2100 Foundations of Education & Field Experience	3	EdCl 4595 Student Teaching Secondary I
EdCl 4210 Tchg. of Rdg. in the Sec. School	2	EdCl 2240 Educational Psychology
EdCl 4300 Ed. Measurement & Evaluation	2	Psy 4200 Psy. of Exceptional Children, 2 or
EdCl 3500 Sec. Tchg. & Behavioral Mgt.	3	EdSp 2100 Ed. of the Exceptional Child, 2
EdCl 3550 Practicum in Secondary Instruction	1	ICap 4468 Student Teaching Secondary II
Secondary Field Experience II in major field	1	Special methods in major field
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 Family and Consumer Science 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	

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	
EdCl	1310	Physics for Teachers	3	EaSc	3114	Meteorology	3
EdCl	1320	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				
GENERAL EDUCATION REQUIREMENTS (page 48) (In the minor, Biol 1004 and Chem 1104 fulfill 7 s.h. of Div. II A)							

Special Projects

EdCl 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.*

EdCl 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.*

Foundations

EdCl 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 EdCl 2240 during the sophomore year. In addition, should be taken concurrently with EdCl 2101 by early childhood, elementary, and middle school majors. An additional fee is assessed for this course.

EdCl 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 EdCl 2100 and EdCl 2240 during the sophomore year.

EdCl 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.

EdCl 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 EdCl 2100 and EdCl 2240 during the sophomore year. An additional fee is assessed for this course.

EdCl 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. An additional fee is associated with this course.

EdCl 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.

Reading

EdCl 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 EdCl 2100 during the sophomore year. In addition, should be taken concurrently with EdCl 2101 by early childhood, elementary, and middle school majors.

EdCl 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: EdCl 2100, EdCl 2101 and EdCl 2240.

EdCl 3215 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. Prerequisite: EdCl 3210 or equivalent

EdCl 3220 The Teaching of the Language Arts (3) All aspects of communication will be considered--reading, writing, listening, and speaking. Prerequisites: EdCl 2100 and EdCl 2240.

EdCl 3230 Content Area Literacy in the Middle School (3) Designed to prepare middle school teachers to address reading needs common to the content areas and reading teachers to carry out a general reading program. Prerequisites: EdCl 3210 or equivalent.

EdCl 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; EdCl 2100 and EdCl 2240, or equivalent.

EdCl 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:

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admission to Teacher Education Program; EdCI 3215 or EdCI 4210; EdCI 4220 must be taken concurrently with EdCI 4250. *Not available for graduate credit.

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 3215, and must be taken concurrently with EdCI 4220. *Not available for graduate credit.

Curriculum and Instruction

EdCI 1310 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.

EdCI 1320 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.

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 test results.

EdCI 4314 Integration of Technology in Instruction (3) Establishes and advances the use of computer technology for both teacher productivity and instructional integration into P-12 classrooms. Prerequisite: EdCI 2310 or consent of instructor.

EdCI 4318 Telecommunications in Education (3) 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 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 EdCI 4130. An additional fee is assessed for this course.

EdCI 4350 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, (EdCI 1310 and Biol 1004) or (EdCI 1320 and EaSc 1004 or Chem 1104 or Phys 1104).

Elementary Education

See information beginning on page 201 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 EdCI 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 EdCI 2240. An additional fee is assessed for this course.

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 EdCI 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. *Not available for graduate credit.

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.) *Not available for graduate credit.

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. *Not available for graduate credit.

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. *Not available for graduate credit.

admission to Teacher Education Program; EdCI 2240 or equivalent.

Secondary Education

See information beginning on page 201 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. Occupational Education majors need consent of T&OE to enroll. An additional fee is assessed for this course.

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 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.) *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:

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. *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.

Child and Family Development

In the section of Child and Family Development, the second digit in a course number stands for the following: 0–General, 2–Development, 7–Professional.

CHILD AND FAMILY DEVELOPMENT Functional Major, B.S. Degree

(43 000121)

Students will be:

- Able to think critically about problems and issues facing children and families.
- Prepared to use developmentally appropriate practices to promote the optimal development of diverse children and families.
- Competent to assume leadership roles in programs providing direct and support services to children and families.
- Articulate advocates for justice for families and children in both public and private arenas.
- Aware of and sensitive to ethical implications in their professional relationships with diverse families and children.

				Sem. Hours
MAJOR REQUIREMENTS				57-63
CFD 1220	Child Development	3	EdCI 2310	Computer/Technology in Ed. 2
CFD 1230	Observation of Children	2	EdSp 2100	Ed. of the Exceptional Child 2
CFD 1240	Pract. in Child Development	3	EdSp 3150	Community & Family Resources . . 2
CFD 3230	Family Sys. & Lifespan Development	3	AE 1450	Valuing Differences: Discovering Common Ground 1
CFD 3240	Parent-Child Interaction	3	Departmentally approved electives from one of the following areas 25-28	
CFD 4710	Internship	3-6	Area 1	Child Development
CFD 4745	Senior Seminar	3	Area 2	Family Development
D&N 2310	Early Childhood Nutr. & Health	2		
FACS 2110	Consumer Problems	3		
MINOR NOT REQUIRED				
GENERAL EDUCATION REQUIREMENTS (page 48)				48
Psy 1100	Div. II B (required)	3	EdCI 2110	Div. II D (required) 3
Soc 1800	Div. II B (required)	3	CFD 1010	Div. III (required) 3
FREE ELECTIVES				13-19
MINIMUM TOTAL				124

General

CFD 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.

CFD 4000 Special Projects in Child and Family

Development (1-3) Investigation of contemporary problems and issues in Child and Family Development. *May be repeated for a maximum of 6 semester hours.*

Development

CFD 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.

CFD 1230 Observation of Children (2) Techniques of observation and actual observation of children.

CFD 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: CFD 1220. An additional fee is associated with this course.

CFD 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.

CFD 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: CFD 1240.

CFD 3230 Family Systems and Lifespan

Development (3) Family relationships and human development with focus on change over the course of the family life cycle.

CFD 3240 Parent-Child Interaction (3) Development and understanding of adult-child interaction in the family setting.

CFD 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: CFD 1240 or consent of instructor.

CFD 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: CFD 1240 or equivalent.

Professional

CFD 4710 Internship (3-6) Provides experience for students in cooperating businesses, agencies and organizations. *May be repeated for a maximum of 12 semester hours.* Prerequisites: 20 semester hours of courses in the major, 2.0 GPA and advance departmental approval.

CFD 4745 Senior Seminar (3) Philosophy, current issues and trends in Child and Family relationships related to occupations. Focus on problem-solving styles leading to group and individual research problems. Prerequisites: senior standing, approval of department advisor.

Clinical Faculty for the Teacher Education Program

Central's education majors participate in a field experience with one of the Professional Development School partners. The Teacher Education Program has formal partnership agreements with Warrensburg and Crest Ridge School Districts. Many of the public school faculty from the two districts serve as clinical faculty for Central, and work with interns in the P-12 classrooms or present on educational issues in the university courses. A list of clinical faculty for the 2002-2003 school year includes:

Crest Ridge Elementary

Sue Volesky*
Gayle Jones
Khrista Callaway
Rhonda Gentry
Teresa Gibson
Luanne Lloyd
Cathy Woody

Crest Ridge Middle School

Rose Ferguson*
Tim Gallagher
Phyllis Callahan
Paula Elfrink
Misha Steed
Carmelita Tibai

Crest Ridge High School

Jackie Gilliland*
John Hays
Juanita Peaslee
Joni Shelton
Janet Bryant

Martin Warren Elementary

Carol Siegfried*
John Finanne

Gay Lynn Bayless
Ginger Cochran
Alisa Collier
Jan Crouch
Beth Cunningham
Amy Holmes
Nancy Hudson
Wendy Marr

Ridge View Elementary

Sherri Carter*
Kim Hawk
Ramona Baldwin
Dawn Bruch
Lee Clark
Rachel Colebank
Gwenette Grady
Tammy Graham
Linda Kraus
Barb Messer
Lorri Terrell
Lucinda Wood

South East Elementary

Tamera King*
Nancy Corbett
Mary Ellen Bishop
Toni Frandsen
Paula Rumsey
Shannon Schwartz
Susan Wegener
Kim Wright
JoAnna Young

Sterling Elementary

Bridget James*
Kurt Ream
Jody Bergner
Carol Haggard
Denise Holden
Maria Lamirande
Diane Van De Wiele
Deborah Lawson
Janet Richhart
Elaine Sargent
Jill Smith

Warrensburg Middle School

Julie Lancaster *
Jim Davis
Jane Abington
Denna Angle
Lori Bell
Tawnya Knupp
Trish Smith
LuAnn Stillwell
Loryn Venekamp

*Site Coordinator

Educational Leadership and Human Development

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.

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--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)

	Sem. Hours
MINOR REQUIREMENTS	23
InsT 3100 Mediating Instruction	3
InsT 4300 Prin. of Instructional Dev.	3
InsT 4330 Technology Troubleshooting for Educators	2
InsT 4400 Design & Production of Media for Instruction	3
InsT 4920 Practicum in Instructional Tech. .	1
EdCI 2310 Computer/Technology in Ed.	2
EdCI 4318 Telecommunications in Education	3
LIS 4230 Sel. & Acquisition of Materials . . .	3
LIS 4740 Adm. of the Library Media Center	3

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.

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.

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.

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.

Library Science and Information Services

In the section of Library Science and Information Services, the second digit in the course number stands for the following: 0--Special Projects, 1--Foundations, 2--Librarianship, 3--Internet, 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.*

Foundations

LIS 4120 Secondary Field Experience II in Library Science (1)

Involves practical experiences in the role and responsibilities of the secondary school library media specialist.

LIS 4220 Introduction to Reference (3) The selection, evaluation and use of traditional and electronic reference sources for school library media centers.

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.

Electronic Resources

LIS 4300 Introduction to the Internet Via Internet (3)

An examination and evaluation of the history, theoretical and practical principles of the Internet, along with the development of skills necessary to perform electronic information research retrieval activities using the Internet.

LIS 4320 Creating Web-Based Internet Sources (3) An in-depth examination and evaluation of theoretical and practical principles, along with the development of skills

necessary to create and provide resources on the Internet. Prerequisites: LIS 4300 or consent of instructor.

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 4640 Library Materials for Children and Youth (3) An examination and evaluation of books and nonbook materials with emphasis on informational materials.

Administration

LIS 4712 Integration and Utilization (3) The integration of information literacy skills and current technologies into K-12 instructional strategies. Prerequisite: InsT 4400 and LIS 4230.

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 4760 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.

Technical Processes

LIS 4829 Cataloging and Classification (3) Principles and practices of organizing information and creating bibliographic records including MARC formats.

Individual Study and Research

LIS 4920 Practicum (1-4) Involves practical experience in processes of library media centers. *May be repeated for a maximum of 4 semester hours.*

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.*

Foundations

EdAd 3120 Legal Problems of Teachers (2) Identifying for prospective teachers the legal challenges in the Missouri public schools.

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 cross-categorical disabilities K-12; educable mentally handicapped K-12; behaviorally disordered K-12; severely developmentally disabled K-12; or early childhood special education Birth-Grade 3)
(41 000784)

The graduate with a Bachelor of Science in Special Education will apply knowledge and skills obtained in the program to:

- Understand the philosophical, historical, and legal foundations of the field of special education.
- Identify the characteristics of exceptional learners in order to provide for accurate selection of programs and learning opportunities.
- Become proficient in the use of assessment devices enabling effective diagnosis, evaluation and programming for exceptional learners.
- Develop a thorough understanding of instructional content and best practices for children and youth with exceptional learning needs.
- Plan and manage the teaching and learning environment for students with disabilities in a variety of educational settings.
- Understand the causes of student behavior and social interaction skills.
- Develop effective communication and collaborative partnerships among educational professionals, parents, and stakeholders in the education of children and youth with exceptional learning needs
- Practice in the field of special education using established professional and ethical practices and resources for the enhanced learning of all children.

Sem. Hours

FUNCTIONAL MAJOR REQUIREMENTS 48-62

CORE REQUIREMENTS -- All Certification Areas 25

EdSp	4140	Coun. Parents of Except. Children	2
EdSp	4360	Behavioral Mgt. Techniques	2
EdSp	4361	Practicum in Behav. Mgt. Tech.	1
EdSp	4620	Eval. of Abilities & Achievement	3
EdSp	4700	IEP & the Law	3
HEd	4330	First Aid & CPR for Educators	1
EdCl	3210	Methods of Reading Instruction	3
EdCl	2310	Computer/Technology in Ed.	2
EdCl	1310	Physics for Teachers, 3 or	
EdCl	1320	Biology for Teachers, 3	3
Art	3910	Art for Elementary Schools	2
Math	3890	Concepts & Methods of Teaching for Special Education	3

Disabled, Cross-Categorical Disabilities 6			
CD	4402	Lang. Dev. for the Handicapped	2
HEd	3310	Health Ed. in the Elem. School	2
Math	4890	Math. for Special Education	2
Area of Certification Requirements 17-31			
Cross-Categorical Disabilities--17			
EdSp	4150	Career Development for Students with Disabilities	2
EdSp	4385	Introduction to Cross-Categorical Special Education	3
EdSp	4420	Methods of Cross-Categorical Special Education	3
EdSp	4460	Teaching the Content Areas to Students with Mental Disabilities	3

REQUIREMENTS - Educable Mentally Handicapped, Behaviorally Disordered & Severely Developmentally

EdCl	3215	Tchg. Reading in Content Fields	
.....	3		
EdCl	4220	Analysis & Corr. of Rdg. Disabil.	2
EdCl	4250	Practicum in Reading	1
Educable Mentally Handicapped--17			
EdSp	4150	Career Development for Students with Disabilities	2
EdSp	4300	Introduction to Students with Mental Retardation	3
EdSp	4430	Teaching the Student with Mental Retardation	3
EdSp	4460	Teaching the Content Areas to Students with Mental Disabilities	3
EdCl	3215	Tchg. Reading in Content Fields	3
EdCl	4220	Analysis & Corr. of Rdg. Disabil.	2
EdCl	4250	Practicum in Reading	1
Behaviorally Disordered--17			
EdSp	4150	Career Development for Students with Disabilities	2
EdSp	4340	Intro. to Students with Behavioral and/or Emotional Disorders	3
EdSp	4410	Tchg. the Student with Behavioral and/or Emotional Disorders	3
EdSp	4460	Tchg. the Content Areas to Students with Mental Disabil.	3
EdCl	3215	Tchg. Rdg. in Content Fields	3
EdCl	4220	Anlys. & Corr. of Rdg. Disabil.	2
EdCl	4250	Practicum in Reading	1

Early Childhood Special Education-31			
EdSp	3150	Community & Fam. Resources	2
EdSp	3151	Community & Fam. Resources Practicum	1
EdSp	4320	Intro. to Early Child. Spec. Ed.	3
EdSp	4350	Augmentative & Alter. Com.	3
EdSp	4370	Screening, Diagnosing & Prescribing Instruction	3
EdSp	4440	Curriculum & Methods in Tchg. Early Childhood Special Ed.	3
EdSp	4470	Perceptual Motor Training for Students with Disabilities	2
CD	2000	The Bases of Speech & Lang.	2
CFD	1220	Child Development	3
CFD	1230	Observation of Children	2
D&N	2310	Early Childhood Nutr. & Health	2
EdCl	3220	Teaching of the Language Arts	3
EdCl	3410	Children's Literature	2

(Additional options listed on next page)

(Continued from previous page)

Severely Developmentally Disabled--22			
EdSp	4310	Intro. to Students with Severe Developmental Disabilities	2
EdSp	4330	Ed. & Training of Students with Severe Dev. Disabilities	3
EdSp	4350	Augmentative & Alter. Com.	3
EdSp	4370	Screening, Diagnosing & Prescribing Instruction	3
EdSp	4450	Curr. & Meth. for Tchg. the Student with Severe Dev. Disabil.	3
EdSp	4470	Perceptual Motor Training for Students with Disabilities	2
Hed	1350	Std. First Aid & Personal Safety	3
PE	4340	Adapted Physical Education	3

MINOR NOT REQUIRED

GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. **Early Childhood Special Education** (In the functional major, EdCl 1310 or EdCl 1320 is allowed to fulfill 3 s.h. of Div. II A; IGen 3468 fulfills 3 s.h. of Div. IV A) 42
 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 (total of 7 hours).

Math	1620	Div. I C (required)	3	PoIS	1510	Div. II B (required)	3
Hist	1350	Div. II B or		Geog	2212	Div. II B (required)	3
Hist	1351	Div. II B (required)	3				

GENERAL EDUCATION REQUIREMENTS — 48 s.h. **Educable Mentally Handicapped, Behaviorally Disordered and Severely Developmentally Disabled** (In the functional major, EdCl 1310 or EdCl 1320 is allowed to fulfill 3 s.h. of Div. II A;

Hed	3310	and 4330 are allowed to fulfill 3 s.h. of Div. III, ICap 4468 fulfills 3 s.h. of Div. IV B)	39				
Math	1620	Div. I C (required)	3	Hist	1350	Div. II B or	

254 Ed. Leadership & Human Development

Hist 1351	Div. II B (required)	3	PolS 1510	Div. II B (required)	3
			Geog 2212	Div. II B (required)	3
PROFESSIONAL EDUCATION REQUIREMENTS — Early Childhood Special Education 23					
EdSp 2100	Ed. of the Exceptional Child	2	EdCI 2100	Foundations of Education & Field Experience	3
EdSp 4395	Student Tchg. in Spec. Ed. I	6-8	EdCI 2240	Educational Psychology	3
EdSp 4396	Student Tchg. in Spec. Ed. II	6	IGen 3468	Community, School & Family Connections	3
PROFESSIONAL EDUCATION REQUIREMENTS -- Educable Mentally Handicapped, Behaviorally Disordered and Severely Developmentally Disabled 26					
EdSp 2100	Ed. of the Exceptional Child	2	Psy 2220	Child Psychology	3
EdSp 4395	Student Tchg. In Spec. Ed. I	8	EdCI 2240	Educational Psychology	3
EdCI 2100	Foundations of Education & Field Experience	3	Psy 4230	Psychology of Adolescence	3
			ICap 4468	Student Tchg. Secondary II	4

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.*

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 Students with Disabilities (2)**
Supportive services to students with disabilities within a career development context. Prerequisite: EdSp 2100 or Psy 4200.

Curriculum and Instruction

- EdSp 4300 Introduction to Students with Mental Retardation (3)**
Introduction to and overview of students with mental retardation of public school age. Prerequisite: EdSp 2100 or Psy 4200.
- EdSp 4310 Introduction to Students with Severe Developmental Disabilities (2)**
Basic information pertaining to the characteristics and care of students with

- severe developmental disabilities. 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 Students with Severe Developmental Disabilities (3)**
The treatment and training strategies used in teaching students with severe developmental disabilities. Prerequisites: EdSp 4310 and EdSp 4370.
- EdSp 4340 Introduction to Students with Behavioral and/or Emotional Disorders (3)**
Etiological factors, symptoms, and special problems associated with students with behavioral disorders and/or emotional disturbances. Prerequisite: EdSp 2100 or Psy 4200 or Psy 4440.
- EdSp 4350 Augmentative and Alternative Communication (3)**
Study and application of communication options, including manual sign language and communication devices. Prerequisite: EdSp 2100 or Psy 4200 or consent of instructor.
- 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. An additional fee is assessed for this course.
- EdSp 4370 Screening, Diagnosing and Prescribing Instruction (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 Introduction to Individuals with Learning Disabilities (3)**
Characteristics, etiologies, definitions, legislation and issues related to the identification of and educational planning for individuals with learning disabilities. Prerequisite: EdSp 2100 or Psy 4200.
- EdSp 4385 Introduction to Cross-Categorical Special Education (3)**
Information about the characteristics and education of children with mild/moderate disabilities. Prerequisite: EdSp 2100 or Psy 4200.

EdSp 4390 Introduction to Teaching the

Gifted/Talented/Creative Student (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 (prior to 2001). 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 EdCl 4495. *Not available for graduate credit.

EdSp 4396 Student Teaching in Special Education II*

(5, 6, 8) Prerequisite: must be taken concurrently with EdSp 4395. *Not available for graduate credit.

Special Methods

EdSp 4410 Teaching the Student with Behavioral and/or Emotional Disorders (3) Classroom methods and materials used to educate students with behavioral disorders and/or emotional disturbances. Prerequisites: Admission to Teacher Education Program and EdSp 4340.

EdSp 4420 Methods of Cross-Categorical Special Education (3) Teaching methods, materials and curricula for educating students with mild/moderate disabilities. Prerequisite: EdSp 4385.

EdSp 4430 Teaching the Student with Mental Retardation (3) Strategies for addressing general problems in teaching students with mental retardation, including materials and methods to be used. Prerequisites: Admission to Teacher Education Program and EdSp 4300.

EdSp 4440 Curriculum and Methods for Teaching Early Childhood Special Education (3) The teaching methods and curricula used for educating young children with special needs. Prerequisites: Admission to Teacher Education Program and EdSp 4320 and EdSp 4370.

EdSp 4450 Curriculum and Methods for Teaching the Student with Severe Developmental Disabilities (3) Teaching methodologies and curricula used in programming for students with severe developmental disabilities. Prerequisites: Admission to Teacher Education Program and EdSp 4330.

EdSp 4460 Teaching the Content Areas to Students with Mental Disabilities (3) Methods and materials used in teaching functional mathematics, social studies, and functional science to the student with mental disabilities. Prerequisites: EdSp 4410 or EdSp 4430.

EdSp 4470 Perceptual Motor Training for Students with Disabilities (2) Theories, assessment, instructional procedures, materials, and equipment adaptations for early childhood special education and students with severe developmental disabilities. Prerequisite: EdSp 2100 or Psy 4200.

EdSp 4480 Curriculum and Methods for the Teaching of Gifted/Talented/Creative Students (3) Teaching methods and curricula used for educating students who are gifted/talented/creative. Prerequisite: EdSp 4390 or consent of instructor.

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. An additional fee is assessed for this course.

Administration

EdSp 4700 IEP 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.

Health and Human Performance

DIETETICS AND NUTRITION

In the section of Dietetics and Nutrition, the second digit in a course number stands for the following: 3--Foods and Nutrition.

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)

The graduate with a Bachelor of Science degree in Dietetics will qualify for a post-baccalaureate internship program. Student outcome goals:

- Solve service-oriented problems utilizing knowledge of nutritional assessment, intervention and evaluation skills.
- Utilize current knowledge, technology, and research to enhance the practice of dietetics.
- Exhibit behaviors consistent with attitudes based on beliefs that an understanding/appreciation of global concerns and the diversity of humankind.
- Attend professional dietetic meetings at the local, state, and/or the national level.
- Acquire the knowledge and skills for the successful participation in a supervised dietetics program, employment related to foods and nutrition, or graduate study.
- Acquire the knowledge, skills, professionalism and ethical conduct needed to become a competent entry-level dietitian.
- Apply scientific knowledge and principles to food service systems in the practice of dietetics.
- Apply scientific knowledge and principles related to nutrition needs and processes through the life cycle in health and disease.
- Generate, interpret, and use research and knowledge of foods and nutrition in clinical dietetics, community nutrition, and food service.
- Participate in activities that promote public awareness of nutrition and advance the profession of dietetics.

				Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS				63	
Food	2322	Food Preparation	3	D&N 4345 Senior Dietetics Seminar	3
Food	3332	Quantity Food Prod. & Service	3	Biol 2401 Anatomy & Physiology I	4
Food	3333	Food Systems Management	3	Biol 2402 Anatomy & Physiology II	4
Food	3334	Food Service Equip. & Purch.	3	Biol 3611 Microbiology	4
Food	4326	Experimental Foods	3	Chem 2651 Elementary Organic Chemistry	3
D&N	1300	Introduction to Dietetics	1	Chem 2652 Elementary Biochemistry	2
D&N	3340	Nutrition	3	Acct 2100 Survey of Accounting	3
D&N	3350	Community Nutrition	3	Mgt 3310 Principles of Management	3
D&N	4340	Advanced Nutrition	3	HRM 3920 Human Resource Management	3
D&N	4342	Diet Therapy	3	Psy 4520 Statistics for the	
D&N	4343	Medical Nutrition	3	Behavioral Sciences	3
MINOR NOT REQUIRED					
GENERAL EDUCATION REQUIREMENTS (page 48)--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				16	
MINIMUM TOTAL				124	

D&N 1300 Introduction to Dietetics (1) Overview dietetics and nutrition including history, current trends and career opportunities.

D&N 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.

D&N 3340 Nutrition (3) Digestive process and fundamental principles of nutrition and their application to the feeding of individuals. Prerequisite: Chem 1103 or Chem 1104.

D&N 3350 Community Nutrition (3) Public health nutrition and nutrition care delivery in community programs. Prerequisite: D&N 3340.

D&N 3360 Entrepreneurship for Dietetics Professionals (3) Identifies and develops dietetic entrepreneurial opportunities in a rapidly changing employment environment. Prerequisites: Food 3333 and D&N 3340.

D&N 4340 Advanced Nutrition (3) An in-depth study of human nutrition and the evaluation of nutritional status. Prerequisites: Biol 2402, D&N 3340 and Chem 2652 or Chem 4421.

D&N 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: D&N 3340.

D&N 4342 Diet Therapy (3) Role of nutrition in the prevention and dietary treatment of disease. Prerequisites: Biol 2402, D&N 3340 and Chem 2652 or Chem 4421.

D&N 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: D&N 4342 or concurrently. *Not available for graduate credit.

D&N 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.

D&N 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: D&N 3340 or consent.

D&N 4351 Geriatric Nutrition (2) Dietary needs and feeding of the elderly. Prerequisite: D&N 3340 or consent.

FAMILY AND CONSUMER SCIENCES

In the Department of Consumer Services Management, the second digit in a course number with a **FACS** prefix stands for the following: 0--General, 1--Family Economics and Management, 7--Professional.

VOCATIONAL FAMILY AND CONSUMER SCIENCES Functional Major, B.S. in Ed. Degree

(Certification to teach vocational family and consumer sciences from birth to grade 12)

(41 000849)

The graduate with a Bachelor of Science in Education degree in Vocational Family and Consumer Sciences will:

- Gain subject matter/content area knowledge needed for certification in Vocational Family and Consumer Sciences.
- Meet Professional Education requirements for certification.
- Interact with diverse and global environments.
- Gain knowledge and skills in order to teach today's high school and middle school students.
- Use technology, research skills, problem solving, communication and critical thinking to the teaching profession.
- Gain experience working with diverse groups.

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						39	
FACS	2110	Consumer Problems	3	D&N	3340	Nutrition	3
FACS	3120	Family Resource Management	3	FACS	3710	Organization of Vocational Family & Consumer Sciences Ed	3
CFD	1220	Child Development	3				
CFD	1240	Practicum in Child Development	3	HEd	4320	Teaching Sex Ed. in the School	3
CFD	3230	Family Systems & Lifespan Dev.	3	FAMe	1450	Textile & Apparel Fabrication I	3
CFD	3240	Parent-Child Interaction	3	FAMe	2442	Textiles	3
Food	2322	Food Preparation	3	FAMe	4410	Architectural Interiors	3
MINOR NOT REQUIRED							
GENERAL EDUCATION REQUIREMENTS (page 48)--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)	3
PoS	1510	Div. II B (required)	3	Psy	4230	Psy. of Adolescence	3
				CFD	1010	Div. III (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 page206)						29	
This includes 3 s.h. of "special methods in major field" required for certification.							
FREE ELECTIVES						11	

FAMILY AND CONSUMER SCIENCES Minor for a Bachelor's Degree

(Certification to teach general family and consumer sciences in grades 5-9 available with middle school-junior high school major; elementary education functional majors may use this as an area of concentration.)

(000850)

						Sem. Hours
MINOR REQUIREMENTS						24
FACS	2110	Consumer Problems	3	CFD	3230	Family Sys. & Lifespan Development
FACS	3120	Family Resource Management	3			..... 3
CFD	1220	Child Development	3	Food	2322	Food Preparation
CFD	1240	Practicum in Child Development	3	D&N	3340	Nutrition
				FAMe	1450	Textile & Apparel Fabrications I ..
						..... 3

General

FACS 4000 Special Projects in Family and Consumer Sciences (1-3) Investigation of contemporary problems and issues in family and consumer services. *May be repeated for a maximum of 6 semester hours.*

Family Economics and Management

FACS 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.

FACS 3120 Family Resource Management (3) Effective and efficient management of family resources to maximize personal and family satisfactions. Prerequisite: FACS 2110.

FACS 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: FACS 3120.

Professional

FACS 3710 Organization of Vocational Family and Consumer Sciences Education (3) The philosophy of vocational family and consumer sciences education, curriculum development and implementation, department management, career development, and student organization management. Prerequisites: EdCI 2100 and 10 semester hours of courses required in the functional major.

FACS 4725 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 FACS 4740 during the Professional Semester. *Not available for graduate credit.

FACS 4740 Methods of Teaching Vocational Family and Consumer Sciences* (3) Prerequisites: 15

semester hours of family and consumer sciences with 5 semester hours of foods and nutrition, 5 semester hours of textiles and clothing, and 5 semester hours in related subjects; EdSp 2100; EdCI 4300 or concurrently; and admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with FACS 4725 during the Professional Semester. *Not available for graduate credit.

FACS 4750 Curriculum in Family and Consumer Sciences Education (2) Design of programs and courses for consumer homemaking or occupational family and consumer sciences education including theory, principles, development and implementation, federal and state guidelines, trends and issues. Prerequisite: FACS 4740 or equivalent.

FOOD

In the Department of Consumer Services Management, the second digit in a course number with a **Food** prefix stands for the following: 3--Foods and Nutrition.

FOODS Minor for a Bachelor's Degree

(Central does not confer teacher certification for this minor)

(000124)

Sem. Hours

MINOR REQUIREMENTS						21	
FACS	2110	Consumer Problems	3	Food	3333	Food Systems Management	3
Food	2322	Food Preparation	3	Food	3334	Food Service Equip. & Purch.	3
Food	3332	Quantity Food Prod. & Service	3	D&N	3340	Nutrition	3
				Acct	2100	Survey of Accounting	3

GENERAL EDUCATION REQUIREMENTS (page 48) (Chem 1104 Div. II A is required)

Food 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.

Food 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: grade of C or better in Chem 1104 or equivalent. An additional fee is associated with this course.

Food 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: Food 2322.

Food 3333 Food Systems Management (3)

Organization and management in food service areas including administrative responsibilities, qualifications, personnel management, and cost control. Prerequisite: Acct 2100.

Food 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: Food 3332 or concurrently.

Food 4326 Experimental Foods (3) An experimental approach to the study of factors which influence the behavior of foods. Group and individual experiments. Prerequisite: Food 2322 or equivalent. An additional fee is associated with this course.

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

(Recommendation for certification to teach health education for grades PK-9 requires 29 semester hours, 30 semester hours for teaching grades 9-12, and 32 semester hours for grades PK-12. The additional classes needed for certification are HEd 4320, HEd 4390, and health electives. Elementary Education Functional Majors (grades 1-6) may use this as an area of concentration. See Director of Clinical Services and Certification for current requirements.)

(000804)

The student will demonstrate a knowledge and/or competencies in the following areas:

- The structures, functions, and interrelationships of body systems as they apply to improving and maintaining healthful living.
- The principles of nutrition and their application to maintaining good health and preventing health problems.
- The use and abuse of legal and illegal drugs and their effects on the human body and society.
- The prevention and management of communicable and chronic diseases and related health care.
- The consumer health issues related to the marketing, selection, and use of health products and services.
- The attaining and maintaining good mental health and its effects on the health of the body.
- The dynamics of interpersonal relationships as related to family life, human sexuality, and growth and development.
- The process of behavior change that favorably affect personal health.

(Continued on next page)

(Continued from previous page)

- The expanded model of the Comprehensive School Health Program and the interrelationships of its components.
- The basic concepts of injury prevention both intentional and unintentional, first aid, emergency systems, and the effects of trauma.

Sem. Hours

MINOR REQUIREMENTS						22	
HEd	1100	Personal Health	3	HEd	4310	Drugs & Youth	3
HEd	1350	Std. First Aid & Personal Safety	3	PE	2800	Human Anatomy	3
HEd	3360	School Health Education	2	PE	2850	Found. of Exercise Physiology	3
HEd	4300	Nutrition & Human Performance	2	Psy	4230	Psy. of Adolescence	3

Biology majors may substitute Biol 2401 for PE 2850.

GENERAL EDUCATION REQUIREMENTS (page 48) (In the minor, HEd 1100 fulfills 3 s.h. of Div. III; 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 Responding to Emergencies 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: EdCI 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 American Red Cross 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 are explored.

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.

In the section of Hospitality Management, the second digit in a course number stands for the following: 7--Professional, 8--Hospitality.

HOTEL AND RESTAURANT ADMINISTRATION Functional Major, B.S. Degree

(43 000205)

The graduate with a Bachelor of Science degree in Hotel and Restaurant Administration will:

- Exhibit professional hotel or restaurant management knowledge and skills.
- Interact with diverse environments.
- Apply scientific principles to hospitality entrepreneurship.
- Demonstrate knowledge and skills of organizational hierarchy systems and tasks within those systems.
- Use critical thinking, problem solving, communication and investigative skills specific to hotel and restaurant management.
- Gain information of professional organizations and attend meetings in the hospitality industry.

						Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS						65	
FACS	2110	Consumer Problems	3	HM	3860	Beverage Mgt. & Marketing	3
Food	2322	Food Preparation	3	HM	4800	Hotel & Restaurant Management	3
Food	3332	Quantity Food Prod. & Service	3	HM	4830	Hotel-Res. Sanitation & Safety	2
Food	3333	Food Systems Management	3	HM	4840	Legal Aspects of Hotel & Res. Mgt.	3
Food	3334	Food Service Equip. & Purch.	3				3
HM	4710	Internship	5	HM	4850	Hotel & Res. Equip. & Furn.	3
HM	4720	Demonstration Techniques	2	Acct	2101	Principles of Financial Acct.	3
HM	4745	Senior Seminar	3	Acct	2102	Principles of Managerial Acct.	3
HM	3800	Front Office Oper. & Management	3	Mgt	3310	Principles of Management	3
HM	3844	Dining Room Management	3	Mgt	3325	Business Communications	3
HM	3850	Plant Operation & Maint. Mgt.	2	HRM	3920	Human Resource Management	3
				Mkt	3400	Principles of Marketing	3
 MINOR NOT REQUIRED							
GENERAL EDUCATION REQUIREMENTS (page 48)						48	
Chem	1104	Div. II A (required)	4	BE&O	1210	Div. II A or	
Econ	1010	Div. II B (required)	3	LIS	1600	Div. II A (required)	2
FREE ELECTIVES						11	
MINIMUM TOTAL						124	

Professional

HM 4710 Internship (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.

HM 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.

HM 4745 Senior Seminar* (3) Philosophy, current issues and trends in hospitality management. Focus on problem-solving styles leading to group and individual research problems. Prerequisites: senior standing and approval of Department Advisor. *Not available for graduate credit.

Hospitality

HM 1800 Introduction to Hospitality (3) Hospitality industry overview including history, current ventures and career opportunities.

HM 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.

HM 3844 Dining Room Management (3) Develop knowledge and skills necessary for managing the front-of-house areas of food service operations. Prerequisite: Food 2322.

HM 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.

HM 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. An additional fee is associated with this course.

HM 4800 Hotel and Restaurant Management (3)

Specialized managerial functions involved in operation of hotels, restaurants, and other facilities in the hospitality industry.

HM 4830 Hotel-Restaurant Sanitation and Safety (2)

Sanitation and safety procedures, laws and policies for operations in the hotel-restaurant industry.

HM 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.

HM 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 section 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)

The graduate with a Bachelor of Science degree with a functional major in Physical Education will:

- Develop a foundation for a professional philosophy based on both historical and current knowledge of physical education, physical activity, and fitness/wellness.
- Understand physical activity through the use of knowledge of human anatomy, kinesiology, physiology and analysis of movement patterns.
- Expand his/her skills, knowledge and understanding in a variety of physical activities including games, sports, rhythms, and fitness skills.
- Understand and apply first aid procedures, safety factors and risk management involved in physical activity settings.
- Gain an awareness of administering physical education and fitness/wellness programs for diverse populations.
- Properly apply measurement and evaluation in the assessment of physical education and fitness/wellness programs.
- Develop an appreciation for the benefits of an active, healthy lifestyle.

				Sem. Hours	
FUNCTIONAL MAJOR REQUIREMENTS				48-60	
PE	1100	Orientation to Physical Education	1	PE 2290 A&T of Innovative Activities	2
PE	1120	Microcomputer Applications in Physical Education, Exercise & Sport Science	2	PE 3280 A&T of Team Activities	3
PE	2303	Analysis & Tchg. of Aerobic Cond.	2	PE 3300 Teaching of Dance	2
PE	2320	Analysis & Tchg. of Weight Training	1	PE 3315 A&T Outdoor Leisure Skills	1
PE	2800	Human Anatomy	3	PE 3430 Creative Dance/Rythms for Elem. School Touch & Flag Football	2
PE	2850	Foundations of Exercise Physiology	3	PE 3450 Techniques of Teaching PE Activities in Elem. School	3
PE	3610	Care & Prevention of Injuries	2	PE 3460 Techniques of Teaching PE Activities in Mid/High School	3
PE	3800	Kinesiology	3	PE 3850 Motor Learning & Control	3
PE	4110	History & Philosophy of Phys. Ed.	2	PE 4830 Psychological Aspects of PE	2
PE	4340	Adapted Physical Education	3	PE 4840 Social Aspects of Phys. Activity	2
PE	4740	Legal Liability in Fitness/Wellness, Physical Education, Recreation, & Sports Settings	2	PE 4760 Physical Education Curriculum 2	2
PE	4390	Eval. Procedures in Physical Ed. (Area 1), 3 or			
PE	4850	Assessment & Evaluation of Fitness/Wellness (Areas 2 & 3), 3	3		

Departmentally approved electives from one of the following areas (see departmental advisor) 31-38

Area 1 Elementary - Secondary certification K-12 -

31

PE	1450	Growth & Dev. in Elem. PE	3
PE	2240	A&T of Ind/Dual Activities	3

Area 2 Fitness/Wellness I (Corporate Fitness) - 32-

34

PE	1204	Stress Management	1
PE	4341	Physical Activity & Older Adult	2
PE	4765	Internship	2-4
PE	4860	Fitness Programming & Implementation	3
Hed	1350	Standard 1st Aid & Pers. Safety	3
Hed	4300	Nutrition & Human Performance	3
Hed	4310	Drugs & Youth	3
Acct	2101	Principles of Financial Acct.	3
BLaw	2720	Legal Environment of Business	3
Mkt	3400	Principles of Marketing	3
Mkt	3420	Principles of Advertising	3
Mkt	3430	Personal Selling	3
Psy	1100	General Psychology	3

Area 3 Fitness/Wellness II (Exercise Science) -34-

38

PE	1204	Stress Management	1
PE	4341	Physical Activity & Older Adult	2
PE	4765	Internship	2-4
PE	4860	Fitness Programming & Implementation	3
Psy	4520	Stat. for Behavioral Sciences	3
Hed	1350	Standard 1st Aid & Pers. Safety	3
Hed	4300	Nutrition & Human Performance	2
Hed	4310	Drugs & Youth	3
D&N	3340	Nutrition	3
Chem	2650	Elementary Organic & Biochemistry 5, or	
Phys	1104	Intro to Sciences: Physics 4, or	
EdCl	1310	Physics for Teachers 3,	3
Biol	2401	Anatomy & Physiology I	4
Biol	2402	Anatomy & Physiology II	4
Soc	1800	General Sociology	3

Area 4 Athletic Training (See Program Director)

MINOR NOT REQUIRED

GENERAL EDUCATION REQUIREMENTS (page 48)-- 48 s.h. (In the major, ICap 4468 fulfills 3 s.h. of Div. III B) 45-48

PE	1206	Div. III (required) OR	PE	1203	Div. III and
			PE	1204	Div. III and
			PE	2200	Div. III 3

FREE ELECTIVES (Professional Education courses may be required for certification) 16-31

MINIMUM TOTAL 124

Students may earn teacher certification through careful choice of electives. See the Director of Clinical Services and Certification (Lov 2176) and departmental advisor for specific course work in both General Education 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	4500	Football Officiating, 1 or
PE	2850	Foundations of Exercise Physiology	3	PE	4510	Basketball Officiating, 1 1
PE	3610	Care & Prevention of Injuries	2	Electives from the following 5		
PE	3800	Kinesiology	3	PE	2300	Analysis & Teaching of Soccer
PE	4590	Adm. of Interscholastic Athletics	2	. . . . . 1		
PE	4830	Psychological Aspects of Physical Education	2	PE	2311	Analysis & Teaching of Touch & Flag Football 1

PE	2330	Analysis & Teaching of Track & Field	1
PE	2340	Analysis & Teaching of Softball	1

Electives (continued)			
PE	2350	Analysis & Tchg. of Gymnastics	1
PE	3310	Analysis & Tchg. of Basketball	1
PE	3331	Analysis & Tchg. of Volleyball	1
PE	3390	Analysis & Tchg. of Wrestling	1
Electives from the following			
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				23-24
PE	1204	Stress Management	1	
PE	1206	Lifetime Fitness	3	
PE	2303	Analysis & Tchg. of Aerobic Cond.	2	
PE	2320	Analysis & Tchg. of Weight Training	1	
PE	3610	Care & Prevention of Injuries	2	
PE	2800	Human Anatomy	3	
PE	2850	Foundations of Exercise Physiology	3	
PE	3800	Kinesiology	3	
PE	4850	Assessment & Evaluation of Fitness/Wellness	3	
PE	4340	Adapted Physical Education, 3 or		
PE	4341	Physical Activity & the Older Adult, 2	2-3	

GENERAL EDUCATION REQUIREMENTS (page 48) (In the minor, PE 1206 fulfills 3 s.h. of Div. III)

PE 1100 Orientation to Physical Education (1) Orients students to the profession of physical education and to the 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.

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) An additional fee is associated with this course.

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 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 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 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 2240 Analysis and Teaching of Individual and Dual Activities (3) Knowledge, skill development, teaching cues, skills analyses and teaching skills of individual and dual activities.

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 2290 Analysis and Teaching of Innovative Activities (2) Knowledge, skill development, teaching cues, skill analyses and teaching skills of innovative activities.

PE 2300 Analysis and Teaching of Soccer (1)

PE 2303 Analysis 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 Analysis and Teaching of Touch and Flag Football (1)

PE 2314 Analysis and Teaching of Recreational Sports (1) Four square, floor table tennis, horseshoes, table tennis, wall paddle tennis, croquet.

PE 2320 Analysis & Teaching of Weight Training (1)

PE 2330 Analysis & Teaching of Track and Field (1)

PE 2340 Analysis and Teaching of Softball (1)

PE 2350 Analysis and Teaching of Gymnastics (1)

PE 2360 Basic Dance Skills (1) An introduction to dance through basic steps and rhythmic analysis.

PE 2410 Movement Skills and Activities for Primary Grades (2) Knowledge, understanding, and applications in teaching motor skills.

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 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. An additional fee is associated with this course.

PE 3280 Analysis and Teaching of Team Activities (3) Knowledge, skill development, teaching cues, skills analyses and teaching skills of team activities. Prerequisite: PE 2240 or PE 2290.

PE 3300 Teaching of Dance (2) Rhythmical analysis of dance forms and methods for teaching them.

PE 3310 Analysis and Teaching of Basketball (1)

PE 3315 Analysis and Teaching of Outdoor Leisure

Skills (1) Introduction to orienteering and angling. Prerequisite: physical education functional majors only.

PE 3320 Analysis and Teaching of Archery and Bowling (1)

PE 3330 Analysis and Teaching of Badminton (1)

PE 3331 Analysis and Teaching of Volleyball (1)

PE 3340 Analysis and Teaching of Modern Dance (1)

A fundamental approach to modern dance integrating movement techniques and classroom teaching experience.

PE 3370 Analysis & Teaching of Swimming and Diving (1)

PE 3380 Analysis and Teaching of Handball and Racketball (1)

PE 3390 Analysis and Teaching of Wrestling (1)

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 Schools (3) Effective teaching knowledge, skill, and techniques for physical education programs at the elementary level. Prerequisite: admission to Teacher Education Program.

PE 3460 Techniques of Teaching Physical Education

Activities in Middle Schools and High Schools (3) Effective teaching knowledge, skill and techniques for physical education programs at the middle and high school levels. Prerequisite: admission to Teacher Education Program.

PE 3610 Care and Prevention of Injuries (2) Accepted athletic training procedure in the care and prevention of athletic injuries. 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 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 4110 History and Philosophy of Physical Education* (2) An investigation of the historical and philosophical development of physical education. *Not available for graduate credit. *Not available for graduate credit.

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 (3) 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 Analysis and Teaching of Golf* (1) *Not available for graduate credit.

PE 4360 Analysis 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 4500 Football Officiating* (1) Lectures, readings, class discussions, and field experience in the officiating of intramural, school, and college football games. *Not available for graduate credit.

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.

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. *Not available for graduate credit.

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 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 Assessment and Evaluation of

Fitness/Wellness* (3) The selection, administration, and interpretation of test and protocols for fitness assessment. Prerequisite: PE 2850. *Not available for graduate credit.

PE 4860 Fitness Programming and Implementation* (3) Planning, developing and implementing a fitness/wellness program. *Not available for graduate credit.

PE 4880 Methods of Teaching Physical Education* (2)

Prerequisites: admission to Teacher Education Program; double majors must take a methods course for each major; methods should be taken concurrently with PE 4885 during the Professional Semester. *Not available for graduate credit.

PE 4885 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 PE 4880 during the Professional Semester. *Not available for graduate credit.

Integrative Studies General

IGen 3472 Sport in American Life (3) Provides for an understanding and appreciation of the role of sport in American life.

RECREATION

In the section of Recreation, the second digit in a course number stands for the following: 0--Special Projects, 1--Foundations, 2--Leadership, 5--Camping and Outdoor Education, 7--Administration and Supervision, 8--Leisure Education, 9--Individual Study and Research.

GENERAL RECREATION Major, B.S. Degree*

(43 000814)

The graduate with a Bachelor of Science degree in General Recreation will:

- Impart an understanding of the benefits and impacts of leisure to patrons of his/her community, based on a sound understanding of the conceptual foundations of leisure.
- Develop and implement recreation programs in a range of activity content areas for various populations, marshaling diverse community and human services resources.
- Use diverse community, institutional, natural, cultural, and human service resource to promote and enhance the leisure experience, thus improving the quality of life for all populations.
- Assess goals and objectives for groups and individuals within the leisure service.
- Utilize sound managerial, marketing, and financial processes in the administration/management of leisure service delivery.
- Utilize diverse communication, interaction and facilitation techniques, including leadership, instructional strategies, and emergency management.
- Demonstrate knowledge and use of legal concepts and legislative processes as applied to leisure services, including implementation of risk management plans.

				Sem. Hours
MAJOR REQUIREMENTS				41
Rec 1100	Introduction to Recreation	3	Rec 4740 Seminar	2
Rec 2200	Developing Rec. & Tourism Prog.	3	Rec 4850 Leisure Education	3
Rec 3210	Leadership & Group Dynamics in Recreation & Tourism Services	3	Rec 4980 Internship	6
Rec 3530	Outdoor Rec. Skills & Adventure	3	TR 3830 Implications of Disabling Conditions for Therapeutic Recreation	3
Rec 4710	Managing Recreation & Tourism Enterprises	3	Tour 1500 Microcomputer Applications for Tourism & Recreation	3
Rec 4720	Financing Recreation & Tourism Enterprises	3	Tour 4720 Tourism Planning & Development	3
			Tour 4730 Tourism Marketing	3
<p>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.</p>				
MINOR REQUIREMENTS				18-25
GENERAL EDUCATION REQUIREMENTS (page 48)				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 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)

				Sem. Hours
MINOR REQUIREMENTS				24
Rec 1100	Introduction to Recreation	3	Rec 4720 Financing Recreation & Tourism Enterprises	3
Rec 2200	Developing Rec. & Tourism Prog.	3	TR 3830 Implications of Disabling Conditions for Therapeutic Recreation	3
Rec 3210	Leadership & Group Dynamics in Recreation & Tourism Services	3	Tour 1500 Microcomputer Applications for Tourism & Recreation	3
Rec 3530	Outdoor Rec. Skills & Adventure	3		
Rec 4710	Managing Recreation & Tourism Enterprises	3		

Special Projects

special areas of interest. *May be repeated for a maximum of 5 semester hours.* *Not available for graduate credit.

Rec 4000 Special Projects in Recreation and Tourism* (1-5) Individual or group study of problems in

Foundations

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.* *Not available for graduate credit.

Leadership

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 1200.

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 1200.

Camping and Outdoor Education

Rec 3530 Outdoor Recreation Skills and Adventure (3) An introduction to experiential education through outdoor recreation adventure programs.

Administration and Supervision

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. *Not available for graduate credit.

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. *Not available for graduate credit.

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.

Leisure Education

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. *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 Tourism, the second digit in a course number stands for the following: 1--Foundations, 2--Leadership, 3--International, 5--Technology, 7--Administration and Supervision.

TOURISM Major, B.S. Degree

(43 000843)

The graduate with a Bachelor of Science degree in Tourism will:

- Interact with a variety of clients and consumers.
- Understand perspectives of potential employers and customers.
- Solve service-oriented problems utilizing appropriate concepts, principles, theories and technology.

- Exhibit an understanding/appreciation of global concerns, the diversity of humankind, risk assessment, professional ethics, and legal environments.
- Obtain knowledge related to professional organizations, service learning, and other external sources of professional enrichment.
- Obtain skills needed for professional management within the tourism sector.

		Sem. Hours
MAJOR REQUIREMENTS		44-50
Tour 1200	Introduction to Tourism	3
Tour 3300	Tourism Destinations	3
Tour 3310	International Tourism	3
Tour 1500	Microcomputer Applications for Tourism & Recreation	3
Tour 3700	Travel Agency Operations	3
Tour 4700	Conf. & Convention Planning	3
Tour 4710	Group Tour Operations	3
Tour 4720	Tourism Planning & Development	3
Tour 4730	Tourism Marketing	3
Rec 2200	Developing Rec. & Tourism Prog.	3
Rec 4740	Seminar	2
Rec 4980	Internship	6
Acct 2101	Principles of Financial Acct.	3
HM 4800	Hotel & Restaurant Management	3
Modern language requirement, minimum proficiency of the second college course in a selected language		0-6
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
GENERAL EDUCATION REQUIREMENTS (page 48)		48
Comm 1000	Div. I B (required)	3
Biol 1004	Div. II A (required)	4
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
Tour 3300	Tourism Destinations	3
Tour 3310	International Tourism	3
Tour 1500	Microcomputer Applications for Tourism & Recreation	3
Rec 2200	Developing Rec. & Tourism Prog.	3
HM 4800	Hotel & Restaurant Management	3
Tour 3700	Travel Agency Operations, 3 or Group Tour Operations, 3	3
Tour 4710	Group Tour Operations, 3	3
Tour 4700	Conf. & Convention Planning, 3 or Tourism Marketing, 3	3
Tour 4730	Tourism Marketing, 3	3

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.

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, and host communities in the process of

attracting and hosting international tourists. Prerequisite: Tour 1200.

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.

Administration and Supervision

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

270 Health and Human Performance

management strategies used in conference and convention operations. Prerequisite: Tour 1200 or HM 4800. *Not available for graduate credit.

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. *Not available for graduate credit.

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 HM 1800 or Rec 3210. *Not available for graduate credit.

THERAPEUTIC RECREATION

In the Department of Consumer Services Management, the second digit in a course number with a **TR** prefix stands for the following: 2–Introductory, 4–Programming, 6–Clinical/Facilitation Skills, 8–Management Skills, 9–Professional Development/Field Work.

Introductory

TR 2200 Implications of Disabling Conditions for Therapeutic Recreation (3) Skills for awareness of and service to individuals with disabilities.

TR 2250 Foundations in Therapeutic Recreation (3)

Leisure theory, philosophy, history, service models, ethics, credentials, professional conduct and principles of therapeutic recreation. Prerequisite: TR 2200.

Programming

TR 3400 Program Design and Evaluation in Therapeutic Recreation (3) Knowledge and skills to design, develop, implement and evaluate client-centered therapeutic recreation programs. Prerequisites: grade of “C” or better in TR 2250 and admission to program.

Clinical/Facilitation Skills

TR 2600 Modalities in Therapeutic Recreation (3) Knowledge and practice of specific treatment modalities in therapeutic recreation and their application to specific diagnostic groups.

TR 3600 Intervention and Facilitation Techniques in Therapeutic Recreation (3) Practical application and mastery of the techniques/interventions for the provision of quality therapeutic recreation services. Prerequisite: grade of “C” or better in TR 2250 and admission to program.

TR 4600 Assessment and Documentation in Therapeutic Recreation (3) Skills to assess and document the impact of cognitive, physical, psychological or social limitations on an individual’s functional ability. Prerequisites: TR 3400 and admission to program.

Management Skills

TR 4800 Management, Administration and Funding in Therapeutic Recreation Services (3) Current information and techniques for inclusive management of therapeutic recreation services. Prerequisites: grade of “C” or better in TR 2250 and admission to program.

Professional Development/Field Work

TR 3901 Clinical Therapeutic Recreation Practicum in Physical Rehabilitation (1) Field-based course with hands-on experience in the delivery of therapeutic recreation services in a physical rehabilitation setting. Prerequisites: grade of “C” or better in TR 2250 and admission to program.

TR 3902 Clinical Therapeutic Recreation Practicum in Mental Health (1) Field-based course with hands-on experience in the delivery of therapeutic recreation services in a mental health/psychiatric setting.

Prerequisites: grade of “C” or better in TR 2250 and admission to program.

TR 3903 Clinical Therapeutic Recreation Practicum in Specified Settings/Diagnostic Groups (1) Field-based course with hands-on experience in the delivery of therapeutic recreation services in a specified setting or with a specific population. Prerequisites: grade of “C” or better in TR 2250 and admission to program.

TR 4900 Seminar in Therapeutic Recreation (3) Recreation therapy internship application, interview, service and termination process; exploration of professional issues and basic research skills.

Prerequisites: grade of “C” or better in TR 2250 and admission to program.

TR 4950 Trends and Issues in Therapeutic Recreation* (3) Critical issues of therapeutic recreation and knowledge of the trends in techniques of practice, research methods, evaluation and professional concepts. Prerequisites: TR 3400 and admission to program. *Not available for graduate credit.

TR 4990 Internship in Therapeutic Recreation (6) Supervised field work blending academic preparation (theory, concepts, models, clerical and technical skills) with practical application. Prerequisites: approval by instructor and admission to program.

Psychology

In the Department 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)

The graduate with a Bachelor of Arts degree in Psychology will use the knowledge and skills obtained in the program to:

- Understand and apply statistics to answer research questions and apply appropriate research designs.
- Understand and apply the importance of cultural and individual differences and be knowledgeable about how these factors affect applied and scholarly work.
- Understand and apply ethical and legal issues related in research and applied settings.
- Understand and apply the general, theoretical and empirical bases of psychology.
- Understand and apply the language of the science of psychology when speaking, reading and writing.
- Understand and apply technology skills appropriate to the degree.

	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 ... 4
	Psy 2220 Child Psychology
	Psy 3340 Social Psychology
	Psy 4310 Theories of Personality
	Psy 4500 Intro. to Psy. Measurement ... 3
Elective in psychology	3
MINOR REQUIREMENTS	18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--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)

The graduate with a Bachelor of Science degree in Psychology will use the knowledge and skills obtained in the program to:

- Understand and apply statistics to answer research questions and apply appropriate research designs.
- Understand and apply the importance of cultural and individual differences and be knowledgeable about how these factors affect applied and scholarly work.
- Understand and apply ethical and legal issues related in research and applied settings.
- Understand and apply the general, theoretical and empirical bases of psychology.
- Understand and apply the language of the science of psychology when speaking, reading and writing.
- Understand and apply technology skills appropriate to the degree.

	Sem. Hours
MAJOR REQUIREMENTS	42
Psy 1100 General Psychology	3
Psy 2130 Learning	3
Psy 4110 Systems of Psychology	3
Psy 4140 Physiological Psychology	4
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
	Psy 3110 Motivation
	Psy 4130 Sensation & Perception ... 3
	Psy 4150 Cognitive Psychology
	Psy 2220 Child Psychology
	Psy 4440 Abnormal Psychology
	Psy 4500 Intro. to Psy. Measurement ... 3
	Psy 4600 Industrial Psychology
	Electives in psychology
	3
MINOR REQUIREMENTS	18-25

GENERAL EDUCATION REQUIREMENTS (page 48)--48 s.h. (In the major, Psy 1100 fulfills 3 s.h. of Div. II B) 45
 FREE ELECTIVES 12-19
 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 4310	Theories of Personality 3	
Psy 2130	Learning 3	
	Electives in psychology 12	
GENERAL EDUCATION REQUIREMENTS (page 48) (In the minor, Psy 1100 fulfills 3 s.h. of Div. II B)		

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 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.

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 (4)** A survey of the relationship between physiological mechanisms and behavior. Course includes scheduled laboratory. Prerequisite: Psy 1100. An additional fee is associated with this course.
- 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.

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 EdCI 2240.
- Psy 3220 Life-Span Development (3)** Theories of development, universal features of human development and its individual variations throughout the life-span of the individual. Prerequisite: Psy 1100 or EdCI 2240.
- Psy 4200 Psychology of Exceptional Children (2)** The identification, care, treatment, and guidance of exceptional children. Prerequisite: EdCI 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: EdCI 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.

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.

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.

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.

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 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.

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)

- The graduate with a Bachelor of Arts degree in Sociology will use the knowledge and skills obtained in the program to:
- Discern the basic components of culture including group diversity, socialization, identity, and cultural symbols.
 - Delineate the basic process and consequences of stratification across social categories including ethnicity, race, social class, gender, and societies.
 - Recognize how social institutions operate within society and how they vary over time and space.
 - Critically read and utilize articles from academic journals and informational sources.
 - Develop an awareness of personal assumptions, as well as basic American assumptions in analyzing positions on social issues.
 - Communicate effectively through a variety of written and oral formats.
 - Conduct and report basic research procedures in accord with the scholarly practices of the discipline of Sociology including the principles of documentation, the acquisition of on- and off-line resources and do so in line with the ASA Code of Ethics.
 - Identify the relative strengths and weaknesses of competing theoretical views and frameworks.
 - Create reasonable linkages between empirical evidence and theory utilizing both inductive and deductive forms of logic.
 - Recognize the complexity and uncertainty that are present in addressing social issues.

	Sem. Hours
MAJOR REQUIREMENTS	30
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
Electives in sociology	4-6
Departmentally approved electives in Soc or in <u>one</u> of the following areas: Anth, SoWk, Psy, or corrections	3-5
MINOR REQUIREMENTS	18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--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)

- The graduate with a Bachelor of Science degree in Sociology will use the knowledge and skills obtained in the program to:
- Discern the basic components of culture including group diversity, socialization, identity, and cultural symbols.
 - Delineate the basic process and consequences of stratification across social categories including ethnicity, race, social class, gender, and societies.
 - Recognize how social institutions operate within society and how they vary over time and space.
 - Critically read and utilize articles from academic journals and informational sources.
 - Develop an awareness of personal assumptions, as well as basic American assumptions in analyzing positions on social issues.
 - Communicate effectively through a variety of written and oral formats.
 - Conduct and report basic research procedures in accord with the scholarly practices of the discipline of Sociology including the principles of documentation, the acquisition of on- and off-line resources and do so in line with the ASA Code of Ethics.
 - Identify the relative strengths and weaknesses of competing theoretical views and frameworks.
 - Create reasonable linkages between empirical evidence and theory utilizing both inductive and deductive forms of logic.
 - Recognize the complexity and uncertainty that are present in addressing social issues.

	Sem. Hours
MAJOR REQUIREMENTS	40
Soc 1800 General Sociology	3
Soc 2805 Introduction to Social Research	3

276 Sociology and Social Work

Soc 3800	History of Social Thought	3	Anth 1820	Cultural Anthropology	3
Soc 3870	Personality & Society	3	Electives in sociology 7-10		
Soc 4860	Contemporary Sociological Thought	3	Departmentally approved electives in Soc		
Soc 4890	Sociological Investigations	3	or in one of the following areas: Anth,		
			SoWk, Psy, or corrections 9-12		
MINOR REQUIREMENTS					18-25
GENERAL EDUCATION REQUIREMENTS (page 48)--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)

The graduate with a Bachelor of Science degree in Sociology will use the knowledge and skills obtained in the program to:

- Discern the basic components of culture including group diversity, socialization, identity, and cultural symbols.
- Delineate the basic process and consequences of stratification across social categories including ethnicity, race, social class, gender, and societies.
- Recognize how social institutions operate within society and how they vary over time and space.
- Critically read and utilize articles from academic journals and informational sources.
- Develop an awareness of personal assumptions, as well as basic American assumptions in analyzing positions on social issues.
- Communicate effectively through a variety of written and oral formats.
- Conduct and report basic research procedures in accord with the scholarly practices of the discipline of Sociology including the principles of documentation, the acquisition of on- and off-line resources and do so in line with the ASA Code of Ethics.
- Identify the relative strengths and weaknesses of competing theoretical views and frameworks.
- Create reasonable linkages between empirical evidence and theory utilizing both inductive and deductive forms of logic.
- Recognize the complexity and uncertainty that are present in addressing social issues

					Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS					63
Soc 1800	General Sociology	3	Electives (continued)		
Soc 2805	Introduction to Social Research	3	Econ 3065	Labor Economics	3
Soc 3800	History of Social Thought	3	CJ 1000	Intro. to Criminal Justice	3
Soc 3870	Personality & Society	3	CJ 2300	Criminal Law	3
Soc 4860	Contemporary Sociological Thought	3	CJ 3303	Criminal Procedure	3
Soc 4890	Sociological Investigations	3	CJ 3400	Criminal Investigation	3
Anth 1820	Cultural Anthropology	3	Psy 1100	General Psychology	3
Departmentally approved electives in two of the following areas 18-21			*Psy 4110	Systems of Psychology	3
Math 1111	College Algebra	3	Psy 3340	Social Psychology	3
Math 1112	College Trigonometry	2	Psy 4440	Abnormal Psychology	3
Math 3311	Statistics I	3	Psy 4600	Industrial Psychology	3
*CS 1110	Intro. to Computing II	3	Electives in sociology 4-6		
Econ 1010	Principles of Macroeconomics	3	Departmentally approved electives in		
Econ 1011	Principles of Microeconomics	3	three of the following areas: Anth,		
Econ 3013	Public Finance	3	SoWk, Psy or corrections 15-20		

MINOR NOT REQUIRED

GENERAL EDUCATION REQUIREMENTS (page 48)--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 4860	Contemporary Soc. Thought, 3	3
Soc 3800	Hist. of Soc. Thought, 3 or				

Anth	1810	Human Prehistory, 3 or	
Anth	1820	Cultural Anthropology, 3	3
		Electives in sociology	11

GENERAL EDUCATION REQUIREMENTS (page 48) (In the minor, Soc 1800 fulfills 3 s.h. of Div. IIBC; if elected, Anth 1810 fulfills 3 s.h. of Div. II B; if elected, Anth 1820, fulfills 3 s.h. of Div. IIDE)

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, psychologic and sociologic implications; and emphasis on sociological principles and perspectives. Prerequisite: 5 semester hours of sociology or graduate standing.

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 General Education 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 2600, SoWk 2611, SoWk 3600, and SoWk 3612.
5. Students must complete a social work prefix course in residence prior to applying for admission into the social work program.
6. 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.
7. Successful completion of an interview with Social Work Admissions Committee.
8. Provisional admission to the program requires the student to successfully complete a plan of corrective action and a subsequent interview with the 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 BSW Social Work program is to prepare students for generalist social work practice. The BSW 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.W. Degree

(48 000847)

The graduate with a Bachelor of Social Work degree will use the knowledge and skills obtained in the program to:

- Apply critical thinking skills within the context of professional social work practice.
- Practice within the values and ethics of the social work profession and with an understanding of and respect for the positive value of diversity.
- Demonstrate the professional use of self.
- Understand the forms and mechanisms of oppression and discrimination and the strategies of advocacy and social change that advance social and economic justice.

- Understand the history of the social work profession and social welfare policy and their current structures and issues.
- Apply the knowledge and skills of generalist social work practice with systems of all sizes.
- Apply the knowledge of bio-psycho-social variables that affect individual development and behavior, and use theoretical frameworks to understand the interactions among individuals and between individuals and social systems (i.e., families, groups, organizations, and communities).
- Understand how to formulate, analyze, and demonstrate influence on social policies.
- Evaluate research studies and apply findings to practice, and, under supervision, to evaluate his/her own practice interventions and those of other relevant systems.
- Use oral and written communication skills differentially and effectively with a variety of client populations, colleagues, and members of the community.
- Use supervision appropriate to generalist practice.
- Function within the structure of organizations and service delivery systems, and under supervision, seek necessary organizational change.
- Demonstrate a commitment to continue his/her own professional growth and development

(Continued on next page)

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				Sem. Hours
FUNCTIONAL MAJOR REQUIREMENTS				65
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, or		
SoWk	4620	Social Services and the Elderly, 3	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	9	
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

GENERAL EDUCATION REQUIREMENTS (page 48)--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. IV B)	39
FREE ELECTIVES	20
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 and must be taken concurrently with SoWk 4612.

SoWk 3612 Human Behavior in the Social Environment I (3) Examines human development and behavior across the life span, studying essential biophysical, psychological and social dimensions, emphasizing the fundamental reciprocity between persons and society/culture. Prerequisites: Biol 2010 or concurrently, SoWk 3600 or concurrently, 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 (3) Selected Topics of contemporary interest in social work or specialized fields of practice; variable content. *May be repeated for a maximum of 9 semester hours.*

Prerequisite: 9 semester hours of social work, graduate standing or consent of instructor.

SoWk 4612 Human Behavior in the Social

Environment II* (3) Utilizes a social systems approach to examine the processes of human behavior within groups, organizations, communities and societies/cultures.

Prerequisites: SoWk 3612 and must be taken concurrently with SoWk 3610. *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 and groups.

Open to social work majors only. Prerequisite: SoWk 3610. *Not available for graduate credit.

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. *Not available for graduate credit.

SoWk 4660 Field Practicum* (9) Educationally directed 500-hour field experience in a social service agency under qualified agency supervision. Open to social work majors only. Prerequisites: SoWk 4650 or concurrently, ICap 4478 concurrently, all other required major courses must be completed and consent of Coordinator of Field Education. *Not available for graduate credit.

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.

In the Department of Academic Enrichment, the second digit in the course number stands for the following: 0-General, 1-TRIO Student Support Services, 4-Orientation, 6-Technology, 8-Learning Techniques and Special Projects, 9-Research.

Academic Enrichment students will develop and demonstrate knowledge and skills needed to:

- Meet and exceed Central's academic standards through introductory college courses in composition, mathematics and reading.
- Function successfully at Central through courses designed to orient students to the university environment, college studies and diversity.

General

AE 0020 Suspension Prevention (2) A self-awareness course required for first-time, full-time freshmen with semester grade-point averages below 1.20. Topics include self-management skills, goal setting, and career exploration. One-to-one mentoring conferences are part of the course requirements.

AE 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.

AE 1010 Textbook Reading Techniques (3) This course will introduce students to various strategies useful in reading and studying college textbooks. Paired with a general education course, most activity will be focused on the transference of reading skills appropriate for success in the paired course. Supplemental instruction for the paired course is included in the lab.

AE 1012 Speed Reading (1) Principles and applications of speed reading and comprehension techniques to textbooks and other types of reading materials. Recommended: Nelson Denny Reading est score of 12th grade level or better. Inquire at AE Learning Center, Humphreys 110.

AE 1020 College Study Skills (2) Principles of time management, note taking, memory, and test taking techniques applied to studying for college courses.

AE 1030 Introductory Algebra (3) Designed to review or improve basic algebra skills. Includes integers, equations, inequalities, polynomials, factoring, quadratic equations, graphing linear equations and work with word problems.

TRIO Student Support Services

AE 0101 Fundamentals of Writing I SSS (3) Review and application of English grammar and basic writing techniques. Prerequisite: acceptance into TRIO Student Support Services. Not applicable to graduation requirements.

AE 0111 Fundamentals of Reading I SSS (3) Review and application of methods for vocabulary, comprehension, and reading rate development. Prerequisite: acceptance into TRIO Student Support Services. Not applicable to graduation requirements.

AE 0131 Fundamentals of Math I SSS (3) Review of fractions and decimals with an introduction to negative numbers and linear equations. Prerequisite: acceptance into TRIO Student Support Services. Not applicable to graduation requirements.

AE 1102 Fundamentals of Writing II SSS (3) Continuation and further application of grammar and writing techniques through paragraph and essay development. Prerequisite: acceptance into TRIO Student Support Services and AE 0101 or demonstrated skill level. This course substitutes for AE 1000.

AE 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 TRIO Student Support Services and AE 0111 or demonstrated skill level. This course substitutes for AE 1010.

AE 1125 College Success Strategies SSS (1) Focus on personal responsibility to enhance academic achievement.

Prerequisite: acceptance into TRIO Student Support Services and AE 1400 or consent.

AE 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 TRIO Student Support Services and AE 0131 or demonstrated skill level. This course substitutes for AE 1030.

Orientation

AE 1400 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.

AE 1450 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.

Technology

AE 1620 MS Office Word (0.5) An individualized, arranged course designed to teach basic word processing in order to help students achieve their academic and personal technology goals.

AE 1630 MS Office PowerPoint (0.5) An individualized, arranged course that teaches the process for creating interactive presentations in order to help students achieve their academic and personal technology goals.

AE 1640 MS Office Excel (0.5) An individualized, arranged course that teaches the process of creating spreadsheets, tables, and charts in order to help students achieve their academic and personal technology goals.

AE 1650 MS Office Access (1.0) An individualized, arranged course that teaches the process for creating database tables, forms and queries in order to help students achieve their academic and personal technology goals.

Learning Techniques and Special Projects

AE 0800 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.

AE 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.*

AE 1820 Learning Strategies (2) Part of the ELO block. Note taking, textbook study, memory improvement, time management, exam preparation and test taking strategies are utilized for succeeding in the ELO block courses.

AE 1825 ELO Supplemental Instruction Lab (1) Supplemental Instruction and structured learning lab for the designated ELO block courses. Prerequisite: Concurrently enrolled in AE 1820.

AE 1826 Supplemental Instruction Lab (1) Supplemental Instruction and structured learning lab for the designated course(s) in which the student is concurrently enrolled. *May be repeated for a total of 6 semester hours.*

AE 4800 Special Projects (0.5, 1.0, 1.5, 2.0, 3.0) Individual or group study of material in special areas of interest. *May be repeated for a maximum of 6 semester hours.*

Research

AE 3900 Introduction to Research Methods and Design (2) Examines methods for planning and conducting academic research, analyzing and interpreting data, and evaluating existing research in a variety of academic disciplines. Particular attention is given to hypothesis development, operationalization, and data collection techniques.

Intensive English Program

The Intensive English Program provides students the opportunity to improve their English skills and become accustomed to a university setting in the United States. The courses are designed to help non-native English speaking students build on their existing language skills. The IEP offers courses at a variety of proficiency levels in reading, writing, grammar, speaking, listening, vocabulary, accent reduction, American culture, academic preparation and testing skills. These courses are non-credit bearing and may be repeated for up to 12 credit hours.

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-Academic Enrichment, 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 General Education 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. *Not available for graduate credit.

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.

IGen 4231 Myth, Memory and Realities* (3) Examines a selected topic in American or World history and literature to understand how interpretations of the past have been constructed to explain the present. *Not available for graduate credit.

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.

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.

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.

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.

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. *Not available for graduate credit.

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.

ICap 4111 Socio-Economic Factors Impacting Health* (3) Examines selected socio-economic issues and their impact on health. *Not available for graduate credit.

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. *Not available for graduate credit.

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.

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.

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.

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.

ICap 4225 Computer Science Capstone Experience*

(3) Integration of computer science topics from other disciplines, including studies in computer ethics, the social impact of computing, and the psychological issues of computer/human interfaces. Prerequisite: Senior standing in Computer Science. *Not available for graduate credit.

ICap 4233 The Scientific, Historical, and Sociological

Impact of Mathematics* (3) Provides an opportunity to experience and understand the importance of mathematics in human development. Prerequisite: 15 semester hours of college mathematics. *Not available for graduate credit.

ICap 4245 Actuarial Science Capstone Experience*

(3) Integration of actuarial science topics and skills with topics from various other disciplines, including actuarial ethics, social roles, and the Code of Professional Conduct. Prerequisite: Math 4520. *Not available for graduate credit. Fin 3850, Mgt 3315, Mgt 3325, Mkt 3405, and senior standing.

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: Admission to the B.S.B.A. program, Fin 3850, Mgt 3315, Mgt 3325, Mkt 3405, and senior standing. *Not available for graduate credit.

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 EdCl 4495 or EdCl 4595 or EdSp 4395. *Not available for graduate credit.

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.

SECTION III

FACULTY AND STAFF

Listing as of January 1, 2003

PRESIDENT

BOBBY R. PATTON--President and Professor of Speech Communication. B.F.A., Texas Christian University; M.A., Ph.D., University of Kansas.

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.

PAUL A. PAGE--Vice President for University Advancement. A.A., Fort Scott Community College; B.S., M.S., Pittsburg State University; Ph.D., University of Kansas.

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.

ADMINISTRATIVE STAFF**Academic Affairs**

KIMBERLY D. ANTHES--Operations Manager, Library Services. B.S., Central Missouri State University.

WILLIAM W. BELL--Student Teaching Coordinator. B.S. in Ed., University of Missouri-Columbia; M.S. in Ed., Southern Illinois University; Ph.D., St. Louis University.

RUSSEL A. BLOOM--Marketing Manager. B.S., University of Wisconsin-La Crosse; M.S., University of North Dakota.

RYAN H. BOWIE--Admissions Representative. B.S., Central Missouri State University.

JIM R. BOWMAN--Dean of the College of Education and Human Services and Professor of Curriculum and Instruction. B.S.B.A., M.S., Pittsburg State University; Ph.D., University of Oklahoma-Norman.

DAVID W. CARD--Airport Director and Chief Flight Instructor. B.S., M.S., Central Missouri State University.

THERESE CARMACK--Executive Officer of Military Science and Leadership. B.S., University of Lacrosse; M.S., Central Missouri State University.

GLENN A. CARRIKER--Assistant Director, Missouri Safety Center. B.S., M.S., Ed.S., Central Missouri State University.

SARAH H. COATS--Assistant Director of Admissions for Recruitment. B.S., Central Missouri State University.

SEAN R. COOPER--Admissions Representative. B.S., M.S., Central Missouri State University.

ROBYN CRISWELL-BLOOM--Director of Outreach Services. B.S., University of North Dakota; M.S., Central Missouri State University.

DAVID A. CRUZ--Media Assistant, Harmon Computer Commons, Library Services. B.S.B.A., Central Missouri State University.

HOLLY N. DAVENPORT--Instructional Design Specialist, Instructional Technology and Design, Center for Teaching and Learning. B.S., Central Missouri State University.

DONALD L. DAVIS--Manager, Business Applications, Small Business Development Center. B.S., Northwest Missouri State University.

YOLANDA DAVIS--Assistant Director of Admissions for Minority Recruitment. B.S., Central Missouri State University.

PATRICIA S. DECKER--Academic Coordinator, McCAP. B.S., Central Missouri State University; M.A., Ph.D., University of Missouri-Kansas City.

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