

2015

2015-2016 Southern Illinois University Bulletin Carbondale Campus (Undergraduate Catalog)

Southern Illinois University Carbondale

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Southern Illinois University Carbondale

2015-2016 Undergraduate Catalog

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Volume 56, Number 2, March 2015

This Catalog

This publication provides information about the University. Primary attention is given to its academic programs, rules, regulations, and procedures. Students starting their collegiate training (first graded course from an accredited institution) during the period of time covered by this catalog (summer 2015 through spring 2016) are subject to the curricular requirements as specified herein. The requirements herein will extend for a seven calendar-year period from the date of entry for baccalaureate programs and three years for associate programs. If the students have not met their undergraduate educational objectives by that time, they will then become subject to current curricular requirements. Should the University change the course requirements contained herein subsequently, students are assured that necessary adjustments will be made so that no additional time is required of them. Where programs include requirements established by agencies external to the University, every effort will be made to follow this same principle so far as possible. Should subsequent curricular requirement changes work to the students' advantage, they may elect to meet the new requirements rather than those contained herein. Should the University find it necessary to discontinue an academic program, the effective date, unless otherwise dictated, will be such that the last regularly admitted class would be able to complete the program in regular time sequence. This means four years for baccalaureate and two years for associate programs. A student who has withdrawn from the University may not be readmitted to a discontinued program.

The University reserves the right to change information contained herein on matters other than curricular requirements without notice when circumstances warrant such action.

The Undergraduate Catalog covers in detail questions concerning the undergraduate program of Southern Illinois University Carbondale for the period from summer 2015 through spring 2016. It supersedes Volume 55, Number 2.

Affirmative Action Policy

It is the policy of Southern Illinois University Carbondale to provide equal employment and educational opportunities for all qualified persons without regard to race, color, religion, sex, national origin, age, disability, status as a protected veteran, sexual orientation, or marital status. The university is committed to the principles of equal employment opportunity and affirmative action and will continue to conduct all personnel actions in accordance with the letter and spirit of applicable state and federal statutes and regulations, including Executive Order 11246 as amended. Personnel actions include, but are not limited to, recruitment, hiring, position assignments, compensation, training, promotion, tenure consideration and award, retention, lay-off, termination, and benefits.

The university recognizes that the barriers of race, color, religion, sex, national origin, age, disability, status as a protected veteran, sexual orientation, or marital status of some individuals have resulted in their denial of full participation in all societal functions and is, therefore, committed to taking affirmative steps aimed at overcoming such historical patterns of discrimination in our society. The university's affirmative action program identifies special actions intended to bring such groups into full participation in all aspects of university life. Through its affirmative action program, Southern Illinois University Carbondale is committed to

- A. increased numbers of minorities, females, individuals with disabilities, and protected veterans in all aspects of SIUC employment with special procedures applicable to those positions determined to be underutilized for minorities, females, individuals with disabilities, and protected veterans;
- B. cultural and educational diversity in the curriculum and environment of the university;
- C. removal of barriers to the disabled;
- D. support of the principles of equal opportunity and affirmative action in an effort to redress the consequences of past societal discrimination and to maintain a positive non-discriminatory educational environment.

The responsibility for coordinating and monitoring compliance with the university's equal employment opportunity/affirmative action policies is assigned to the University Affirmative Action Officer. Implementing and assuring compliance with these policies is the responsibility of the Associate Chancellor for Institutional Diversity and each vice chancellor. In addition, each dean, director, or other staff member involved in the recruitment and hiring process must ensure compliance with the spirit as well as letter of the policies and procedures. Many involved in the staff selection process assume that others are responsible for the success of the affirmative action program. It is a basic assumption of SIUC's Affirmative Action Office that all administrative levels and especially deans, directors, chairs, faculty and all hiring administrators are responsible for fostering and enhancing institutional diversity. The initiating hiring officer has the primary responsibility for maintaining the integrity of these affirmative action policies and procedures and is ultimately accountable for attaining diversity within his or her staff.

The University's ADA, §504, Title IX and Sexual Harassment coordinator is Linda McCabe Smith, Associate Chancellor for Institutional Diversity, 110 Anthony Hall, Mail Code 4341, Southern Illinois University Carbondale, 1265 Lincoln Drive, Carbondale, IL 62901. Phone: (618) 453-1186.

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Board of Trustees and Officers of Administration

Board of Trustees of Southern Illinois University

	Term Expires
Randal Thomas, <i>Chair</i> , Springfield	2019
Donna Manering, <i>Vice-Chair</i> , Makanda	2017
J. Phil Gilbert, Carbondale	2021
Roger Herrin, Harrisburg	2017
Shirley J. Portwood, Godfrey	2019
Joel Sambursky, Carbondale	2019
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Mitch Morecraft (Student Trustee), Edwardsville	2015
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Duane Stucky, <i>Board Treasurer</i>	

Officers of Administration, Southern Illinois University

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Vice President for Academic Affairs
 Duane Stucky, *Senior Vice President for Financial*
and Administrative Affairs
 John Charles, *Executive Director for Governmental*
and Public Affairs

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 Susan M. Ford, *Acting Provost and Vice Chancellor for*
Academic Affairs
 Kevin Bame, *Vice Chancellor for Administration and Finance*
 J. Kevin Dorsey, *Dean and Provost, School of Medicine*
 James Garvey, *Interim Vice Chancellor for Research*
 James Salmo, *Vice Chancellor for Development and Alumni*
Relations

Approved 2015 - 2016 University Calendar

Summer Session 2015

Eight-Week Session Begins	Monday, June 15
Independence Day Holiday	Friday, July 3
Final Examinations	Thursday, August 6 and Friday, August 7
Commencement	<i>Ceremonies now held only in May and December</i>

Fall Semester 2015

Semester Classes Begin	Monday, August 24
Labor Day Holiday	Monday, September 7
Fall Break	Saturday, October 10, 12:00 Noon through Tuesday, October 13
Veteran's Day Holiday	Wednesday, November 11
Thanksgiving Vacation	Wednesday, November 25 through Sunday, November 29
Final Examinations	Monday, December 14 through Friday, December 18
Commencement	Saturday, December 19, 2015

Spring Semester 2016

Martin Luther King, Jr.'s Birthday Holiday	Monday, January 18
Semester Classes Begin	Tuesday, January 19
Spring Vacation	Saturday, March 12, 12:00 Noon through Sunday, March 20
Honors Day	Saturday, April 9
Final Examinations	Monday, May 9, through Friday, May 13
Commencement	Saturday, May 14, 2016

All breaks begin officially at 10:00 p.m. the night before and end at 7:30 a.m. the morning after the respective beginning and ending dates listed, unless otherwise noted.

Accommodating Religious Observances of Students

Southern Illinois University Carbondale will make reasonable accommodation for individual student religious observances. The *Policy Accommodating Religious Observances of Students* appears in its entirety in Chapter 7.

Chapter Reference Guide

Chapter 1
General
Information

Chapter 2
Admission, Tuition and
Academic Information

Chapter 3
University Core
Curriculum

Chapter 4
Colleges,
Academic Services and
Programs

Chapter 5
Undergraduate
Curricula and Faculty

Chapter 6
Campus Programs and
Services

Chapter 7
University
Policies

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For information or concerns pertaining to this catalog, contact the Registrar's Office, Student Services Building, Southern Illinois University Carbondale, Carbondale, IL 62901. For access to the Undergraduate Catalog visit: registrar.siu.edu. Published by the Registrar's Office, Southern Illinois University Carbondale.

Photography: University Photo Communications.



1 / General Information



The University

Southern Illinois University

Southern Illinois University is a multi-campus university comprising two institutions, Southern Illinois University Carbondale (SIU Carbondale) with a School of Medicine at Springfield, and Southern Illinois University Edwardsville (SIUE) with a School of Dental Medicine at Alton and a center in East St. Louis. Southern Illinois University, with an annual operating budget of more than \$621,183,100 million (this includes Carbondale, University-Wide Services and School of Medicine), enrolls more than 31,961 students (SIUC total: 17,989; SIUE total: 13,972) in programs from two-year technical curriculums to doctoral programs in 34 fields along with law and medicine. SIU was chartered in 1869 as Southern Illinois Normal University, a teachers' college. In 1947, the name was changed to Southern Illinois University, reflecting the institution's academic expansion. Southern Illinois University also expanded geographically. As early as 1949, SIU began offering off-campus academic courses in the metropolitan East St. Louis area, which led to the eventual development of a separate institution in Edwardsville.

A modern and comprehensive post-secondary educational institution, Southern Illinois University offers a broad range of academic programs that lead to associate, baccalaureate, masters, specialists, doctoral, and professional degrees.

The instructional, research, and service missions of the two institutions reflect the needs of the geographic areas in which they are located. Southern Illinois University also is committed to serving statewide, national, and international needs. This commitment is reflected in SIU Extended Campus, which offers educational opportunities located off the main campus. SIU Extended Campus is present at 21 military locations, and 18 non-military locations across 13 states, offering 13 online degree programs, 9 off-campus programs, and 5 military programs. It is also realized through research and training exchanges, and worldwide student exchange programs.

A nine-member Board of Trustees governs Southern Illinois University and sets policy that enables it to carry out its established missions and goals. The president of Southern Illinois University is its chief executive officer and reports to the Board of Trustees. The chancellors report directly to the president and are responsible for the internal operations of SIUE and SIU Carbondale.

Southern Illinois University Carbondale

Southern Illinois University Carbondale has taken pride in the quality of its services since its doors were first opened in 1869. Outstanding departments, distinguished faculty, thorough and inspired teaching, and a thoughtful approach to the blending of old wisdom with new knowledge, as well as student services from admission to placement, combine with the University's enviable location to provide a rewarding educational experience.

Every member of the University faculty is a student as well as a teacher bringing the products of research and scholarship into the classroom. The University has many distinguished scholars on its faculty honored by their peers for important contributions to the fields they study. Contact with these hard-working educators offers students the best possible entry into

the world of today where ideas and technology mesh. As students progress in their studies they will work along with faculty members and may eventually be able to participate in ongoing research projects or set up projects of their own. Other courses may lead to internships or practicum work on campus or in the area around the University.

Morris Library, a major resource for students and faculty, contains more than 2,918,421 volumes, more than 3,600,000 units of microform, and more than 53,381 current serials. These materials are in open stacks, available to every student. There are also important collections of original research materials, as well as support services such as a map library, records and tapes, and a self-instruction center. Many disciplines require laboratories; some are the traditional variety and some are in orchards, barns, hangars, machine shops, sound chambers computer labs, archaeological digs, sewing rooms, kindergartens, and clinics.

The University offers a great variety of services to students. The Registrar's Office audits students' progress and maintains records from entrance to graduation. Financial experts, wise in the field of money for education, work tirelessly to find the right combination of loans, grants, and on- and off-campus employment to keep each student in school. Residence halls are available on campus as are furnished and unfurnished apartments for families. The counseling services are ready to help students deal with scholastic, family, emotional, medical, legal, or financial problems.

The University provides an aggressive placement program on a number of levels. University Career Services presents career fairs and regular visits by recruiters from large employers. Career counselors are ready to work with students from the time of their enrollment. Seminars and workshops are conducted regularly and a career library is maintained. Some schools and departments have highly successful recruitment programs of their own. Placement services do not stop at graduation — the University keeps a current placement file for every interested graduate, and Alumni Services offers referral assistance.

Carbondale, an economic center of southern Illinois, has been cited in a recent study as one of the 50 most desirable places to live in the United States. Only a few hours from Chicago, St. Louis, and Memphis, the University sits amid rolling hills, farmlands, and orchards just 60 miles above the confluence of the Mississippi and Ohio rivers. Glacial deposits of rock have left the area from Carbondale south ruggedly scenic and popular among students and area residents alike for a wide range of outdoor activities. Four large recreational lakes are within minutes of the campus; the two great rivers, the spectacular 240,000-acre Shawnee National Forest, and a large number of smaller lakes, state parks, and recreational areas are within easy driving distance. The Mid-South climate is ideal for year-around outdoor activities — even a little cross-country skiing. The campus itself is a marvel of landscaping, planted with native trees, shrubs and blooming flora.

Activities on campus are equally inviting. There are more than 400 student organizations—special interest, political, Greek, religious, service—intramurals from baseball to ultimate frisbee, a recreational lake on campus, nine intercollegiate sports programs for women and nine for men, and great varieties of diverting entertainment. A large indoor recreation

center contains an Olympic-sized pool, weight rooms, game courts of all kinds, diet and exercise programs, instruction, and equipment that can be checked out for outdoor recreation.

At this modern university in a rural setting, one can benefit from the best of both worlds – the scenic wonders, the small-town friendliness, the easy access to all the area has to offer, and the resources of a sophisticated faculty and staff with the latest in technological marvels at its command.

Mission Statement

Southern Illinois University Carbondale, now in its second century, is a major public higher education institution dedicated to quality academic endeavors in teaching and research, to supportive programming for student needs and development, to effective social and economic initiatives in community, regional, and statewide contexts, and to affirmative action and equal opportunity.

Enrolling students throughout Illinois and the United States and from a large number of foreign countries, SIU actively promotes the intellectual and social benefits of cultural pluralism, encourages the participation of non-traditional groups, and intentionally provides a cosmopolitan and general education context which expands students' horizons and leads to superior undergraduate education.

Seeking to meet educational, vocational, social and personal needs of its diverse population of students and helping them fully realize their potential is a central purpose of the University. Emphasis on accessibility and regional service which creates distinctive instructional, research and public service programs also gives SIU its special character among the nation's research universities, and underlies other academic developments, such as its extensive doctoral program and the schools of medicine and law.

Committed to the concept that research and creative activity are inherently valuable, the University supports intellectual exploration at advanced levels in traditional disciplines and in numerous specialized research undertakings, some of which are related directly to the southern Illinois region. Research directions are evolved from staff and faculty strengths in keeping with long-term preparation and planning.

Even as SIU constantly strives to perpetuate high quality in both instruction and research, it continues a long tradition of service to its community and region. Its unusual strengths in the creative and performing arts provide wide-ranging educational, entertainment and cultural opportunities for its students, faculty, staff, and the public at large. Its programs of public service and its involvement in the civic and social development of the region are manifestations of a general commitment to enhance the quality of life through the exercise of academic skills and application of problem-solving techniques. The University seeks to help solve social, economic, educational, scientific, and technological problems, and thereby to improve the well being of those whose lives come into contact with it.

Focus Statement

Southern Illinois University Carbondale offers a full range of baccalaureate programs, is committed to graduate education through the doctoral degree, and gives high priority to research. It receives substantial federal support for research and development and annually awards a significant number of doctoral

degrees balanced among selected liberal arts and sciences disciplines and professional programs. In addition to pursuing statewide goals and priorities, Southern Illinois University Carbondale:

- strives to develop the professional, social, and leadership skills expected of college students and to improve student retention and achievement;
- supports the economic, social, and cultural development of southern Illinois through appropriate undergraduate, graduate, and professional education and research;
- develops partnerships with communities, businesses, and other colleges and universities, and develops utilization of telecommunications technologies;
- cultivates and sustains a commitment in research and instruction to problems and policy issues related to the region and the state's natural resources and environment;
- strives to meet the health care needs of central and southern Illinois through appropriate health-related programs, services, and public health policy; and
- cultivates and sustains diversity through a commitment to multiculturalism, including international programming.

Accreditations

AACSB International - The Association
to Advance Collegiate Schools of Business
777 S. Harbour Island Blvd., Suite 750
Tampa, FL 33602-5730
Telephone: (813) 769-6500
url: <http://www.aacsb.edu>

Accreditation Association for Ambulatory Health Care, Inc.
5250 Old Orchard Road, Suite-200
Skokie, IL 60077
Telephone: (847) 853-6060
url: <http://www.aaahc.org>

ABET
Engineering Accreditation Commission
Engineering Technology Accreditation Commission
Computing Accreditation Commission
<http://www.abet.org>

Accreditation Commission for Programs in Hospitality
Administration (ACPHA)
211 Tred Avon Street, PO Box 400
Oxford, MD 21654
Telephone: (410) 226-5527
url: <http://www.acpha-cahm.org>

Accreditation Council for Education in Nutrition and Dietetics
120 South Riverside Plaza, Suite 2000
Chicago, IL 60606-6995
Telephone: (312) 899-0040
url: <http://www.eatright.org/acend/>

Accreditation Review Commission on Education for the
Physician Assistant (ARC-PA)
12000 Findley Rd., Suite 150
Johns Creek, GA 30097
Telephone: (770) 476-1224
url: <http://www.arc-pa.org>

Accrediting Council on Education in
Journalism and Mass Communications
School of Journalism/Stauffer-Flint Hall
1435 Jayhawk Blvd.
University of Kansas
Lawrence, KS 66045
Telephone: (785) 864-3973
url: <http://www2.ku.edu/~acejmc/>

American Association of Museums
1575 Eye Street, Suite 400
Washington, DC 20005
Telephone: (202) 218-1818
url: <http://www.aam-us.org>

American Bar Association
Section of Legal Ed and Admissions to the Bar,
Office of the Consultant on Legal Ed
321 N. Clark, 21st Floor
Chicago, IL 60654
Telephone: (312) 988-6738
url: <http://www.americanbar.org>

American Bar Association Standing
Committee on Paralegals
321 N. Clark Street
Chicago, IL 60610
Telephone: (312) 988-5617
url: <http://www.americanbar.org/groups/paralegals.html>

American Board of Funeral Service Education
3414 Ashland Avenue, Suite-G
St. Joseph, MO 64506
Telephone: (816) 233-3747
url: <http://www.abfse.org>

American Camp Association, Illinois Section
5 S. Wabash St., Suite 1406
Chicago, IL 60603
Telephone: (312) 332-0833
url: <http://www.acail.org/>

American Chemical Society
1155 16th St., N.W.
Washington, DC 20036
Telephone: (202) 872-4600
url: <http://www.acs.org>

American Psychological Association,
Committee on Accreditation
750 First St., N.E.
Office of Program Consultation and Accreditation
Washington, DC 20002-4242
Telephone: (202) 336-5500
url: <http://www.apa.org/ed/accreditation>

Association for Assessment and Accreditation
of Laboratory Animal Care (AAALAC)
5283 Corporate Drive, Suite-203
Frederick, MD 21703-2879
Telephone: (301) 696-9626
url: <http://www.aaalac.org>

Association of American Law Schools (AALS)
1614 20th Street, N.W.
Washington, D.C. 20036-2717
Telephone: (202) 296-8851
url: <http://www.aals.org>

Association for Behavior Analysis (ABA)
550 W. Centre Avenue
Portage, MI 49024-5364
Telephone: (269) 492-9310
url: <http://www.abainternational.org>

Association of American Law Schools (AALS)
1201 Connecticut Avenue, N.W., Suite 800
Washington, D.C. 20036-2717
Telephone: (202) 296-8851
url: <http://www.aals.org>

The Association of Technology Management and Applied
Engineering (ATMAE)
1390 Eisenhower Place
Ann Arbor, MI 48108
Telephone: (734) 677-0720
url: <http://www.atmae.org>

Aviation Accreditation Board International
3410 Skyway Drive
Auburn, AL 36830
Telephone: (334) 844-2431
url: <http://www.aabi.aero/programs.html>
Clinical Lab Improvement Amendments
Illinois Department of Public Health - Health Care
Facilities and Programs (CLIA)
Regional Office, U.S. Department of Health and Human
Services
233 N. Michigan Avenue, Suite 600
Chicago, IL 60601
Telephone: (312)886-6432
url: <http://www.cms.hhs.gov/clia>

COLA
Reference ID #5438 #0455
9881 Broken Land Parkway, Suite 200
Columbia, MD 21046
Telephone: (800) 981-9883
url: <http://www.cola.org>

Commission on Accreditation of Allied
Health Education Programs (CAAHEP)
1361 Park Street
Clearwater, FL 33756
Telephone: (727) 210-2350
url: <http://www.caahep.org>

Commission on Dental Accreditation of
the American Dental Association
211 E. Chicago Ave.
Chicago, IL 60611-2678
Telephone: (312) 440-2500
url: <http://www.ada.org>

Commission on Accreditation in Physical
Therapy Education (CAPTE)
1111 N. Fairfax Street
Alexandria, VA 22314-1488
Telephone: (703) 684-2782
url: <http://www.apta.org>

Commission on Accreditation of
Rehabilitation Facilities (CARF)
6951 East Southpoint Road
Tucson, AZ 85756-9407
Telephone: (520) 325-1044 or (888) 281-6531
url: <http://www.carf.org>

Commission on English Language Program
Accreditation (CEA)
801 North Fairfax Street
Alexandria, VA 22314
Telephone: (703) 519-2070
url: <http://www.cea-accredit.org/>

Council for Accreditation of Counseling and Related
Educational Programs (CACREP)
1001 N. Fairfax Street, Suite 510
Alexandria, VA 22314
Telephone: (703) 535-5990
url: <http://www.cacrep.org>

Council for the Accreditation of Educator Preparation (CAEP)
2010 Massachusetts Ave., N.W., Suite 500
Washington, DC 20036
Telephone: (202) 223-0077
url: <http://www.ncate.org>

Council for Interior Design Accreditation (CIDA)
206 Grandville Avenue, Suite 350
Grand Rapids, MI 49503
Telephone: (616) 458-0400
url: <http://www.accredit-id.org>

Council on Academic Accreditation in
Audiology and Speech-Language Pathology
2200 Research Boulevard
Rockville, MD 20850-3289
Telephone: (301) 296-5700
url: <http://www.asha.org> *website down for changes

Council on Rehabilitation Education, Inc. (CORE)
1699 Woodfield Road, Suite 300
Schaumburg, IL 60173
Telephone: (847) 944-1345
url: <http://www.core-rehab.org>

Council on Social Work Education
1701 Duke St., Suite 200
Alexandria, VA 22314
Telephone: (703) 683-8080
url: <http://www.cswe.org>

Educational Leadership Constituent Council (ELCC)
1904 Association Drive
Reston, VA 22091
Telephone: (703) 860-7207
url: <http://www.npbea.org>

Federal Aviation Administration
Flight Standards District Office
1250 North Airport Drive, Suite 1
Springfield, IL., 62707-8417
Telephone: (217) 744-1910
url: <http://www.faa.gov/fsdo/spi>

(The) Higher Learning Commission of the North Central
Association of Colleges and Schools
230 S. LaSalle St. Suite 7-500
Chicago, IL 60604-1411
Telephone: (312) 263-0456 (800) 621-7440
url: <http://www.ncahlc.org>

Illinois Alcohol and Other Drug Abuse
Professional Certification Assoc. Inc.
401 E. Sangamon Avenue
Springfield, IL 62702
Telephone: (217) 698-8110
url: <http://www.IAODAPCA.org>

International Association of Counseling Services
101 S. Whiting Street, Suite 211
Alexandria, VA 22304
Telephone: (703) 823-9840
url: <http://www.iacsinc.org>

International Fire Service Accreditation Congress
Oklahoma State University
1812 Tyler Avenue
Stillwater, OK 74078-8075
Telephone: (405) 744-8303
url: <http://www.ifsac.org>

Joint Review Committee on Education in Diagnostic Medical
Sonography (JRCEDMS)
6021 University Boulevard, Suite 500
Ellicott City, MD 21043
Telephone: (443)973-3251
url: <http://www.jrcdms.org>

Joint Review Committee on Education in Radiologic
Technology (JRCERT)
20 N. Wacker Drive, Suite 2850
Chicago, IL 60606-3182
Telephone: (312)704-5300
url: <http://www.jrcert.org>

Liaison Committee on Medical Education (LCME)
American Medical Association (AMA) and Association of
American Medical Colleges (AAMC)
LCME Secretariat
330 N. Wabash Avenue, Suite 39300
Chicago, IL 60654
Telephone: (312) 464-4933
url: <http://www.lcme.org>

National Architectural Accrediting Board, Inc. (NAAB)
1101 Connecticut Avenue, N.W., Suite 410
Washington, DC 20006
Telephone: (202)783-2007
url: <http://www.naab.org/>

National Association for the Education
of Young Children (NAEYC)
1313 L Street, NW Suite 500
Washington, DC 20005
Telephone: (800) 424-2460
url: <http://www.naeyc.org>

National Association of Schools of Art and Design
11250 Roger Bacon Dr., Suite 21
Reston, VA 20190
Telephone: (703) 437-0700 ext. 10
url: <http://www.arts-accredit.org>

National Association of Schools of Music
11250 Roger Bacon Dr., Suite 21
Reston, VA 20190
Telephone: (703) 437-0700 ext. 10
url: <http://www.arts-accredit.org>

National Association of Schools of
Public Affairs and Administration
1029 Vermont Avenue, NW, Suite 1100
Washington, DC 20005
Telephone: (202) 628-8965 ext. 103
url: <http://www.naspaa.org>

National Association of Schools of Theatre (NAST)
11250 Roger Bacon Dr., Suite 21
Reston, VA 20190
Telephone: (703) 437-0700 ext. 10
url: <http://www.arts-accredit.org>

National Automotive Technicians Education Foundation
101 Blue Seal Drive, SE, Suite 101
Leesburg, VA 20175
Telephone: (703) 669-6650
url: <http://www.natef.org>

Society of American Foresters (SAF)
5400 Grosvenor Lane
Bethesda, MD 20814-2198
Telephone: (301) 897-8720 X 123
url: <http://www.safnet.org>

Faculty

The University faculty is dedicated to excellence in teaching and to the advancement of knowledge in a wide variety of disciplines and professions. Many faculty members are well known both nationally and internationally for their varied research contributions. The Undergraduate Catalog lists the numerous programs offered by the faculty and, in addition, in Chapter 5 of this catalog the departments in which they are appointed list members.

Undergraduate Curricula

The undergraduate majors and minors offered by Southern Illinois University Carbondale are listed below in alphabetical order. Also indicated is whether a major, a minor, or both are offered. The academic unit, which offers the major, is listed, as is the degree the student would expect to receive upon graduation. If a major may be completed in more than one academic unit, the other units are listed on additional lines. For example, the biological sciences major are offered through the College of Science. Students planning to teach biological sciences may also complete the major in the College of Education and Human Services. The requirements for each of the programs listed below are explained in Chapter 5 of this bulletin. The degree abbreviations used are: A.A.S., Associate in Applied Science; B.A., Bachelor of Arts; B.F.A., Bachelor of Fine Arts; B.Mus., Bachelor of Music; B.S., Bachelor of Science. In addition to the majors and minors listed, preprofessional programs may be completed in dentistry, law, medicine, nursing, optometry, pharmacy, physical therapy, physician assistant, podiatry, public health, and veterinary science.

SUBJECT	MAJOR / MINOR	COLLEGE	DEGREE
Accounting ⁵	• •	College of Business	B.S.
Aerospace Studies	•		
Africana Studies	• •	College of Liberal Arts	B.A.
Agribusiness Economics ⁵	• •	College of Agricultural Sciences	B.S.
Agricultural Systems and Education	• •	College of Agricultural Sciences	B.S.
Air Traffic Control	•	College of Applied Sciences and Arts	
Aircraft Product Support	•	College of Applied Sciences and Arts	
Airport Management and Planning	•	College of Applied Sciences and Arts	
American Sign Language	•	College of Liberal Arts	
American Studies	•	College of Liberal Arts	
Animal Science ⁵	• •	College of Agricultural Sciences	B.S.
Animation	•	College of Mass Communication and Media Arts	
Anthropology	• •	College of Liberal Arts	B.A.
Aquatics ²	•	College of Education and Human Services	
Architectural Studies	•	College of Applied Sciences and Arts	B.S.
Army Military Science	•		
Art	• •	College of Liberal Arts	B.A., B.F.A.
	•	College of Education and Human Services	B.S.
Art History	•	College of Liberal Arts	
Asian Studies	•	College of Liberal Arts	
Automotive Technology ⁵	•	College of Applied Sciences and Arts	B.S.
Aviation Flight	•	College of Applied Sciences and Arts	A.A.S.
Aviation Management ⁵	•	College of Applied Sciences and Arts	B.S.
Aviation Technologies ⁵	•	College of Applied Sciences and Arts	B.S.
Behavior Analysis and Therapy	•	College of Education and Human Services	B.S.
Biological Sciences	• •	College of Science	B.S.
	•	College of Education and Human Services	B.S.
Business and Administration ⁵	• •	College of Business	B.S.
Business Economics ⁵	•	College of Business	B.S.
Chemistry	• •	College of Science	B.A., B.S.
Child and Family Services ³	•	College of Education and Human Services	
Chinese ¹	•	College of Liberal Arts	
Cinema and Photography	•	College of Mass Communication and Media Arts	B.A.
Civil Engineering	•	College of Engineering	B.S.
Classical Civilization ¹	•	College of Liberal Arts	
Coaching ²	•	College of Education and Human Services	
Communication Disorders and Sciences	•	College of Education and Human Services	B.S.
Computer Engineering	•	College of Engineering	B.S.
Computer Science	• •	College of Science	B.S., B.A.

SUBJECT	MAJOR / MINOR	COLLEGE DEGREE
Criminology and Criminal Justice	• •	College of Liberal Arts B.A.
Crop Breed, Genetics and Biotech	•	College of Agricultural Sciences
Crop, Soil and Environmental Management ⁵	• •	College of Agricultural Sciences B.S.
Dance	•	College of Education and Human Services
Dental Hygiene ⁵	•	College of Applied Sciences and Arts B.S.
Design	•	College of Liberal Arts B.A.
Early Childhood ³	•	College of Education and Human Services B.S.
East Asian Civilization ¹	•	College of Liberal Arts
Economics	• •	College of Liberal Arts B.A.
Electrical Engineering	•	College of Engineering B.S.
Electronic Systems Technologies ⁵	•	College of Applied Sciences and Arts B.S.
Elementary Education ³	•	College of Education and Human Services B.S.
Engineering Technology ⁵	•	College of Engineering B.S.
English	• •	College of Liberal Arts B.A.
	• •	College of Education and Human Services B.S.
Environmental Studies	•	College of Liberal Arts
Equine Studies ⁴	•	College of Agricultural Sciences
Exercise Science	•	College of Education and Human Services B.S.
Fashion Design and Merchandising	•	College of Applied Sciences and Arts B.S.
Finance	• •	College of Business B.S.
Fire Service Management ⁵	•	College of Applied Sciences and Arts B.S.
Forensic Science	•	College of Science/College of Liberal Arts
Forestry	•	College of Agricultural Sciences B.S.
French ¹	•	College of Liberal Arts
Game Design and Development	•	College of Mass Communication and Media Arts
Geography and Environmental Resources	• •	College of Liberal Arts B.S.
Geology	• •	College of Science B.A., B.S.
German ¹	•	College of Liberal Arts
GIS	•	College of Liberal Arts
Global Studies	•	College of Liberal Arts
Greek ¹	•	College of Liberal Arts
Health Care Management ⁵	• •	College of Applied Sciences and Arts B.S.
Health Education	•	College of Education and Human Services B.S.
History	• •	College of Liberal Arts B.A.
	•	College of Education and Human Services B.S.
Horticulture ⁵	• •	College of Agricultural Sciences B.S.
Hospitality and Tourism Administration ⁵	•	College of Agricultural Sciences B.S.
Human Nutrition and Dietetics	•	College of Agricultural Sciences B.S.
Industrial Technology ⁵	•	College of Engineering B.S.
Information Systems Technologies ⁵	•	College of Applied Sciences and Arts B.S.
Interior Design	•	College of Applied Sciences and Arts B.S.
International Studies ¹	•	College of Liberal Arts
Japanese ¹	•	College of Liberal Arts
Journalism	• •	College of Mass Communication and Media Arts B.S.
Kinesiology	•	College of Education and Human Services B.S.
Languages, Cultures & International Studies	•	College of Liberal Arts B.A.
	•	College of Education and Human Services B.S.
Latin ¹	•	College of Liberal Arts
Latino and Latin American Studies	•	College of Liberal Arts

SUBJECT	MAJOR / MINOR	COLLEGE DEGREE
Linguistics	• •	College of Liberal Arts B.A.
Management ⁵	• •	College of Business B.S.
Marketing ⁵	• •	College of Business B.S.
Mathematics	• •	College of Science B.S.
	•	College of Liberal Arts B.A.
	•	College of Education and Human Services B.S.
Mechanical Engineering & Energy Processes	•	College of Engineering B.S.
Microbiology	• •	College of Science B.S.
Mining Engineering	•	College of Engineering B.S.
Mortuary Science and Funeral Service ⁵	•	College of Applied Sciences and Arts B.S.
Museum Studies	•	College of Liberal Arts
Music	• •	College of Liberal Arts B.Mus., B.A.
Musical Theater	•	College of Liberal Arts B.F.A.
Native American Studies	•	College of Liberal Arts
Paralegal Studies ⁵	• •	College of Liberal Arts B.S.
Peace Studies	•	College of Liberal Arts/ Mass Comm. and Media Arts
Philosophy	• •	College of Liberal Arts B.A.
Photography	•	College of Mass Communication and Media Arts
Physical Education Teacher Education	•	College of Education and Human Services B.S.
Physical Therapist Assistant	•	College of Applied Sciences and Arts A.A.S.
Physics	• •	College of Science B.S.
Physiology	• •	College of Science B.S.
Plant Biology	• •	College of Science B.A., B.S.
Political Science	• •	College of Liberal Arts B.A.
Psychology	• •	College of Liberal Arts B.A.
Radio, Television, & Digital Media	•	College of Mass Communication and Media Arts B.A.
Radiologic Sciences ⁵	•	College of Applied Sciences and Arts A.A.S., B.S.
Recreation	•	College of Education and Human Services B.S.
Rehabilitation Services ⁵	• •	College of Education and Human Services B.S.
Social Sciences	•	College of Education and Human Services B.S.
Social Work	•	College of Education and Human Services B.S.
Sociology	• •	College of Liberal Arts B.A.
Spanish ¹	•	College of Liberal Arts
Special Education	•	College of Education and Human Services B.S.
Speech Communication	• •	College of Liberal Arts B.S.
Sport Administration	•	College of Education and Human Services B.S.
Sustainability	•	College of Liberal Arts
Technical Resource Management ⁵	•	College of Applied Sciences and Arts B.S.
Television Studies	•	College of Mass Communication and Media Arts
Theater	• •	College of Liberal Arts B.A.
University Studies	•	College of Liberal Arts B.A., B.S.
Visual and Screen Cultures	•	College of Mass Communication and Media Arts
Women, Gender and Sexuality Studies	•	College of Liberal Arts
Workforce Education and Development ⁵	• •	College of Education and Human Services B.S.
Zoology	• •	College of Science B.A., B.S.

¹Described under Languages, Cultures & International Studies²Described under Kinesiology³Described under Curriculum and Instruction⁴Described under Animal Science⁵Qualified A.A.S. graduates may be eligible to earn a B.S. degree through the Capstone Option. (See Chapter 3)

Campus Visitors

We welcome visitors to experience Southern Illinois University Carbondale through our Campus Visit Programs, which include Individualized Visits, Group Visits, Saturday Visits and special events hosted by Undergraduate Admissions. Special events include Open Houses, Off-Campus Previews and Off-Campus Admitted Student Receptions. Information and registration for all visit options can be found at admissions.siu.edu/visit.

Individual Campus Visits. Prospective students and their families may schedule an individualized visit to campus. Appointments are available Monday through Friday, 8:00 a.m. – 4:30 p.m. and select Saturdays during the fall and spring semesters (see Saturday Visits below). Please request your visit at least two weeks in advance to allow us time to schedule your appointments. Student-led tours of campus and housing allow prospective students to experience SIU from the unique viewpoint of a current student. A meeting with an admissions counselor will provide information on academic programs, student services, admissions policies and procedures, housing options, financial aid and general information about the campus and community. Appointments can also be scheduled with representatives of various academic programs and student services. These appointments must be scheduled in advance and are subject to availability of a representative. Once your visit is scheduled, an itinerary will be sent via email. It is important to arrive early to take advantage of all scheduled aspects of your visit. Campus visitors without scheduled appointments will be accommodated to the best of our abilities. To schedule an individualized campus visit, please complete the online visit request form at admissions.siu.edu/visit/programs/individual-visits.html or call 618-453-7141.

Group Visits. We encourage a visit from your high school, community college, community organization or church. One month advance notice is necessary to allow for special arrangements to ensure a successful visit for your group. Groups are encouraged to visit on the date of an Open House. Group Visits are only available Monday – Friday, except on Open House days. For more information about our Group Visit Program, please visit our website at admissions.siu.edu/visit/programs/group-visit.html or call 618-453-2957.

Saturday Visits. Prospective students and families may schedule a visit to campus on a few select Saturdays in the fall and spring. Saturday visits include a group admissions presentation, student-led campus tour and housing tour. On select Saturdays, students will have a chance to speak with an academic representative about our academic majors. For more information and to register for a Saturday visit, please visit our website at admissions.siu.edu/visit/programs/Saturday.html or call 618-453-7141.

Open Houses. Open house programs are held on campus multiple times each year. Activities include information sessions on housing, financial aid, admissions, honors and other student services. Additionally, an academic college fair and college showcases are held to allow students the opportunity to speak with faculty and staff in the college of their major interest. Campus and housing tours are offered at various times throughout

the program, with a chance to enjoy other activities or events. For more information and to register for an Open House, please visit our website at admissions.siu.edu/openhouse or call 618-453-7141.

Off-Campus Previews. Visit SIU without leaving home! Off-campus preview programs are held in Chicago and St. Louis in the spring. Prospective students and families have the opportunity to speak with representatives from admissions, financial aid, housing and other student services, as well as representatives from our academic colleges who can provide information about specific majors and minors offered. Also, local alumni will be available to share their SIU experiences. For more information and to register for an off-campus event, please visit our website at admissions.siu.edu/offcampus or call 618-453-7141.

Off-Campus Admitted Student Receptions. Students who have been accepted to SIU might be wondering what to do next. The next step for admitted students is New Student Orientation, but an admitted student reception is a chance to get any last minute questions answered before signing up for Orientation. At an off-campus admitted student reception, students and families will get a chance to meet fellow current and incoming Salukis and hear about student life at SIU. Also, faculty and staff will be present to share information on academic life at SIU and what to expect in the classroom. Local alumni will be available to share their SIU experiences. For more information and to register for an off-campus event, please visit our website at admissions.siu.edu/offcampus or call 618-453-7141.

For information about upcoming visit opportunities, please visit our website at admissions.siu.edu/visit or contact the Campus Visit Program at visitsiu@siu.edu or 618-453-7141.

Applying for Admission

Request the Undergraduate Admission Application from Undergraduate Admissions, Mailcode 4710, Southern Illinois University Carbondale, Carbondale, Illinois 62901, call (618) 536-4405 (direct), email admissions@siu.edu or view our home page at <http://www.admissions.siu.edu>. You can submit the Application for Undergraduate Admission and Scholarships electronically. For admission requirements see Chapter 2.

Campus Living

Traditional Residence Halls

University Housing offers two residence hall areas – East Campus and West Campus. Each area offers dining services, 24-hour emergency maintenance and live-in staff. The traditional residence hall contract includes meals, all utilities (air-conditioning in all buildings), wireless Internet and cable television. Students may contract online at housing.siu.edu.

Junior/Senior Housing

University Housing offers designated junior/senior housing in University Hall. Rooms are furnished and include wireless Internet, cable TV, and all utilities. A kitchenette is available on site. A dining plan is optional for juniors and seniors residing in University Hall.

Residence Hall Dining

University Housing offers the Saluki Anytime dining plan,

which provides all-you-care-to-eat meals. Options include cook to order deli, light menu options, vegetarian entrees, soup and salad bars and more. Complimentary nutritional counseling is available. Dietary questions can be addressed to our Nutrition Team. Information about dining off campus is available online at housing.siu.edu.

Getting Involved

University Housing offers involvement and leadership opportunities through the Residence Hall Association, Area Councils, and the Black Togetherness Organization. In addition, more than 2000 social and educational programs are offered in the halls each year.

University Housing Apartments

University Housing offers three apartment areas. Live-in staff are available to assist residents and 24-hour emergency maintenance is offered. All apartments are air-conditioned and laundry facilities are located in each area.

Wall & Grand Apartments offer all-inclusive, two- and four-bedroom apartments. Each apartment houses four students and is fully furnished, with a complete kitchen and washer/dryer in each unit.

Eligibility: Single sophomores, juniors, seniors and graduate students of any age and single freshmen age 21 and older.

Evergreen Terrace Apartments offer two- and three-bedroom unfurnished apartments. Water and trash are included. A computer lab and laundry room located on site. Programs and activities for adults and children are available. Eligibility: Students with children, married or domestic partner students and single graduate students.

Elizabeth Apartments is a two-story brick complex with 16 furnished efficiency apartments. Utilities are included. Eligibility: Single graduate students.

For more information, visit housing.siu.edu.

Off-Campus Housing

All off-campus housing is privately owned. Off-campus housing information is available through online classifieds such as dailyegyptian.com, southernillinoisian.com, and at apartmentfinder.com.

Parking on Campus

Students parking a motor vehicle on campus must display a valid and appropriate parking permit obtained from the Parking Division. The Parking Division of the Department of Public Safety assists students with parking on campus by issuing a parking decal or a temporary parking permit for individuals with short-term parking needs. Parking regulations are enforced twenty-four hours a day, seven days a week and can be reviewed at our website. Applications for parking privileges can be completed online at <http://www.dps.siu.edu/parking>.

The Parking Division office is open 7:30 a.m. - 4:30 p.m. Monday through Friday. After hours, please contact the SIU Police Department for parking guidance at (618) 453-3771.

Please visit the Department of Public Safety website at <http://parking.siu.edu> for additional parking information and policies or contact us at (618) 453-5369 or parkingdiv@dps.siu.edu.

Financial Aid

The Financial Aid Office assists students in obtaining monetary assistance to finance their postsecondary education at Southern Illinois University Carbondale. Last year SIU distributed over \$284 million in financial aid to 17,395 students.

Offers of financial aid are extended beginning in March 2015 for the upcoming fall and spring semesters. These offers are based on the student filing the Free Application for Federal Student Aid (FAFSA), and may include a combination of grants, scholarships, loans and employment. Students should complete the FAFSA as early as possible after January 1. Institutional and state aid are awarded on a first come basis.

Financial Aid Programs

The University participates in federal, state, and institutionally funded financial aid programs. The Financial Aid Office website at www.fao.siu.edu summarizes the types of financial aid available, application procedures, eligibility requirements, and deadlines.

Grants. The following grant programs are need based and awarded based on the results of the FAFSA:

- Federal Pell Grant
- Federal Supplemental Educational Opportunity Grant (SEOG)
- Illinois Monetary Grant Program (MAP)
- Student-To-Student (STS) Grant
- SIU Grant

Scholarships. Southern Illinois University Carbondale offers scholarships based on academic achievement, special talent, athletic ability or other considerations. Our scholarship program provides entering freshmen and transfer awards to students who have achieved high academic standards. Awards to continuing students who have excelled are also available. Scholarships vary in eligibility requirements and dollar values. A comprehensive list of scholarships is available at www.scholarships.siu.edu.

Loans. Students attending SIU can borrow funds from the Federal Direct Stafford/Ford loan programs. Students completing a FAFSA will automatically be considered for federal loans. The Federal Direct Subsidized Stafford/Ford Loan and the Federal Perkins Loan are based on financial need. The Federal Direct Unsubsidized Stafford/Ford Loan is awarded to students who do not demonstrate financial need. The Federal Direct Parent Loan for Undergraduate Students (PLUS) is not based on financial need and allows parents to borrow for their dependent student's cost of attendance. Alternative loans through private lenders are also available.

Employment. The University employed over 4,300 students last year. Most student employees work at the SIU minimum wage for 15 to 20 hours per week. Job listings can be found at www.studentjobs.siu.edu.

Application for Financial Aid for the 2015-2016 Academic Year

To apply for financial aid, students and their parents (if applicable) should complete a 2015-16 Free Application for Federal Student Aid (FAFSA). Students are encouraged to apply online at www.fafsa.ed.gov. When completing the FAFSA, entering

our school code of 001758 will allow us to receive application information electronically from the U. S. Department of Education.

Students should complete their FAFSA as early as possible after January 1, 2015, since funding is limited and distributed to eligible students on a first come, first served basis.

Senior Citizens Courses Act

Senior citizen as defined under the Act means a person 65 years of age or older whose annual income is less than the specified threshold for a household containing one person and other requirements contained in the Senior Citizens Assistance Act (320 ILCS 25). The statute requires the University to waive the tuition for such citizens unless classroom space is not available or if tuition paying students enrolled do not constitute the minimum number required for the course. Even though tuition is waived, the student must pay other fees.

Satisfactory Academic Progress Requirements

Students receiving most forms of financial aid are required to make academic progress toward their degree to remain eligible for assistance. At the end of each spring semester, academic records are evaluated to determine if the student meets the credit hour completion requirement, as well as the 2.00 minimum grade point average. Students must also complete their degree within a maximum number of semesters and are limited

in the maximum number of credit hours earned. Students failing to meet the satisfactory progress standard will be denied any future financial aid. Policy details may be found at <www.fao.siu.edu>.

Students who reduce attempted hours or receive WF or WU grades that reduce enrollment to less than half time, or who withdraw from SIU Carbondale are subject to repayment of financial aid based on the last date of attendance.

Additional Financial Aid Information

Students desiring information should contact the Financial Aid Office, Mail Code 4702, Student Services Building-Suite 0211, 1263 Lincoln Drive, Carbondale, Illinois 62901; telephone (618) 453-4334, or visit the website at <http://www.fao.siu.edu>. Students may FAX financial aid documents to (618) 453-7305.

Students can contact the Financial Aid Office electronically at email address: <fao@siu.edu>. Students can also access information at: <<http://www.fao.siu.edu>> or obtain their financial aid information from SalukiNet at: <<http://salukinet.siu.edu>>.

Note: At the time of printing this publication, final rules and regulations for the 2015-2016 academic school year were pending. Students should contact the Financial Aid Office for the most recent information.

2/ Admission, Tuition and Academic Information



Admission Policies, Requirements, Procedures

Policies and procedures for admission are presented in the admissions section of this chapter. Definitions of each category of admissions are included along with procedures needed to follow to complete your undergraduate admission application.

APPLYING FOR ADMISSION

You may obtain an application one of several ways. Apply online at: <http://admissions.siu.edu>. Request an Application for Undergraduate Admission and Scholarships from Undergraduate Admissions, Mailcode 4710, Southern Illinois University Carbondale, Carbondale, Illinois, 62901, phone (618) 536-4405 or email admissions@siu.edu or download a printable application at: <http://admissions.siu.edu>. The application requires a \$40 non-refundable fee. The admission application cannot be processed until the application fee is received. The fee must be paid using a credit card if applying online and by check or money order if using the paper application.

The application term may be changed one time per application, provided the request is made prior to the start of the original application term.

The University closes admission to some programs whenever the availability of faculty or facilities necessitates such closures. The University also stops accepting admission applications from freshmen whenever the availability of the University resources dictates this action.

If you are transfer student you can be considered for any future term. Transfer students who intend to transfer to Southern Illinois University Carbondale before completing one year of study may be admitted prior to completing their transfer work if they qualified for admission as beginning freshmen.

As part of its admission process, the University requires applicants to answer a series of "Public Safety Questions" eliciting information about prior criminal convictions, pending criminal charges, and disciplinary suspensions from other colleges or universities. If a positive response is given to one or more of these Public Safety Questions, the applicant is asked to provide supplemental information and to authorize the University to conduct a criminal background check if deemed necessary. The University requires this information to help ensure a safe environment for all members of our community and their property and to evaluate the character, maturity, and responsibility of its applicants. Information obtained from the applicant and through the criminal background check will be evaluated and may serve as a basis to deny admission or to impose specific conditions on admission. Providing false or inaccurate information relative to the applicant's criminal or disciplinary history may result in denial of admission. The existence of a conviction, pending criminal charges or previous disciplinary suspension does not necessarily mean that a student will be denied admission to the University. Each case will be evaluated on its facts.

Applications are reviewed by representatives of the University's various academic units and a University Admissions Review Committee, which make recommendations to the office of Undergraduate Admissions. All appeals are initiated through Undergraduate Admissions. Further appeals should be direct-

ed to the Director of Admissions. Appeals beyond the Director of Admissions should be directed to the Provost. Decisions by the Provost are final.

Documents required to process an application for admission

All students need a completed Application for Undergraduate Admission and Scholarships accompanied by the \$40 non-refundable application fee.

New first time freshmen and transfers with less than 26 semester hours

1. Official High School Transcripts or GED Test Scores.
2. ACT or SAT scores¹.

Transfer Students (including those with less than 26 semester hours)

1. Official transcripts from each institution of post-secondary education attended, even if no credit was earned. Transcripts must not be issued for more than 30 days.

¹Must have their official ACT scores sent to the University from ACT, Inc., Box 451, Iowa City, Iowa 52240, www.act.org or their official SAT scores sent to the university from the College Board SAT Program, PO Box 6200, Princeton, New Jersey 08541, www.collegeboard.com.

Programs Requiring Additional Materials or Screening

In addition to the undergraduate admission application and the required educational records, some programs require applicants to submit other materials. If other materials are needed, the student will receive information and instructions from their intended major after admission to the University.

The following majors require that students be screened beyond the regular SIU Carbondale admission requirements before entering directly into the programs: architectural studies, automotive technology, aviation flight, aviation management, business and administration, dental hygiene, fire service management, music, physical therapist assistant, and radiologic sciences.

In most cases, students may apply for any major in any term. However, a few majors at SIU permit new students to enter in the fall semester only. They are: architectural studies, dental hygiene, fashion design and merchandising, interior design, physical therapist assistant and radiologic sciences. For transfer students, admission to architectural studies and interior design in spring or summer will be considered individually.

Mortuary Science and Funeral Service offers major courses beginning in the fall only, but will permit students to begin in the spring and summer terms to take non-major courses.

ADMISSION OF FRESHMEN

To be eligible for admission, you must be a graduate of a recognized high school. Graduates of non-recognized high schools may be admitted to the University by submitting an acceptable entrance examination score. If you have not completed high school, you may be considered for admission by passing the GED test.

Freshmen students will be admitted directly to the academic unit in which their major field of study is offered if they qualify for that program. Students who are undecided about their major field of study will be admitted and advised by University

College or the selected unit with an undecided major.

Students admitted as beginning freshmen, but who enroll at another college or university prior to their enrollment at Southern Illinois University Carbondale may face a change in their admission status. It will be necessary for students to report work in progress and forward the official transcripts after completion of the coursework.

Beginning freshmen are considered for admission on the basis of a combination of high school performance and test scores (ACT or SAT). In addition, students entering the University are required to have completed selected high school courses to qualify for unconditional admission. All students granted admission while in high school are required to graduate from high school and to meet the Course Subject Pattern Requirements listed below.

Course Subject Pattern Requirements. This policy applies to beginning freshmen and transfer students who have completed fewer than twenty-six semester hours of transferable credit.

High school units in excess of the required number of units in social studies or science may be redistributed among the other categories by applying no more than one unit to any of the following categories: social studies, science, or elective. Elective subjects cannot be substituted for required courses in English, mathematics, science or social sciences. A prospective student with two or more deficiencies in English or mathematics may be subject to denial.

Beginning freshmen may satisfy a course pattern deficiency by achieving a sub score on the ACT, which is equivalent to the sixtieth percentile on the College Bound Norms. CLEP scores or AP scores that qualify the student for credit may also fulfill deficiencies. The tests must be in the area that is deficient.

Students who have course pattern deficiencies but qualify for admission based on high school grade point average, test scores and transfer grade point average, will be admitted to the University on the condition that deficiencies will be satisfied through the academic advisement process.

Selected applicants are exempt from the course subject pattern requirements. These include students whose high school grade point average and ACT/SAT test scores are at the seventy-fifth percentile, participants in the high school/concurrent

enrollment program until the time of their high school graduation, and transfer students who have earned twenty-six semester hours of transferable credit.

Requirements for Admission of Freshmen

High school graduation and fulfillment of mandated course subject pattern requirements are required for admission.

Additionally, applicants meeting either of the following two criteria will be automatically admitted to the University. Exceptions to this rule are those programs that have established additional admission requirements beyond the University’s minimum standards for admission, and recommendations of the Campus Violence Prevention Committee that deny or place conditions on admission.

ACT composite score at or above 23 and a high school grade point average at or above a 2.0 (on a 4.0 scale)

or

ACT composite score at or above 18 and a high school grade point average at or above a 3.0 (on a 4.0 scale).

All other applicants who meet the course subject pattern requirements will undergo a holistic review to determine potential admissibility. Admission of students who do not meet automatic admission requirements may be subject to conditions.

The preferred deadline for completed applications is December 1st, for entry in the following fall semester. The secondary deadline is May 1st. A completed application consists of an Application for Undergraduate Admission and Scholarships and receipt of all necessary credentials, including test scores and transcripts. All completed applications received by the preferred deadline will be guaranteed a decision by February 1.

Course Subject Pattern Requirements for Admission

Course	Required Units	High School Courses That Complete the Area
English	4	Emphasizing written and oral communication and literature.
Social Studies	3	Emphasizing history, government, sociology, psychology, geography, etc.
Mathematics	3	Algebra I and II, and a proof-based geometry course. A fourth unit is highly recommended: trigonometry and precalculus, or statistics, depending on the student’s area of interest.
Science	3	Laboratory sciences.
Electives	2	Foreign language, art, music, or vocational education. If a foreign language is taken, it must include two semesters of the same language.
Total	15 – 15.5	

ADMISSION OF TRANSFER STUDENTS

If you have attended another college, university, or postsecondary institution you are required to submit an official transcript from each institution attended. All transcripts become the official property of Southern Illinois University Carbondale and will not be returned nor issued to another institution. Transcripts must be issued by the previously attended institution within the last thirty days. Transcripts are required from the following institutions:

1. An institution which is accredited or in candidacy status by one of the regional accrediting associations; or,
2. An institution which is not accredited by or in candidacy status with one of the regional accrediting associations but the credit from the institution is accepted by the reporting institution in that state; or,
3. An institution which is not accredited by or in candidacy status with one of the regional accrediting associations but is one recognized by ACCSCT, ACICS, N.A.I.T., AMA, ABET, or similar accrediting bodies recognized by the Council of Higher Education Accreditation or the United States Office of Education. The student must have completed a two-year non-baccalaureate degree or equivalent terminal program with a C average before admission to SIU will be granted. Students admitted from such institutions should not expect to receive credit at Southern Illinois University Carbondale except in programs which accept occupational credit.

Requirements for Admission of Transfer Students

1. Graduation from a recognized high school or satisfactory completion of the General Educational Development Test; and,
2. An overall C average (2.0 on a 4.0 scale) from all post-secondary institutions. If necessary, grade point average will be converted to a 4.0 scale and/or semester hours. Remedial (non-credit) course work is not used in calculating the admission grade point average. All transfer work is calculated according to Southern Illinois University Carbondale regulations rather than those of institutions students have previously attended; or,
3. Completion of an associate degree in a baccalaureate-oriented program (A.A. or A.S.) from an accredited Illinois public two-year institution; completion of an A.A. from an accredited Missouri public two-year institution; or completion of an A.A. or A.S. from a Kentucky Community and Technical College System institution. The student will: (a) be admitted to the University with junior standing and, (b) be considered to have completed the University Core Curriculum requirements for general graduation purposes; and,
4. Eligible to continue your enrollment at the last post-secondary institution attended. Students who have been placed on scholastic probation or academic suspension from another college or university will be considered for admission by Undergraduate Admissions only if there is tangible evidence that additional education can be completed successfully. Tangible evidence might include: (1) an interruption of schooling for one or more years, (2) military experience, (3) work experience, and (4) previous academic performance.

The Office of Student Rights and Responsibilities must clear students suspended for any reason other than academic failure, before the Director of Admissions will grant admission. If you are seeking admission with fewer than twenty-six semester hours, you will be required to meet the admission requirements of a beginning freshman as well as a transfer student.

Transfer students who have completed a minimum of one year of work can be considered for admission in advance of their matriculation. If you are enrolled in a collegiate program for the first time and wish to transfer upon completion of your first term or first year, you may do so if you meet the University's admission requirements for beginning freshmen. Admission granted to a student on partial or incomplete records is granted with the condition that the student will have an overall C average and be eligible to continue at the last school attended at the time of matriculation. Students whose final transcripts indicate a grade point average or scholastic standing less than that required for unconditional admission may have their admission and registration withdrawn or their scholastic standing changed. Transfer students admitted on the basis of incomplete transcripts must submit complete transcripts prior to being allowed to register for a second term at SIU.

Transfer students will be admitted directly to the academic unit in which their major field of study is offered if they qualify for that program. Students who are undecided about their major field of study will be admitted and advised by University College or the selected unit with an undecided major.

Dual Admission Program

The Dual Admission Program allows baccalaureate-oriented students at eligible community colleges to benefit from pre-advisement for a chosen major at Southern Illinois University Carbondale. The Dual Admission Program addresses specific departmental requirements that a student may not automatically fulfill by completing their associate degree at their community college. Students who apply for the Dual Admission Program are provided with a transfer plan that will guide them to the most direct route to their bachelor's degree, along with personalized contact with an SIU representative. The transfer plan includes major, College, and University Core Curriculum requirements. Dual Admission Program students receive access to enroll in an online Dual Admission Program course which connects students early to the University, its resources, and other transfer students. Students apply to the Dual Admission Program by completing the Application for Undergraduate Admission and Scholarships and indicating interest in the Dual Admission Program. Students must have at least two semesters remaining at their community college to participate, must select a participating SIU major, and must attend an eligible community college. Information on participating degree programs and community colleges are located online at admissions.siu.edu/dap.

Transfer Credit

Transfer credit for students admitted to the University is evaluated for acceptance toward University Core Curriculum requirements by Transfer Student Services (a division of Enrollment Management). Credit from a regionally accredited institution, and those in candidacy status, or from an institution that has its credit accepted by the reporting institution in the

state is evaluated at the time of admission. Courses, which are remedial, developmental or pre-college, will not be accepted for transfer. Transfer Student Services will determine the acceptance of credit and its applicability toward University Core Curriculum requirements. All credit accepted for transfer, which is not applied to University Core Curriculum requirements or to a specific degree program, will be considered general transfer credit (elective credit). Transfer courses to be considered toward specific program requirements will be authorized by the department directing the program. Information on articulation of individual schools is available at: <http://transfer.siu.edu>.

Credit for Military Experience. Students who have served one or more years of active duty and received an honorable or general discharge may receive two hours of military studies credit, two hours of physical education credit, and two hours of health education credit which satisfies the UCC Human Health requirement. Service of only six months to one year may result in two hours of freshman aerospace studies or army military science credit. Completion of basic training will result in an award of two hours of physical education credit. To receive credit, students must submit a copy of the DD 214 (copy 4) document.

Credit will be accepted for DANTES subject standardized courses within the limits enforced for proficiency credit. No credit is allowed for college-level GED tests. In evaluating credit possibilities based on formal service-school training programs, the recommendations of the American Council on Education, as set forth in the US Government bulletin *Guide to the Evaluation of Educational Experiences* in the Armed Forces are followed. To receive credit for military service, veterans must present a copy of DD214, a Joint Services (JST) transcript, an AARTS transcript, a SMART transcript or transcript from the Community College of the Air Force to Southern Illinois University Carbondale, Transfer Student Services, Student Services Building, Mailcode 4725, 1263 Lincoln Drive, Room 0382, Carbondale, IL 62901. For information go to: <http://transfer.siu.edu>.

Submission of Transcripts. Transfer students who have taken college-level work at other institutions must have an official transcript of all work, from each college or university attended, forwarded to Transfer Student Services. All transcripts must be issued by the sending institution within the last thirty days. Failure to comply with this ruling, failure to indicate all institutions attended on the Application for Undergraduate Admission and Scholarships, or incorrect information regarding the status at other institutions can result in withdrawal of admission, dismissal, or denial of credit. Transfer students admitted on the basis of incomplete transcripts must submit complete transcripts prior to being allowed to register for a second term at SIU.

Completion of an associate degree in a baccalaureate-oriented program (A.A. or A.S.) in an accredited Illinois two-year public institution; completion of an A.A. from an accredited Missouri public two-year institution; or completion of an A.A. or A.S. from a Kentucky Community and Technical College System institution provides that the student will: (a) be accepted with junior standing and (b) be considered to have completed the University Core Curriculum requirements for general graduation purposes. These benefits do not automatically apply

to other associate degrees (e.g., A.A.S., A.E.S., A.G.S., A.F.A.). Associate degrees earned at out-of-state two-year institutions will be reviewed by Transfer Student Services. If the degree is determined to be baccalaureate-oriented and to have comparable content and credit hour criteria, the same benefits will be extended to those graduates. Transfer students may also satisfy the requirements of the University Core Curriculum by successful completion of the Illinois Transferable General Education Curriculum. Credit from an accredited two-year institution is limited only by the provision that students must earn at least 42 semester hours of senior level (300-400) work at Southern Illinois University Carbondale or at any other approved four-year institution and must complete the residence requirements for a degree from the University.

Further information on the application of transfer work toward satisfying University Core Curriculum requirements may be found in Chapter 3.

ADMISSION OF SPECIAL CATEGORIES OF STUDENTS

Several types of students are given special consideration when seeking admission to the University.

Provisional Admission at Off-campus Military Sites

Students may be provisionally admitted to off-campus degree programs at military sites for one semester with incomplete academic credentials. Certain academic records may be necessary to receive financial aid. For students to be released from provisional status, they must submit official transcripts from all institutions previously attended, including high school transcripts and ACT or SAT scores (if the applicant is under 21 years of age) if they have earned less than 26 hours of transfer work. Working closely with their academic advisors, students must submit all required academic records and meet all University admission requirements in order to register for further course work beyond the first semester of attendance.

Admission of International Students

In general, International Students must meet the same academic standards for admission as those required of domestic students. As there is considerable variation between educational systems throughout the world, precise comparative standards are not always available. Therefore, International Students are considered for admission on the basis of their former academic work, English proficiency, and evidence of adequate financial resources.

Educational Records. You must submit official transcripts, certificates, or mark sheets from all secondary schools, colleges and universities you have attended. Also, submit the official results of any national secondary school examinations you are required to take. If you completed high school in the U.S.A. or in an American high school system, submit scores from the American College Test (ACT) or the Scholastic Aptitude Test (SAT). Other applicants may submit SAT scores for admission consideration, but they are not required to do so.

The access codes for the West African School Certificate should be submitted with the application. This will allow us to process your application quickly.

The submission of unofficial records (those that do not bear

the original signature of the institution's representative), will delay the processing of your admission. The Registrar, Headmaster, or Dean of the institution issuing the documents must sign all credentials. Photocopies are acceptable only if they bear the institution's original seal and the original signature of the school official certifying the documents. Transcripts and other records attested as certified by a notary public or solicitor (non-institutional official) are not being accepted as official.

2014-2015 Financial Requirements. Beginning Fall 2013 semester, international students must have assured financial resources of approximately \$38,000 (U.S. dollars) for the 2013-2014 academic year of study at SIU. PLEASE NOTE: Tuition charges have not yet been determined for 2014-2015. *The cost of attendance at SIU Carbondale is subject to change without notice.* Please refer to the International Admissions Application for details.

English Competency. You must also demonstrate English competency before you can enroll in SIU Carbondale university courses. TOEFL scores are required of all International Students and those who have acquired immigrant status. Either of the following options will qualify you for exemption from our Center for English as a second Language TOEFL examination:

TOEFL	IELTS	ITEP	Academic Plus
520-Paper based	6	4	2 yrs high school
68-Internet based			56 college hours

An administrative service fee of \$100 per student per semester, including summer session, will be charged to sponsoring agencies which enroll international students.

International students interested in making application to Southern Illinois University Carbondale should address their inquiries to Center for International Education, Mailcode 4333, Southern Illinois University Carbondale, Carbondale, Illinois 62901. The undergraduate international admission application can be submitted electronically by linking to <http://www.cie.siu.edu>.

Southern Illinois University Carbondale is authorized under Federal law to enroll non-immigrant alien students.

Admission of Former Students

If you have attended other institutions since your previous enrollment at Southern Illinois University Carbondale you must submit an official transcript from each institution before you can be considered for readmission. An overall *C* average (2.0 on 4.0 scale) as calculated according to SIU grading policies and procedures and based on all post-secondary institutions attended since previous SIU enrollment is required for readmission consideration. Students who were suspended for scholastic or disciplinary reasons during their previous enrollment at the University must be approved for readmission by the appropriate academic dean or the Office of Student Rights and Responsibilities before they can be readmitted to the University. Students with less than a *C* average must be approved for readmission by an academic dean if they are entering an academic unit other than the one in which they were previously enrolled.

It is advisable for former students to initiate the readmission process with the Office of Undergraduate Admissions early. This permits students to complete any special requirements

that may be imposed upon them. (See Scholastic Probation, Academic Renewal Program for Former Students and Scholastic Suspension elsewhere in this catalog for further information.)

Academic Renewal Program for Former Students

The Academic Renewal Program is designed to allow some former Southern Illinois University Carbondale students, who had academic difficulty in their initial enrollment, an opportunity to get off probation faster and to graduate in a timely manner. The program permits eligible students to establish a new grade point average calculated from their first semester of readmission.

Program Eligibility Requirements. Former Southern Illinois University Carbondale students who meet one of the following qualifications may apply for entrance to the Academic Renewal Program.

1. Adult re-entering students who previously earned at Southern Illinois University Carbondale less than a 2.0 grade point average and have since had at least three calendar years interruption following their last enrolled term at SIU Carbondale. Applicants who have attended any post-secondary institution, college, or university within the immediate three years prior to re-entering Southern Illinois University Carbondale in the Academic Renewal Program, must have earned a 2.0 cumulative grade point average.
2. Veterans who have completed at least one year of active military service after having previously earned at Southern Illinois University Carbondale less than a 2.0 grade point average. Southern Illinois University Carbondale must be the first institution attended since discharge or separation.
3. Community college associate degree graduates who have previously earned from SIU Carbondale a grade point average below 2.0 prior to completing an associate degree from a regionally accredited institution. SIU must be the first institution attended since earning the associate degree.

Application/Admission Guidelines and Academic Regulations

1. A former Southern Illinois University Carbondale student must meet the University readmission requirements at the time of readmission before applying for the Academic Renewal Program.
2. The Academic Renewal Program application must be submitted before completing the first semester of attendance after being readmitted to the University. The application should be submitted soon after the readmission decision is granted.
3. A student can be admitted to Academic Renewal only once. Students who are suspended for scholastic reasons while enrolled in Academic Renewal cannot be readmitted to this program.
4. Teacher Education Programs in the College of Education and Human Services as well as those majors in other colleges in which a student intends to pursue a Teacher Education Program are not available to students in the Academic Renewal Program.
5. Students readmitted through the Academic Renewal Program will have Academic Renewal indicated on their transcripts with an appropriate explanation of the program

included in the transcript explanation sheet, which is attached to all transcripts.

6. A new Southern Illinois University Carbondale grade point average will be calculated from the first term of readmission through the Academic Renewal Program.
7. The new Southern Illinois University Carbondale grade point average will apply only to scholastic retention, and the grade point average required for graduation from the University. All grades earned at Southern Illinois University Carbondale, including all work taken prior to admittance to the Academic Renewal Program, will be used in the calculation of student classification, major program grade point average, collegiate unit requirements, graduation honors, and total semester hours completed.
8. Previously earned work at Southern Illinois University Carbondale will remain on the student's official record and passing work may be used to satisfy degree requirements.
9. Students readmitted through the Academic Renewal Program may not use the University's forgiveness policy to calculate another grade point average for graduation purposes.
10. To be eligible for graduation, a student readmitted through the Academic Renewal Program must earn at least 30 additional semester hours at Southern Illinois University Carbondale.
11. An Academic Renewal student who changes majors to a program that does not participate in Academic Renewal, (see number 4) will have their previous SIU grade point average calculated in all future grade point averages.

Admission of Veterans

Veterans seeking admission to the University are admitted in good standing regardless of their previous academic record provided that any additional post-secondary education attempted after active duty has been completed with a grade point average of *C* (2.0 on a 4.0 scale) quality or better.

Veterans are required to submit all required admission credentials before their applications can be processed. This includes high school transcripts or GED scores, ACT or SAT results if under the age of 21, and official transcripts from each college or university previously attended. Official transcripts from the previously attended institutions must not be more than thirty days old. In order to be admitted under the veteran's policy, one must have served on active duty and present a copy of discharge or separation papers (DD 214-copy 4) to the Transfer Student Services Office. There is a \$40 non-refundable fee, which must accompany the Application for Undergraduate Admission and Scholarships.

Military personnel on active duty in any branch of the United States military are expected to meet the same admission requirements as a veteran. Students in military programs are admitted directly into the degree program in which they are enrolling.

Admission of Non-Degree Students

Adults may be considered for admission as Unclassified, non-degree students if they wish to take classes but do not intend to earn a degree at SIU. Students in this category may take up to a total of twenty-six semester hours before they are required to

provide all of their academic credentials. Students in this category are not ordinarily eligible for any financial aid program. There is a \$40 non-refundable fee that must accompany the application. This fee is not required of students enrolling solely in courses specifically designated as Distance Education.

Senior Citizen Courses Act

Students admitted under the Senior Citizen Courses Act may be considered for admission as unclassified non-degree students without submitting records required for admission to a degree program. Those seeking admission to a degree program must meet all University admission policies. For further information refer to Financial Aid.

Admission of High School Students for Concurrent Enrollment

Exceptionally capable high school students that have completed their freshman year in high school and are recommended in writing by their high school principal may be approved for admission by the Director of Undergraduate Admissions. Enrollment in some University courses may be subject to departmental approval. Students approved for admission to this program will be permitted to enroll in University courses during the summer and concurrently with their high school work during the regular school year. Sophomores and juniors may register for one course and seniors may enroll for one and possibly two courses depending on their high school schedules. There is a \$40 non-refundable fee, which must accompany the application. The concurrent enrollment program is an acceleration and enrichment experience for academically capable students. To participate in the program, students must have achieved an overall *B* grade point average (3.0 on a 4.0 scale) in high school.

The University courses to be taken in this program should be in subject areas in which a high school does not offer courses or in subject areas in which the student has completed all of the courses the high school can offer. When a high school principal recommends a specific course or courses to be taken, an academic advisor will assist the student in arranging such a schedule.

It is assumed that high school principals or guidance counselors who recommend students for this program will consider a student's aptitude for completing college work and a student's ability to adjust socially to the campus community.

Advisement, Registration, Withdrawal

Through a carefully designed system of orientation, academic advisement and registration, the University attempts to assure students an efficient and effective introduction to the University prior to the time they start class attendance. A more extensive program is provided for those students entering during the fall semester while abbreviated activities are in operation for the other semesters.

The University conducts an advance registration system. All continuing and new students have the opportunity and are expected to complete advisement and registration for the semester before its actual start. Advisement and registration for new freshmen and transfer students are included with the orienta-

tion activities. These activities are offered prior to the start of school.

Similar procedures are followed at the start of the other semesters. Admitted students are kept informed of orientation, advisement, registration procedures, and the times when they occur by the Registrar's Office in cooperation with New Student Programs and other units in Student Affairs.

Academic Advisement

Academic advisement for the undecided freshman student is administered in first-year advisement in University College. Transfer students and continuing students advise with their academic unit. Each unit employs a select group of professional advisors. They operate under the supervision of a chief advisor who is responsible to the dean of the academic unit.

The University accepts the importance of the academic advisement function. Insistence on receipt of transcripts and ACT or SAT scores prior to admission serves not only to determine admission, but later provides suitable educational information to advisors upon which decisions can be made relative to the proper courses to advise the student to take. On the basis of this information, an advisor can make intelligent decisions relative to students who should receive advanced standing in courses or who should be urged to take proficiency examinations in courses about which they appear to be already well informed.

The advising of individual students as to their progress is a service provided to them. It does not relieve the students of the responsibility to assure that they are meeting the requirements they need for graduation. The students should check with their advisor whenever there is a question as to how they are proceeding.

Changing Majors

A student wishing to change their major must receive approval from the new department and college. A minimum of a C average is required to process a change in major; some academic units and departments require a higher grade point average. To ascertain the grade point average required for a department, check Chapter 5. Students with less than a C (2.0) grade point average who desire to change from one department to another will be admitted to the new academic unit only if approved by the dean of that unit. A change is initiated by going to the academic unit where admission is being sought. Current term major changes must be completed within the first two weeks of the semester. Any change received after week two will be processed for the next term.

Declaration of Major

Effective March 1, 2014, ahead of advance registration for Summer and Fall 2014, undergraduate students who have earned more than 45 total credit hours, but who have not yet earned a Bachelor's degree, must declare a major in a degree granting program, if they have not already done so. Such students who do not declare a major will be prevented from registering for future terms until they do declare a major. New and Transfer students, regardless of the number of credit hours that they may transfer to SIU, will be allowed to earn up to 26 credit hours of SIU work before being required to declare a major. Students concurrently enrolled at SIU and in the SIUE Nursing program may be exempt from this requirement.

Registration for Courses

Registration for any session of the University is contingent upon being eligible for registration. Thus advance registration, including the payment of tuition and fees, is considered to be invalid if the student is later declared to be ineligible to register due to scholastic reasons. One may also be considered ineligible to register because of financial or disciplinary reasons.

Detailed information about the dates and procedures for advisement and registration may be found at: <<http://registrar.siu.edu/schedclass/>>.

Familiarization with the following general points about registration is important:

1. Registration for a semester is conducted under a registration calendar consisting of three distinct periods. Advance registration occurs during the latter half of the preceding term, final registration immediately preceding the start of classes and late registration during the first week of classes.
2. Currently enrolled students are expected to register during the advance registration period. New freshmen, transfer, and re-entry students are provided an opportunity to advance register on specific new student registration days during the advance registration periods.
3. Students who are unable to advance register may register prior to the beginning of classes during the final registration period.
4. Students register online within SalukiNet (<http://salukinet.siu.edu/>) after visiting with the advisement center of their colleges, schools, or departments.
5. A student may not attend a class for which he/she is not officially registered. Mere attendance does not constitute registration in a class, nor will attendance in a class for which a student is not registered be a basis for asking that a program change be approved permitting registration in that class. Students should complete the registration process before classes begin.
6. Enrollment changes to classes are normally made within SalukiNet. After particular deadlines have passed which would prevent the student from doing this, such changes can only be made through the use of an official registration form approved by the advisement center and processed by the Registrar's Office.
7. Tuition and fees are payable as billed, and no student shall be allowed to register for classes in any educational unit if they have a past-due balance greater than \$200.
8. Students may not drop a course merely by stopping attendance, but must officially drop the course.
9. Transfer students admitted on the basis of incomplete transcripts must submit complete transcripts prior to being allowed to register for a second term at SIU.

Attendance

The faculty of Southern Illinois University Carbondale affirms the importance of prompt and regular attendance on the part of all undergraduate students. Quality instruction clearly depends upon active student participation in the classroom or its

equivalent learning environment. In the transition from high school to the university and from the university to the workplace, personal success is directly related to good attendance.

As a caring public institution, SIU has the obligation to encourage its primary constituents, the students, to meet their responsibilities first of all to themselves, but also to their families, their classmates, their instructors and the taxpayers and donors who underwrite higher education in the state of Illinois.

For these reasons the SIU faculty remind undergraduates and their instructor that the first day of class is just as valuable as the last day of class; that work and other extracurricular commitments do not necessarily justify an absence; that holidays begin and end precisely as stated in the University calendar; that instructors should be notified three days prior to religious observances; that major examinations, term papers, and/or assigned projects for one class do not exempt students from their need to attend another; and finally, that some financial assistance at the university is actually contingent upon attendance. Students who need to miss class due to religious observances should refer to the *Policy Accommodating Religious Observances of Students* at the end of Chapter 7 of this catalog.

Students who stop attending a class without officially dropping will be subject to being awarded a *WF* grade for the class. The *WF* grade is assigned by the instructor along with an indication of the recorded last date of attendance. The *WF* grade counts as an *F* in the undergraduate GPA calculation. The last date of attendance associated with the *WF* may affect the student's enrollment status, and thus their eligibility for financial aid.

These guidelines express the faculty's collective concern for undergraduates and for one important feature of their education here at SIU.

Student Identification Numbers

Effective Fall 2009 all students will be issued a system-generated ID number (referred to as their DAWG Tag) to be used in place of their Social Security number (SSN). The DAWG Tag will be the basis for a student's Network ID, which provides access to various campus computing systems (such as SalukiNet). The Network ID must first be claimed by the student (at <http://netid.siu.edu/>) before the student can use these computing systems.

The SSN may still be needed for things such as financial aid, student employment, and 1098-T reporting. If the SSN on file for the student is incorrect, the student can submit a correction of the SSN to the Bursar's Office. Official documentation may be required.

Name and Date of Birth

A student's legal name may be changed upon request to the Records staff within the Registrar's Office. If the name or the date of birth on file for the student is incorrect, the student can submit a correction to the same office. Official documentation may be required.

Withdrawal

Students who officially register for a session may not withdraw merely by the stopping of attendance. An official withdrawal form needs to be initiated by the student and processed by the University. Outlined below are the procedures to be followed when dropping courses and when dropping from the University (which would be withdrawal from all courses for which registered).

Deadline Dates

If Classes Meet for	Deadline for Withdrawal to Receive Full Refund	Deadline to Withdraw
13–16 weeks	2nd week	10th week
9–12 weeks	2nd week	8th week
8 weeks	2nd week	5th week
7 weeks	1st week	4th week
4–6 weeks	1st week	3rd week
2–3 weeks	1st day	1st week
Less than 2 weeks	1st day	2nd day

Course Drops. Effective Fall 2009 all students that wish to officially add or drop classes will do so within the Salukinet portal. Unless a student has processed an authorized drop from a course by the deadline in the schedule above, the student will not be allowed to drop the course. It is the student's responsibility to ensure that the drop process is officially completed. It is probable that a student, who does not drop by the deadlines, but stops attending during the second half of the semester, will receive a grade of *WF*. Note: ceasing to attend a course may affect a student's financial aid eligibility and the *WF* counts as an *F* in the calculation of the GPA. Students who drop courses after the full refund deadline, but remain enrolled in the University, will not receive any refund.

Effective for courses taken Summer 2013, or later, undergraduate students will be allowed a maximum of 6 credit hours or 50% of total semester enrollment, whichever is greater, of dropped courses during any given semester (3 hour limit in Summer) with a maximum of 12 credit hours of dropped courses over 60 hours of enrollment. Exceptions to this policy must be requested in writing by the Office of the Provost and Vice Chancellor of Academic Affairs. For the purpose of this policy, a dropped course is defined as any course dropped after the official date for receiving a full refund. This policy does not affect courses dropped as part of a full withdrawal for a term, nor do such courses count toward the maximums allowed.

Withdrawal From the University. Students registered for academic work must obtain a withdrawal if they contemplate leaving the University. If a housing contract has been purchased, the student must contact University Housing to cancel the contract.

Withdrawal from the University is a serious decision, which, in many cases, affects financial assistance status, housing contracts, and academic records. A student may, with authorization from the Registrar's Office, obtain a withdrawal. There are, however, restrictions on a withdrawal. A withdrawal will not be issued beyond the tenth week of the semester unless the reasons for the withdrawal are beyond the student's control and verified in writing. Warning: if a student obtains a withdrawal after the 100% refund period and is receiving financial assistance, the student may be in violation of the Satisfactory Progress for Financial Assistance policy since no academic credit will be earned for the semester. The table above provides the deadline dates for withdrawal.

Continued on page 29.

Tuition and Fees and Other Financial Information

Tuition and Fees

Tuition and fees charged students are established by the Board of Trustees and are subject to change whenever conditions necessitate. All tuition assessments are on a per-hour basis, as are most fee assessments. The tuition and fee amounts to be assessed students for Fall 2015 were not approved in time for inclusion in this Catalog. The tuition and fee schedules shown below are the fees currently in place for Fall 2014. More up-to-date information on tuition and fees may be found at: <http://tuition.siuc.edu>.

Fall 2014 On-Campus Undergraduate Tuition Charges (Per Semester Hour Enrolled)

Term of Entry at SIU	Illinois Resident ¹	Border State Resident ^{1,2}	Other Non-IL Resident ¹
Prior to Fall 2004	\$280.50 per hour	\$701.25 per hour	\$701.25 per hour
Fall 2004	\$280.50 per hour	\$701.25 per hour	\$701.25 per hour
Fall 2005	\$280.50 per hour	\$701.25 per hour	\$701.25 per hour
Fall 2006	\$280.50 per hour	\$701.25 per hour	\$701.25 per hour
Fall 2007	\$280.50 per hour	\$701.25 per hour	\$701.25 per hour
Fall 2008 ⁶	\$280.50 per hour	\$701.25 per hour	\$701.25 per hour
Fall 2009 ³	\$243.00 per hour	\$243.00 per hour	\$607.50 per hour
Fall 2010 ⁴	\$259.80 per hour	\$259.80 per hour	\$649.50 per hour
Fall 2011 ⁴	\$259.80 per hour	\$259.80 per hour	\$649.50 per hour
Fall 2012 ⁵	\$272.30 per hour	\$272.30 per hour	\$680.75 per hour
Fall 2013 ⁶	\$280.50 per hour	\$280.50 per hour	\$701.25 per hour
Fall 2014 ⁶	\$280.50 per hour	\$280.50 per hour	\$701.25 per hour

¹Tuition is capped at 15 times the above rates for students enrolled in 15 or more semester hours.

²Those from the border states of MO, KY, IN, TN, and AR (*and effective Fall 2014, WI and IA*).

³College of Business students have a tuition surcharge of \$36.45 per hour.

⁴College of Business students have a tuition surcharge of \$38.95 per hour.

⁵College of Business students have a tuition surcharge of \$40.85 per hour.

⁶College of Business students have a tuition surcharge of \$42.10 per hour.

Fall 2014 On-Campus Undergraduate Fee Charges (Flat and Per Semester Hour Enrolled)

Fee	Fee Type	Charge (all fees are subject to change)
STS Grant (1)	Flat	\$3.00 per semester
Student Attorney (2)	Flat	\$6.00 per semester
Student Center (3)	Per Hour	\$12.34 per hour up to a maximum of \$148.00 for 12 or more hours
Student Activity (4)	Per Hour	\$3.88 per hour up to a maximum of \$46.48 for 12 or more hours
Student Rec (5)	Per Hour	\$11.22 per hour up to a maximum of \$134.60 for 12 or more hours
Athletic Fund (6)	Per Hour	\$26.25 per hour up to a maximum of \$315.00 for 12 or more hours
Campus Rec (7)	Per Hour	\$0.72 per hour up to a maximum of \$8.54 for 12 or more hours
Student Medical (8)*	Flat	\$656.00 per semester
Revenue Bond (9)	Per Hour	\$4.95 per hour up to a maximum of \$59.40 for 12 or more hours
Mass Transit (10)	Per Hour	\$4.21 per hour up to a maximum of \$50.50 for 12 or more hours
Info. Technology (11)	Per Hour	\$7.00 per hour up to a maximum of \$84.00 for 12 or more hours ¹
Student Svcs. Bldg. (12)	Per Hour	\$6.67 per hour up to a maximum of \$80.00 for 12 or more hours
Facilities Maint. (13)	Per Hour	\$19.00 per hour up to a maximum of \$228.00 for 12 or more hours ¹
Green (14)	Per Hour	\$0.84 per hour up to a maximum of \$10.00 for 12 or more hours
Student Media	Per Hour	\$0.75 per hour up to a maximum of \$9.00 for 12 or more hours

*Student Medical Benefit Fee is comprised of the SMB: Student Health Fee of \$219.00 and the SMB: Student Insurance Fee of \$437.00.

¹New incoming students for Fall 2013 or later who register for more than 12 hours will not have this fee capped at the noted maximum amount.

The fees which have been established by the Board of Trustees are payable by all students unless they are specifically exempted by the Board of Trustees. All fees are considered to be institutional in nature and require payment regardless of whether or not the student receives direct benefits or is in a location which permits access to such benefits.

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Students receiving a withdrawal from a full semester length course within the first two weeks will, under normal circumstances, receive a refund of all tuition and fees paid by the student or family. Some or all financial assistance funds, depending on the source, will be returned to their original sources if the student withdraws during the 100% period.

Students who withdraw after the full refund deadline will receive an account credit equal to the appropriate refund of tuition and fees. An administrative fee will be assessed to all students who withdraw from the University and receive a refund beyond the full refund period. The amount of the fee will be a fixed charge of \$100. See the following:

Refund schedule for withdrawals from the University (Effective Fall 2011)

SIU Refund Policy

This chart is based on refunding for full semester length courses.

Percentage of Refund

	Tuition	Fees
Week One	100%	100%
Week Two	100%	100%
Week Three	50%	100%
Week Four	50%	0%
Week Five and after	0%	0%

No tuition refund will be given after week four; no refund of fees will be given after week three. Student fees are charged as a condition of enrollment. Further explanation of tuition and fee refunding may be found at: <http://registrar.siu.edu/schedclass/>.

Students who officially withdraw from school by the specific withdrawal deadline will receive a credit to their University account. Immediate cash refunds are not given for withdrawal from the University, reduction in credit-hour loads, or overpayment of account. The Bursar processes refunds at least once a week (twice a week during the week before the start of a semester and the first week of a semester) from an automated listing reflecting those accounts with a credit balance. No refunding of tuition and fees is made for a withdrawal occurring after the deadlines, except as described in the section titled Tuition and Fee Refund Policy and Procedures below.

Special consideration is extended to individuals who leave school for extended military service (6 months or longer). These students may choose to withdraw completely and have the withdrawal backdated to show no enrollment. If withdrawing during the third through tenth weeks of school, these students may receive *WMS* grades in all classes, with the appropriate refund. When the withdrawal occurs after the tenth week, students will receive both grades and credit hours for the courses in which they are passing. In all instances, a copy of the military orders or a letter from the commanding officer is required for verification of impending military service. To be eligible for these benefits students must remain in school to within ten days of their military reporting date.

Students in military service with the State of Illinois pursuant to the orders of the Governor have the right to receive a full monetary credit or refund for funds paid to any Illinois public university, college or community college if the person is placed

into a period of military service with the State of Illinois in the event of state emergencies pursuant to the orders of the Governor and is unable to attend the university or college for a period of seven or more days. Students may elect to receive course credit for all of their courses rather than a refund.

Withdrawal from the University does not relieve the student from housing contract obligations. Each student who has a contract with the University must contact University Housing and resolve the contract issue with that office.

All students seeking a withdrawal must contact the Registrar's Office in person or by mail. The effective date of the withdrawal is based on the date the student initiates the withdrawal process, provided the student completes the requirements for the withdrawal. Incomplete applications for withdrawal will be denied. Any student who fails to comply with the withdrawal procedures will receive grades for the semester and must satisfy the financial obligations for the semester.

Student Fees Include:

1. The Student-to-Student (STS) Grant Program Fee funds a student grant program. The fee is payable by undergraduate students only; those who do not wish to participate in the program may seek a refund of the fee by submitting a request, in writing, to the Registrar's Office within ten days of the date of payment of fees.
2. Student's Attorney Fee supports the budget of the Students' Attorney Program.
3. Student Center Fee provides funding for operation of the Student Center.
4. Student Activity Fee funds student organizations and activities on campus; it includes \$1.55 in funding for Campus Safety, \$11.75 in support of Rainbow's End and \$5.50 for support of enhanced fine art activities.
5. Student Recreation Fee (REC) provides funds for operation of the Student Recreation Center and associated programs.
6. Athletic Fund Fee partially funds the University's intercollegiate programs.
7. Campus Recreation Fee funds recreational facilities and programs external to the Student Recreation Center.
8. Student Medical Benefit Fee is comprised of the SMB: Student Health Fee of \$219.00 and the SMB: Student Insurance Fee of \$437.00. It funds the comprehensive Student Health Center that includes emergency service and hospitalization; specialty, primary and emergency dental care; and prevention programs. Students who pay these fees are entitled to full medical benefits at the Student Health Center. If the student feels they have comparable coverage, they may seek a refund of the SMB: Student Insurance Fee within the first two weeks of a fall or spring semester or the first week of a summer session by contacting the Student Health Center Insurance Department.
9. The Revenue Bond Fee (RBF) replaces funds which were previously obtained from tuition payments and used to underwrite the funded debt operations of the Student Center and University Housing.

10. The Mass Transit Fee provides funding for bus transportation to on-campus and certain Carbondale locations.
11. The Information Technology Fee provides funding for maintenance and improvements to the Information Technology network as well as funding for a new student information system.
12. The Student Services Building Fee provides funding for the new Student Services Building.
13. The Facilities Maintenance Fee provides funding to partially cover the costs of utilities and the maintenance and improvement costs to the University facilities.
14. The Green Fee provides funding for on-campus renewable energy, energy efficiency, and sustainability projects and research.
15. The Student Media Fee provides funding for the operation of the Daily Egyptian newspaper.

Additional Tuition and Fee Information

1. Students who register for regular term-length classes after classes begin and students who register for shorter-than-term-length classes, including intersession classes after the first listed meeting day of the class, will be assessed a Late Registration Fee of \$15. The fee is non-refundable/non-waiverable unless it is clearly shown that faculty or administrative action caused the late registration. Off-campus classes and registration in courses 599, 600, 601 and 699 are exempt from this fee.
2. Graduate, medical, and law students are not charged the student-to-student grant program fee.
3. Permanent full-time or permanent part-time employees may be eligible for tuition and fee credit. Employees must have approval from their department head and the director of Human Resources before enrolling for courses.
4. Students taking regular off-campus courses (section number range 800-899, not cost recovery) are required to pay tuition, but do not pay student fees for those classes. Students who combine enrollment in on- and off-campus courses pay tuition only for hours off-campus and tuition and fees for hours enrolled on campus.
5. Students may also incur charges for departmental field trips, library fines and excess breakage. Students taking a course involving use of materials, as distinct from equipment, will ordinarily pay for such materials.
6. Students enrolling in Public Service Courses pay tuition and \$3 per hour divided equally between Student Center and Medical fees. Students enrolling in a combination of public service courses and other courses pay tuition and fees based on the on-campus tuition and fee schedule for the combined total of hours enrolled.
7. Medical students at Springfield do not pay the Student Center Fee, Student Recreation Fee, Revenue Bond Fee, Students' Attorney Fee, or Athletic Fund Fee.
8. Students taking distance education courses (section number range 900-999) are required to pay tuition (regardless of residency status) plus the Information Technology Fee, Student Services Building Fee, STS Fee (for undergraduates), and a \$59 per credit hour Distance Learning Fee.
9. Tuition and program delivery charges for students enrolled in off-campus programs for the military are established in accordance with the Board of Trustee's policies relating to such charges for Southern Illinois University Carbondale cost recovery programs and are not affected by the residency status of the student.
10. For the purpose of tuition assessment, all faculty and staff (including Civil Service employees), as well as their spouses and dependent children, shall be considered as resident students.
11. An identification card fee of \$10 will be charged to all first-time SIU students who register for on-campus credit. This is a one-time charge. Replacement ID cards will incur a \$20 fee. For additional information contact the Student Center ID Card office.
12. Senior Citizen Courses Act. Senior citizen as defined under the Act means an Illinois resident 65 years of age or older whose annual household income is at or below 200% of the federal poverty level. The statute requires the University to waive the tuition for such citizens accepted for admission unless classroom space is not available or if tuition paying students enrolled do not constitute the minimum number required for the course. Even where tuition must be waived, other fees may be charged. For more information contact the Financial Aid Academic Scholarships office.
13. A \$40 nonrefundable fee, which must accompany the admission application.
14. The College of Agricultural Sciences assesses College of Agricultural Sciences undergraduate majors a technology fee of \$4.58 per credit hour up to twelve credit hours. The fee is charged Fall and Spring semesters.
15. The College of Business assesses College of Business majors a technology fee of \$6.00 per credit hour for Fall and Spring semesters up to twelve semester hours and Summer up to six semester hours. Effective Fall 2008, the technology fee is being phased out and will be subsumed under the differential tuition surcharge. Consequently, these students will be charged either the technology fee or the differential tuition surcharge but not both.
16. The School of Art and Design assesses Art and Design majors an instructional support equipment fee of \$10.00 per credit hour for Fall and Spring semesters up to twelve semester hours and Summer up to six semester hours.
17. A \$150 nonrefundable Matriculation Fee will be assessed to all new, undergraduate degree-seeking students taking on-campus classes to cover the costs associated with their orientation to campus.
18. In addition to the above fees, there is a graduation application fee and a transcript fee. For further information contact the Registrar's Office.

Payment of Tuition and Fees

Tuition and fees are payable each semester during the academic year. Statements will be available on SalukiNet around the fifteenth of the month with payments due on the 10th of the following month. The statement lists all tuition and fees assessed, charges for University housing, charges for various other services, credits applied to the student's account from financial aid sources and cash payments. It shows the balance of these charges and credits as an amount owed by the student or an amount owed to the student. Payments may be made online by visiting SalukiNet, by phone (618) 453-2221 or toll free at (877) 533-0071, by mail, or in person at the Bursar Office by the 10th of the month. The Bursar's office accepts cash, checks, money orders, and credit cards (Visa, Master Card, American Express, and Discover).

All student fees and other financial obligations to the university are payable as billed by school terms, and no student shall be enrolled in classes in any educational unit if they have a past due balance greater than \$200, except upon authorization of the Provost.

A service charge of one and one-half percent per month (18% APR) will be assessed on the balance of the amount due which is unpaid at the next billing cycle. To avoid the service charge, students must pay the total amount due on the statement prior to the next billing date. Detailed information is in the Schedule of Classes published each semester on the Registrar's Office website, <http://www.registrar.siu.edu/schedclass/>.

Following the end of each semester, students not registered for the next semester that have delinquent account balances will be mailed a series of letters requesting payment. If payments, or arrangements, are not made on a timely basis, the account may be placed with a collection agency with a collection fee added to the account. Should it be necessary for an outside agency to effect collection, reasonable collection costs shall be added and shall be paid by the debtor. If the University obtains judgment from a court of competent jurisdiction, the debtor shall be liable for the collection agency fee as well as reasonable court costs and attorney's fees. A claim on delinquent accounts may be submitted to the State of Illinois Comptroller's Office in accordance with the Illinois Collection Act which authorizes the deduction of the amount you owe to SIU from an amount normally due you (i.e., payroll deduction, tax refund, etc.) and your account may be referred to a credit bureau. As SIU Carbondale is a non-profit institution of higher learning, student receivable accounts are considered to be educational loans offered for the sole purpose of financing an education and may not be dischargeable in bankruptcy proceedings.

Students who process a program change which places them in a different tuition and fee category than the one for which they originally registered will be billed additional tuition and fees when appropriate. If the change places them in a smaller tuition and fee category and if they processed the program change within the necessary time frame, they will receive a refund provided their account carries no other charges.

Tuition and Fee Refund Policy and Procedures

Tuition and all mandatory student fees shall be refunded to students who officially withdraw from the University by the withdrawal deadlines (see Deadline Dates above). Action on any request for refund of tuition and fees shall be in compliance with Board of Trustees policy and these procedures. For refund of tuition and fees prior to the withdrawal deadlines, the following will apply.

Request for a withdrawal from the University is initiated in the Registrar's Office and approved by the student's academic dean as part of the normal withdrawal procedures.

Refund of tuition and fees based on withdrawal from the University on or prior to the withdrawal deadlines is made without consideration of the student's reason for withdrawing. There is no refund of the application fee.

No tuition or mandatory student fees shall be refunded in cases where withdrawal occurs after the deadlines stated in Board of Trustees policy, except for students in grave circumstances who demonstrate that, for reasons beyond their control, they are utterly unable to continue their educational programs. Refunds of tuition and general student fees approved in such cases are made at the University's discretion upon a determination by the chancellor or his designee.

The refund of tuition and fees in cases where withdrawal from the University occurs after the deadlines specified in the Board of Trustees refund policy is governed by the following procedures.

Request for such refunds are initiated in the Office of Transitional Programs, which will furnish the student with the necessary information and appropriate form.

Tuition and fees will not be refunded for courses which have already been completed earlier in the semester, and for which a final grade has been earned.

The student must submit written verification of the reasons supporting the request: written verification from a physician or other healthcare professional; a copy of the letter denying a disciplinary, academic or financial aid termination appeal and verification that the appeal was filed prior to the withdrawal deadline; written correspondence from the military which verifies when the student is to report for military service and the length of time the student is expected to serve.

The student requesting the refund shall be required to substantiate to the satisfaction of the Registrar's Office (Transitional Programs) the nature, extent, and seriousness of conditions or circumstances which are the basis for the refund request.

The Registrar's Office will make a decision on the request and inform the student as soon as practical.

Tuition Waivers for Faculty and Staff

Employees, who are seeking a waiver of tuition, must apply for the waiver each term by completing an Application for Tuition/Waiver. Waiver application forms may be obtained from Human Resources, 1255 Douglas Drive, 108 Miles Hall, or from the website at <http://hr.siu.edu/forms/index.html> under Application for Employee Tuition Waiver. The form should be filled out each term and must be returned to Human Resources. The waiver benefit does not limit the number of credit hours that may be taken. The amount of the waiver will be credited to the applicant's account after employment status has been verified and the application form has been processed. Employees shall be eligible for a tuition waiver when they are employed at any time during a semester for which they registered. Questions concerning the process may be directed to Human Resources (618) 453-6698.

Graduate School Waivers

All full-time University employees who wish to use the employee tuition waiver (faculty and staff) who are classified as graduate students must seek approval of the Graduate School to enroll in more than six semester hours of courses.

Tuition Waivers for Dependents of Deceased Employees

Surviving spouses and dependent children of a deceased SIU employee may be eligible for a tuition waiver if the service time of the deceased employee was at least five years in a full-time capacity and if the employee was in active, retired or disability status at the time of death. In the case of a dependent child of a deceased employee, the applicant must have been less than 22 years of age at the date of death of the employee, or enrolled in the University at that time. Applicants who are themselves employed by SIU in a status other than student work are not eligible for this waiver. Human Resources administer applications for the waiver. Questions concerning the process should be directed to Employee Records (618) 453-6696.

Inter-institutional Undergraduate Tuition Waiver

Children of employees who have been employed by any Illinois senior public university for at least seven years shall receive a 50% tuition waiver for undergraduate tuition. The student must qualify for formal admission to the university and must be under the age of 25 at the beginning of the academic year during which the waiver is to be effective. Eligible applicants who have maintained satisfactory progress toward graduation may have the partial tuition waiver renewed each semester until they have reached 130 semester hours of undergraduate partial tuition waiver benefits. Human Resources administer applications for the waiver. Questions concerning the process should be directed to Employee Records (618) 453-6696.

Southern Illinois University Undergraduate Tuition Waive

In addition to the Inter-institutional tuition waiver benefit listed above, a waiver will be extended to eligible children of a seven year employee of Southern Illinois University who has retired or who is on permanent layoff status, and to the natural or adopted children of a domestic partner. Subject to the requirements listed above, an eligible child will be entitled to a 50% waiver of the undergraduate tuition for the number of credit hours in which the student is enrolled at Southern Illinois University. This waiver applies to the Southern Illinois University system only.

Local, Permanent and Billing Addresses

The University maintains both a local and a permanent address for students and a billing address for students. Accurate addresses are very important for students to ensure receipt of timely mail from the University.

The *billing address* is used only by the Bursar for correspondence. If no billing address exists, correspondence will be mailed to your permanent address. Statements are available online through SalukiNet.

The *permanent address* maintained by the University is your permanent home address or the address at which you will promptly receive mail when you are absent from Carbondale.

The *mailing address* is your primary residence while classes are in session. It is used by the University to direct correspondence during the semester.

Grading and Scholastic Regulations

Grading System Explanation

The grades of *A, B, C, D, F* and *WF*, are included in determining student grade point averages.

Grade Symbol	Definition	Grade Points Per Hour
A	Excellent	4
B	Good	3
C	Satisfactory	2
D	Poor	1
F	Failure	0
WF	Failure. For student who did not officially withdraw from class, ceased attending and failed to complete requirements for the course.	0
P	Pass. Used only in Pass/Fail system. See below.	
PR	Work in Progress. See below.	
W	Authorized withdrawal.	
INC	Incomplete. See below.	
AU	Audit. No grade or credit earned. See below.	
NS	Student failed to show up for the class and will soon be removed from it.	
NR	Grade not yet recorded by instructor.	

An *INC* is assigned when, for reasons beyond their control, students *engaged in passing work* are unable to complete all class assignments. An *INC* must be changed to a completed grade within one semester following the term in which the course was taken, or *graduation*, whichever occurs first. Should the student fail to complete the course within the time period designated, that is, by no later than the end of the semester following the term in which the course was taken, or graduation, whichever occurs first, the incomplete will be converted to a grade of *F* and the grade will be computed in the student's grade point average. Students should not reregister for courses in which an *INC* has been assigned with the intent of changing the *INC* grade. Re-registration will not prevent the *INC* from being changed to an *F*.

Students enrolling for an *Audit* must designate their intent to enroll on an *Audit* basis at the time of registration, or prior to the end of the second week of a sixteen-week semester and prior to the end of the second week of an eight-week summer session. An equivalent prorated amount of time would be allowed for courses of shorter duration. Students registering for short courses must register for Audit prior to the beginning of those classes. Students registering for a course on an *Audit* basis receive no credit. Auditors' Course Request Forms must be marked accordingly, and they pay the same fees as though they were registering for credit. They are expected to attend regularly and to determine from the instructor the amount of work expected of them. If auditing students do not attend regularly, the instructor may determine that the student should not have a satisfactory (*AU*) audit grade. If the audited class is unsatisfactory, a grade of *UAU* will appear on the student's transcript.

PR is an authorized grade for specifically approved undergraduate courses. For example, it is used for the required Uni-

versity Core Curriculum English 101, which is a course that has been designated as one in which students must receive a grade of *C* or better. The grade is given only to students who regularly attend class and attempt to complete the required work. The grade is to be used only once per student for any given course. The course provides additional instruction for those students not making adequate progress. Students who receive a *PR* grade must reregister for the course within a time period not to exceed a year from the end of the semester in which the course is taken. The grade earned in the course for which the student reregisters will be included in the grade point average. Failure to complete the course within the year will result in the *PR* automatically becoming an *F*. The *F* will be included in grade point computation.

Pass/Fail Grading System

Certain courses, which, in the judgment of the department or program, have been determined to be inappropriate for the traditional grading system are designated as Mandatory Pass/Fail. Courses, which carry this designation, include the words Mandatory Pass/Fail at the end of the course descriptions in Chapter 5. For courses taken on a Mandatory Pass/Fail basis, completed grades will be either a grade of *P* when the student's work is satisfactory or the grade of *F* when the student's work is unsatisfactory. The grade of *P* is not included in the grade point average but the hours earned apply toward graduation. The grade of *F* is computed in the grade point average as a failure but no hours of credit are earned. If a student receives an *INC* in a Mandatory Pass/Fail course, the same regulations apply for completion of the work as apply for all other grades of *INC*, as explained in the Grading System Explanation above.

In addition to the Mandatory Pass/Fail courses, an Elective Pass/Fail grading policy was in effect through the end of Spring Semester, 1987. The regulations concerning the discontinued policy appear in the 1986-1987 Undergraduate Catalog.

Changing of Grades

Grades given at the end of a course are final and may not be changed by additional work or submitting additional materials. When work is completed for a course in which an *INC* grade has been given, instructors notify the Registrar's Office of that fact, along with the final grade to be given, by processing a Grade Change Card through the academic dean's office.

Occasionally, students may wish to question grades given, either for accuracy or for removal of grades in situations when they were unable to perform some required step for reasons beyond their control. Only the assigned instructor for a course has the authority to change a grade except in the instance when the University no longer employs the instructor. Extenuating circumstances, which transcend faculty judgment of the instructor, may be appealed through procedures established by the instructor's school or college. Matters related to faculty judgment in grading may not be appealed. Any change of grade must be approved and signed not only by the instructor but also by the departmental chair and the dean of the academic unit. In the case of an *INC* being changed to a final grade, only the instructor's signature is required.

Repeat Policy

Effective for courses taken Summer 2013, or later, an under-

graduate student may, for the purpose of raising a grade, enroll in a course for credit no more than two times (two total enrollments) unless otherwise noted in the course description. For students receiving a letter grade of *A*, *B*, *C*, *D*, or *F*, the course repetition must occur at Southern Illinois University Carbondale. Only the most recent (last) grade will be calculated in the overall GPA and count toward hours earned.

Students seeking to repeat a course a second time (third enrollment) must obtain permission from the Office of the Provost to allow the student to register in the course.

This policy will be applied to all transferrable credit in that only the last grade will be used to calculate grade point average. Only those courses taken at the same institution are considered repeats under this policy.

Grade Point Average and Scholastic Standing

The matter of scholastic standing is quite often of importance to students both while in school and later when they present a transcript of their educational record in support of their application for employment or additional schooling.

At the end of each semester or session of attendance, SalukiNet is updated for each student showing, in addition to the grades earned that semester or session, the scholastic standing and the grade point average for that semester or session and for the overall record at Southern Illinois University Carbondale. It is important that you understand the University's system for computing grade point averages and the various grade point average requirements.

Transferred grades are not to be used in determining students' calculated SIU grade point averages, except that transfer students who are admitted on probationary status will be required to earn a 2.0 average semester by semester before they can be removed from probation.

The significance of the above should be clearly understood by transfer students when studying the general baccalaureate degree requirements. A 2.0 (*C*) average is required for the work taken at this University.

In computing a student's grade point average (GPA), all grades of *A*, *B*, *C*, *D*, *F*, and *WF* are included in determining the number of quality hours. Each hour of these grades (1 hour of *A* is worth 4 quality points) is given its numerical quality points, which are then divided by the total number of quality hours to determine the student's GPA. For further details about computing a GPA, see <http://registrar.siu.edu/grades/gpa.html>.

Scholastic Probation and Suspension System

Students are expected to make satisfactory progress toward a degree, certificate or other approved objective. To ensure that students are making progress, their records are checked against the regulations below.

Scholastic Probation

When a student's cumulative University average falls below a *C* average (2.0), the student will be placed on scholastic probation. A student on scholastic probation may continue enrollment at the University provided the student is not placed on scholastic suspension, which will occur if the student's subsequent term average is below 2.0 and the student has accumulated more than 6 negative points. A student will be reinstated to good standing when the cumulative University average reaches 2.0

or above.

While on scholastic probation students may not enroll for more than 14 hours per semester unless approved to do so by the dean of their academic unit. Students employed full time may not register for more than eight hours without approval of the head of their academic unit. The academic unit within which the students are enrolled may establish other limitations. Students enrolled in programs for the military or students enrolled in programs with a weekend or evening format are not restricted to the eight-hour limit while on probation.

Transfer Students Admitted on Probation

Transfer students admitted on scholastic probation will remain in that status until they have earned at least a *C* average at Southern Illinois University Carbondale. If they earn below a *C* average for any session while on scholastic probation, they will be placed on scholastic suspension.

Scholastic Suspension

Students will be scholastically suspended from the University if they (1) fail to meet the requirements of their conditional or probational status or (2) are enrolled full time their first term of enrollment, and earn a GPA of 0.00. Students placed on Scholastic Suspension may seek reinstatement after a minimum of two semesters' interruption (excluding Summer session) but must furnish tangible evidence that additional education can be successfully undertaken. Continuing students (those suspended at the end of the immediate preceding term) may not change academic units, nor may those readmitted prior to the end of the normally required two semester period of separation from the University. Some academic units have scholastic requirements in addition to the overall University requirements listed here. Students must comply with the University requirements as well as those requirements applying to individual schools and colleges. Appeals must be approved at the Office of the Provost and Vice Chancellor for Academic Affairs. Decisions by the Provost are final.

Positive and Negative Quality Points

Positive and negative quality points are assigned to grades above or below a *C*. There are two methods to figure points depending upon the information, which is available.

Grades. The SalukiNet grade report, which is updated at the end of each semester, lists the hours used in calculating the average and the quality points earned. Since *C* has a value of two quality points on a 4 point scale, quality points equaling a *C* average are exactly twice the number of quality hours. All quality points over that amount are positive quality points. All quality points under the amount are negative quality points.

For example:

<i>Quality Hours</i>	=	<i>Quality Points</i>	=	<i>Grade Point Average</i>
60	=	120	=	(C) 2.0

Twice the quality hours equals 120 quality points. This is a *C* (2.0) average. A student with 60 quality hours and only 115 quality points would have five negative points (1.92) average. A student with 30 quality hours and 55 quality points would have five negative points (1.83) average.

Grades and Hours of Credit Available. Whenever all grades and hours of credit are known and quality points have not been assigned as on SalukiNet, a simple method is to assign positive and negative points as follows:

A	=	2 positive points per hour
B	=	1 positive point per hour
C	=	0
D	=	1 negative point per hour
F	=	2 negative points per hour
WF	=	2 negative points per hour

For example:

3 hours of A	x	2 positive points	=	6 positive points
3 hours of B	x	1 positive point	=	3 positive points
3 hours of C	x	0 points	=	0
2 hours of D	x	1 negative point	=	2 negative points
4 hours of F	x	2 negative points	=	8 negative points
4 hours of WF	x	2 negative points	=	8 negative points

The eighteen negative points are balanced by only nine positive points so the sample has nine negative points.

Negative points are also used to easily determine exactly what grades must be earned to raise the average to *C*. For example, a student with eight negative points could raise the average to *C* by earning four hours of *A* grade or eight hours of *B* grade, assuming all other grades earned are at least *C*.

Class Standing

The University requires students to earn at least 120 semester hours of acceptable credit in order to receive a baccalaureate degree. For academic classification purposes a freshman is a student who has completed fewer than 26 hours; a sophomore, from 26 through 55; a junior, from 56 through 85; and a senior 86 or more.

Academic Load

The University considers 12 hours as the minimum number to constitute full-time attendance. Academic programs are designed for a four year completion; 15 credit hours a semester (fall and spring), or 30 credit hours a year. This is the figure used for enrollment reporting purposes on the undergraduate level. Academic load guidelines are as follows:

Load	Regular Semester	8-Week Summer Session
Minimum load for full time	12	6
Average load	15–16	7–8
Maximum load without dean's approval	18	9
Maximum load ¹	21	11

¹This maximum may be exceeded by very special action of the respective academic dean, and rarely more than once in the student's degree program.

Students on scholastic probation may not take more than 14 hours without approval of the dean of their academic unit. Stu-

dents employed full-time at the University may not register for more than eight hours.

Credit

Unit of credit

The University is on the early semester calendar. All references to hours of credit in this catalog are to semester hours unless otherwise specified. One semester hour of credit is equivalent to one and one-half quarter hours. One semester hour of credit represents the work done by a student in a lecture course attended fifty minutes per week for one semester and, in the case of laboratory and activity courses, the stated additional time.

Program Flexibility for the Student

The University offers you a wide variety of programs on all higher educational levels. Specialized programs are available on the associate and baccalaureate levels. In addition, the University gives attention to ways it might better serve present-day educational needs. Described below are opportunities for you to earn credit through means other than the traditional classroom method. While greater flexibility is the goal, the University exercises appropriate supervision to ensure the flexibility is accompanied by educational soundness.

CREDIT BY MEANS OTHER THAN CLASSROOM ATTENDANCE

Access SIU

Access SIU is designed to allow non-declared students to take courses for a fee. Greater flexibility and access for the non-declared student is the goal of Access SIU. If you have interest in Access SIU, please contact the Office of Distance Education and Off-Campus Programs at 618-453-3430 or at siuaccess@siu.edu.

Credit for Military Experience

In order to receive credit for military service, active military personnel and veterans must present an official copy of the Joint Service Transcript (JST), AARTS, SMART, CGI, Reserves, and/or CCAF transcript.

Military transcripts are sent directly to:

Southern Illinois University Carbondale
Transfer Student Services
Student Services Building, Mail Code 4725
1263 Lincoln Drive, Room 0382
Carbondale, IL 62901

Active Duty students, or students who have served one year or more of active duty and have received an Honorable or General Discharge, may receive two hours of ROTC credit, two hours of physical education credit, and two hours of health education credit. Completion of basic training only will be awarded two hours of physical education credit. Service for six months to one year may result in two hours of freshman ROTC credit and two hours of physical education. If the student has separated or retired from the military, then discharge separation papers and/or a DD214 must also be sent to TSS. A Member-4 or Service-2 copy of the DD214 is required in order to show the character of service.

Credit will be accepted for Defense Activity for Non-Traditional Education Support (DANTES) subject standardized ex-

aminations within the limitations enforced for proficiency credit. The web address for more information on DANTES Credit is: <http://transfer.siu.edu/pdfs/dantes.pdf>. No credit is allowed for college-level GED tests. The recommendations of the American Council on Education (ACE) as set forth in the U.S. Government bulletin, Guide to the Evaluation of Educational Experiences in the Armed Forces, are followed in evaluating credit possibilities based upon formal service-school training programs.

High School Advanced Placement Program (AP)

Through the High School Advanced Placement Program, high school students who are qualified through registration in an advanced placement course in their high schools or through other special educational experiences may apply for advanced placement and college credit through the Advanced Placement Program of the College Board. To receive credit, students must earn at least a grade of 3 and in some cases a 4 or 5. Transcripts from the Advanced Placement Program must be sent to Southern Illinois University Carbondale, Transfer Student Services, Student Services Building, Mailcode 4725, 1263 Lincoln Drive, Room 0382, Carbondale, IL 62901.

Transfer students who have AP credit transcribed as college courses from their previous institution will receive that course credit at SIU as transfer credit. The maximum credit granted through advanced placement examinations is thirty hours (fifteen for an associate degree).

It is nonresident credit, does not carry a grade, and is not used in computing the students' grade point average. The thirty-hour limit also includes any CLEP credit or proficiency credit that has been earned. Advanced classes, which qualify for this purpose, are offered in many high schools in specific subjects such as English composition, economics, foreign languages, history, biology, computer science, chemistry, government, mathematics, physics, and psychology. A national examination is given in each subject with the examinations administered through the Educational Testing Service. The examinations are prepared by a national committee of high school and college teachers and intended to measure the achievement of the student and determine at what point the student should begin college work in the subject.

The credit to be granted at Southern Illinois University Carbondale is determined by the appropriate academic department. The credit will be validated after the student has earned 12 hours of credit with a minimum grade average of C grade or above in residence at SIU. The following is a list of exams and the credit that can be received. A score of three is required unless otherwise noted.

The AP Capstone Program

AP Capstone is an innovative program from the College Board that equips students with the independent research, collaborative teamwork, and communication skills that are increasingly valued by colleges. AP Capstone is built on the foundation of a new, two-course high school sequence-AP Seminar and AP Research-and is designed to complement and enhance the in-depth discipline-specific study provided through AP courses. It cultivates curious, independent, and collaborative scholars and prepares them to make logical and evidence-based decisions. Students who earn scores of 3 or higher in both of the AP Capstone courses and on four additional AP Exams of their choosing will receive the AP Capstone Diploma. Students who earn scores of 3 or higher in both of the AP Capstone

mance in those courses. Students entering SIU having earned either the Diploma or the Certificate will receive the following credits in addition to any credits awarded on the basis of their AP exams:

ENGL 120H, Honors English Composition (6 hours)
UCOL 101U, Foundations of Inquiry (3 hours)
Advanced UCC Substitution Credit in the area most closely related to their Research project (3 hours)

AP EXAM	SIU COURSE	CREDIT HOURS
Art History	AD 207C	3 semester hrs
Biology	PLB 115	3 semester hrs
Chemistry (score of 3)	CHEM 200	3 semester hrs
Chemistry (score of 4 or 5)	CHEM 200 & CHEM 210	6 semester hrs
Computer Science:		
Computer Science A	CS 202	4 semester hrs
Computer Science AB	CS 202 & CS 220	8 semester hrs
Economics:		
Economics-Macroeconomics	ECON 241	3 semester hrs
Economics-Microeconomics	ECON 240	3 semester hrs
English:		
English Language & Comp (score of 3 or 4)	ENGL 101	3 semester hrs
English Language & Comp (score of 5)	ENGL 102 & ENGL 120H	6 semester hrs
English Literature & Composition	ENGL 121	3 semester hrs
Environmental Science (score of 4 or 5)	GEOG 100	3 semester hrs
Foreign Language:		
Chinese Language (score of 3)	CHIN 320A	3 semester hrs
Chinese Language (score of 4 or 5)	CHIN 320A & CHIN 390	6 semester hrs
French Language (score of 3)	FR 321	3 semester hrs
French Language (score of 4 or 5)	FR 321 & FR 390	7 semester hrs
French Literature (score of 3)	FR 311	3 semester hrs
French Literature (score of 4 or 5)	FR 311 & FR 330	6 semester hrs
German Language (score of 3)	GER 320A	3 semester hrs
German Language (score of 4 or 5)	GER 320A & GER 390A	6 semester hrs
German Literature (score of 3)	GER 385	3 semester hrs
German Literature (score of 4 or 5)	GER 370 & GER 385	6 semester hrs
Japanese Language (score of 3)	JPN 320A	3 semester hrs
Japanese Language (score of 4 or 5)	JPN 320A & JPN 390	6 semester hrs
Classical Latin Language (score of 3)	CLAS 391	3 semester hrs
Classical Latin Language (score of 4 or 5)	CLAS 391	6 semester hrs
Spanish Language (score of 3)	SPAN 306	3 semester hrs
Spanish Language (score of 4 or 5)	SPAN 306 & SPAN 304	6 semester hrs
Spanish Literature & Culture (score of 3)	SPAN 306	3 semester hrs
Spanish Literature & Culture (score of 4 or 5)	SPAN 306 & SPAN 370A	6 semester hrs
Spanish Lit/Sp-Am Culture (score of 3)	SPAN 306	3 semester hrs
Spanish Lit/Sp-Am Culture (score of 4 or 5)	SPAN 306 & SPAN 370B	6 semester hrs
Government & Politics:		
Government & Politics: Comparative	POLS 250	3 semester hrs
Government & Politics: U. S.	POLS 114	3 semester hrs
History:		
European History	HIST 205A & HIST 205B	6 semester hrs
U.S. History	HIST 300 & HIST 301	6 semester hrs
World History	HIST 101A & HIST 101B	6 semester hrs
Human Geography (score of 4 or 5)	GEOG 103	3 semester hrs

AP EXAM	SIU COURSE	CREDIT HOURS
Mathematics:		
Calculus AB	MATH 150	4 semester hrs
Calculus BC	MATH 150 & MATH 250	8 semester hrs
Statistics (score of 4 or 5)	MATH 282	3 semester hrs
Music (score of 4 or 5)	MUS 104A & MUS 105A	4 semester hrs
Physics:		
Physics 1: Algebra-Based (score of 4 or 5)	PHYS 203A	3 semester hrs
Physics 1: Algebra-Based (score of 3)	Qualify for Proficiency Exam in PHYS 203A	
Physics 2: Algebra-Based (score of 4 or 5)	PHYS 203B	3 semester hrs
Physics 2: Algebra-Based (score of 3)	Qualify for Proficiency Exam in PHYS 203B	
Physics C, Part I-MECH (score of 4 or 5)	PHYS 205A	3 semester hrs
Physics C, Part I-MECH (score of 3)	Qualify for Proficiency Exam in PHYS 205A	
Physics C, Part II-E&M (score of 4 or 5)	PHYS 205B	3 semester hrs
Physics C, Part II-E&M (score of 3)	Qualify for Proficiency Exam in PHYS 205B	
Psychology	PSYC 102	3 semester hrs

Further information about the Advanced Placement Program may be obtained by writing AP Services, P.O. Box 6671, Princeton, NJ 08541-6671, calling 1-888-225-5427 or email: apexams@info.collegeboard.org. The website for AP is: <http://www.collegeboard.com/student/testing/ap/about.html>.

International Baccalaureate Program (IB)

The International Baccalaureate Diploma Program sponsored by the International Baccalaureate Organization is a comprehensive and challenging two-year course of study for students of senior high school age leading to final examinations in six subject areas. The Higher Level (HL) courses represent a recommended 240 teaching hours. Students who do not satisfy the requirements of the full Diploma Program or who have elected to take fewer than six subjects are awarded a certificate for the examinations completed. SIU will award proficiency credit to students who have passed the Higher Level (HL) exams with the appropriate scores as indicated in the following chart. No credit is awarded for Standard Level (SL) courses. Upon receipt of test scores, the appropriate number of credit hours will be entered on the student's record. If test scores for new freshmen are received after orientation/registration, the student will need to work with their academic advisor to ensure duplicate courses are not taken. For more information, please see the International Baccalaureate Organization's website at: <http://www.ibo.org>.

IB Transcripts may be ordered from the following address:

ATTN: Transcript Officer, International Baccalaureate
American Global Centre
7501 Wisconsin Ave., Suite 200 West
Bethesda, MD 20814

The transcript scores should be sent to:

Transfer Student Services
Southern Illinois University Carbondale
Student Services Building, Mail Code 4725
1263 Lincoln Drive, Room 0382
Carbondale, IL 62901

INTERNATIONAL BACCALAUREATE (IB) DIPLOMA PROGRAM EQUIVALENCY CREDIT

Course (HL-Higher Level)	Score	Course Equivalent	Hours
Group 1 Study in Language and Literature			
Language A: Literature	5-7	ENGL 121 The Western Literary Tradition	3
Language A: Language and Literature*	5-7	Humanities Sub 2	3
*Additional language credit may be available through departmental evaluation			
Group 2 Language Acquisition			
Language AB	5-7	FR 123A,B Elementary French, SPAN 140A,B Elementary Spanish, or GER 126A,B Elementary German	6
Language B	6-7	FR 201A,B Intermediate French, SPAN 201A,B Intermediate Spanish, or GER 201A,B Intermediate German	6
Latin or Classical Greek	5-7	CLAS 130A Elementary Classical Greek, or CLAS 133A Elementary Latin	3
*Additional language credit may be available through departmental evaluation			
Group 3 Individuals and Societies			
Economics	5	ECON 113 Economics of Contemporary Social Issues or ECON 114 Introduction to Economics: Classroom Simulations	3
Economics	6-7	ECON 240 Introduction to Microeconomics and ECON 241 Introduction to Macroeconomics	6
Geography	5-7	GEOG 103 World Geography	3
History	5-7	HIST 112 The Twentieth Century World	3
Information Technology (ITGS)	5-7	CS 200B Computer Concepts or ISAT 229 Computing for Business Administration	3
Philosophy	5-7	PHIL 102 Introduction to Philosophy	3
Psychology	5-7	PSYC 102 Introduction to Psychology	3
Social and Cultural Anthropology	5-7	ANTH 104 The Human Experience: Anthropology	3
Group 4 Experimental Sciences			
Biology	5	PLB 115 General Biology	3
	6-7	BIOL 200A Introductory Cell Biology, Genetics and Evolution, and BIOL 200B Introductory Organismal Biology and Ecology	8
Chemistry	5	CHEM 106 Chemistry and Society	3
Chemistry	6-7	CHEM 200/201 Intro to Chemical Principles and CHEM 210/211 General and Inorganic Chemistry	8
Design Technology	5-7	IT 208 Fundamentals of Manufacturing Processes	3
Physics	5	PHYS 101 Physics that Changed the World	3
Physics	6-7	PHYS 203A,B College Physics	6
Environmental Systems and Society	5-7	GEOG 100 Environmental Conservation	3

Group 5 Mathematics and Computer Science

Mathematics	5-7	MATH 150 Calculus I	4
Further Mathematics	5-7	MATH 250 Calculus II	4
Computer Science	5	CS 202 Introduction to Computer Science	4
Computer Science	6-7	CS 202 Introduction to Computer Science and CS 220 Programming with Data Structures	8

Group 6 The Arts

Film	5-7	CP 101 Film History and Analysis	3
Music	5-7	MUS 103 Music Understanding	3
Theater	5-7	THEA 101 Theater Insight	3
Visual Arts	5-7	AD 101 Introduction to Visual Culture	3

College Level Examination Program (CLEP)

Southern Illinois University awards credit for satisfactory performance on both the General Examinations and the Subject Examinations developed and administered through the College Level Examination Program Board (www.collegeboard.com). The General Examinations cover comprehensive content of a study which would be covered by several introductory-level courses, while the Subject Examinations cover more specific content of a single college-level course.

These exams allow students who have acquired knowledge outside the traditional classroom setting - through independent study, on-the-job training, or cultural inquiry - to gain recognition of mastering college-level material by receiving introductory course credit.

Through the College Level Examination Program (CLEP) students may apply for credit, which may substitute for one or more SIU courses. Listed below are the minimum required scores and the credit awarded for each CLEP exam. The exams listed below are the only CLEP exams which will be accepted for credit.

General Exams:	Paper-Based Exam Score	Computer-Based Exam Score	Credit Awarded (semester hours)
Natural Science	52 or above ⁽¹⁾	52 or above	6 semester hours of University Core Curriculum Science credit: Science Group 1 (3) Science Group 2 (3)
Social Sciences and History	52 or above ⁽¹⁾	52 or above	6 semester hours of University Core Curriculum credit in Social Science.
Humanities	52 or above ⁽¹⁾	52 or above	6 sem. hrs of University Core Curriculum credit in Humanities or 3 sem. hrs of credit in Humanities and 3 sem. hours of credit in Fine Arts.
College Composition	61 or above ⁽¹⁾	61 or above	6 sem. hrs of University Core Curriculum English Composition (ENGL 102 and 120H).
College Composition	57 to 60 ⁽¹⁾	57 to 60	Entitles student to receive advanced placement in ENGL 120H and 6 sem. hrs of credit for UCC English Comp (ENGL 102 and 120H) upon successful completion of ENGL 120H with a grade of C or higher.
College Mathematics	58 or higher ⁽¹⁾	58 or higher	3 sem. hours of credit for Math 101, which will fulfill UCC math requirement.

Subject CLEP Exam	SIU Equivalent	Minimum Score
Composition and Literature		
American Literature	ENGL 121 (3 semester hours)	50
English Literature	ENGL 121 (3 semester hours)	50
History and Social Sciences		
American Government	POLS 114 (3 semester hours)	50
History of US I: Early Colonization to 1877	General Elective	50
History of US II: 1865 to present	HIST 110 (3 semester hours)	50
Human Growth and Development	SOCS SUB1 (3 semester hours)	50
Principles of Macroeconomics	ECON 113 (3 semester hours)	50
Principles of Microeconomics	ECON 113 (3 semester hours)	50
Introductory Psychology	PSYC 102 (3 semester hours)	50
Introductory Sociology	SOC 108 (3 semester hours)	50
Western Civilization I	HIST 101A (3 semester hours)	50
Western Civilization II	HIST 101B (3 semester hours)	50
Science and Mathematics		
Biology	PLB 115 (3 semester hours)	50
Calculus	MATH 110 (3 semester hours)	50
Chemistry	CHEM 106 (3 semester hours)	50
College Algebra	MATH 108 (3 semester hours)	50
Precalculus	MATH 111 (3 semester hours)	50
Business		
Financial Accounting	ACCT 220 (3 semester hours)	65
Information Systems and Computer App.	CS 200B/ISAT 229 (3 semester hours)	50
Principles of Management	MGMT 304 (3 semester hours)	62
Principles of Marketing	MKTG 304 (3 semester hours)	56

Foreign Languages		(Paper-Based)	(Computer-Based)
French-College Level 1	FR 123A, 123B (6 sem. hours)	42	50
French-College Level 2	FR 123A, 123B, 201A, 201B (12 semester hours)	45	59
German-College Level 1	GER 126A, 126B (8 sem hours)	36	50
German-College Level 2	GER 126A, 126B, 201A, 201B (12 semester hours)	42	63
Spanish-College Level 1	SPAN 140A, 140B (8 sem hrs)	45	50
Spanish-College Level 2	SPAN 140A, 140B, 201A, 201B (12 semester hours)	50	63

[©]CLEP Testing at DANTES Education Centers is by Paper-and-Pencil Exam Format.

If prior to taking a CLEP examination the student has received a grade (including a *W* or an audit) or has enrolled in college-level work in any discipline included in the CLEP exam (see below) they shall be ineligible for credit. (Military credit does not constitute prior coursework). One exception to this rule is made if the course the student took in a discipline from a CLEP exam was taken more than five years prior and no credit was awarded for the course.

The Natural Sciences General examination includes the disciplines of plant biology, microbiology, physiology, zoology, chemistry, physics, geography and all SIU University Core Curriculum science courses.

The Social Sciences and History General examination includes the disciplines of western civilization, American history, Afro-Asian civilization, world history, political science, economics, anthropology, geography, sociology, social psychology, social studies, and all SIU University Core Curriculum social science courses.

The Humanities General examination includes the disciplines of literature, poetry, fiction, drama, non-fiction, creative writing, films, performing arts, art, art appreciation, art history, architecture (past and present), music: classical, modern and jazz, general humanities courses, philosophy: aesthetics, ethics, and general survey, and all SIU University Core Curriculum humanities courses.

The College Composition General examination disciplines includes rhetoric; composition, creative writing and all English prefix courses.

The College Mathematics disciplines include all college-level mathematics courses.

The Foreign Language disciplines include all college-level courses in the corresponding foreign language.

Students may be exempted from all University Core Curriculum requirements if they: **(a)** meet the minimum required scores for the five CLEP general examinations; Natural Sciences, Social Sciences and History, Humanities, College Composition and College Mathematics, prior to completion of 12 semester hours of college-level credit and **(b)** complete the graduation option of the University Honors Program. Further information is available from the director of the University Honors Program.

Transfer students who have CLEP credit transcribed as a college course from their previous institution, with the exception of English Composition, will receive that course credit at SIU as transfer credit. Students who transfer with an AA or an AS degree from an Illinois Community College will receive credit for their English Composition CLEP if it is transcribed as a course from that institution.

CLEP credit will not be recorded on the student's SIU transcript until the student has earned 12 hours of credit with a minimum grade average of *C* grade or above in residence at SIU.

A maximum of thirty hours of proficiency credit, including CLEP, Advanced Placement, departmental and Core Curriculum proficiency exams, will be accepted toward a Bachelor's degree (fifteen hours toward an associate degree).

CLEP credit does not apply toward the residence requirement for graduation.

For further information, students should consult with their academic advisor.

Proficiency Examinations

Through its proficiency examination program, the University recognizes the importance of providing encouragement for academically talented students. Such students are permitted to make application to demonstrate the mastery of certain courses through proficiency examinations. Application forms are available at the departmental offices.

The following general rules govern the proficiency examinations for undergraduate credit:

1. Students who believe they are qualified to take a proficiency examination should check with the department offering the course to determine their eligibility to do so. Students scoring in the top ten percent of ACT are particularly encouraged to avail themselves of this opportunity.
2. Credit not to exceed thirty hours (fifteen hours toward an associate degree), including credit through the College Board Advanced Placement Program and the College Level Examination Program, may be earned through proficiency examinations. Credit will be considered nonresident. A combined total of 40 hours may be earned through proficiency examinations and credit for work experience.
3. All University Core Curriculum courses are available for proficiency credit, subject to specified restrictions.
4. Upon passing proficiency examinations, students are granted course credit and receive a *Pass* grade. Their records will show the name of the course, the hours of credit granted, and the notation "credit granted by proficiency examination." Students who fail a proficiency examination receive a Fail grade. This results in no penalty to the students. They will not receive credit and there will be no official record regarding the proficiency examination. However, the proficiency examination grade report form will be in the student's file for reference purposes.
5. Students may not take proficiency examinations for the same course more than one time. Neither may they take a proficiency examination in a course in which they have previously received a grade. Students who are registered for a course may not receive credit by proficiency examination for that course unless they withdraw from the course by the date during the semester, which would result in no course entry appearing on the transcript. This date is the end of the second week for a regular semester course, and a correspondingly shorter period for summer session or short courses. Individual departments may require the proficiency examination to be completed in advance of this date.
6. No credit granted by proficiency examinations will be recorded until the student has earned at least 12 hours of credit of *C* grade or above in residence at the University.

Credit for Work Experience

Southern Illinois University Carbondale recognizes that there might well be a number of undergraduate programs for which work experience has a meaningful relationship. It therefore permits those undergraduate programs to grant credit for work experience that relates to the students' areas of specialization. The credit granted is to apply to the major program and is

awarded only upon approval by the major departments. Credit earned by work experience is limited to 30 hours. Any combination of credit for proficiency examinations, AP, CLEP and work experience is limited to 40 hours. Credit granted for work experience is considered non-resident credit when granted for work that is not part of a regular instructional course. Students should consult with their major departments to see whether they approve credit for work experience.

Degrees Offered

Southern Illinois University Carbondale grants the following degrees:

- Associate in Applied Science
- Bachelor of Arts
- Bachelor of Fine Arts
- Bachelor of Music
- Bachelor of Science
- Master of Accountancy
- Master of Architecture
- Master of Arts
- Master of Arts in Teaching
- Master of Business Administration
- Master of Engineering
- Master of Fine Arts
- Master of Laws
- Master of Legal Studies
- Master of Music
- Master of Public Administration
- Master of Public Health
- Master of Science
- Master of Science in Education
- Master of Science in Physician Assistant Studies
- Master of Social Work
- Professional Science Masters
- Juris Doctor
- Doctor of Medicine
- Doctor of Philosophy

In addition to the above degrees, the University offers undergraduate courses in preprofessional areas.

The School of Law and the School of Medicine offer professional degrees. Information about the School of Law may be obtained by writing the dean, School of Law, Southern Illinois University Carbondale, Carbondale, Illinois 62901. Information about the School of Medicine may be obtained by writing the dean, Southern Illinois University School of Medicine, P.O. Box 19230, Springfield, Illinois 62794.

For information concerning academic programs on the advanced degree level, refer to the Graduate Catalog or write the dean, Graduate School, Southern Illinois University Carbondale, Carbondale, Illinois 62901.

Degree Requirements

ASSOCIATE DEGREE

Each candidate for an associate degree must complete a minimum of 60 hours of credit in approved courses. Each student must complete the residency requirement by completing a minimum of 15 semester hours of technical courses within a major

for the Associate in Applied Science degree at Southern Illinois University Carbondale. Each student must maintain a C average for all work taken at Southern Illinois University Carbondale. The degree-granting unit for the associate degree is the College of Applied Sciences and Arts.

BACCALAUREATE DEGREE

Each candidate for a bachelor's degree must complete the requirements listed:

Hour Requirements. Each student must complete at least 120 semester hours of credit, which can include credit for work experience, College Level Examination Program (CLEP), Advanced Placement Program (AP), military credit, and proficiency examination credit. Mathematics 107 and University 388 cannot be counted in the 120 hours required for graduation. Each student must have at least 42 hours in courses that number 300 or above from a four year institution.

Residence Requirements. Each student must complete the residence requirement by taking the last year, which is defined as 30 semester hours, or by having three years of credit, which is defined as 90 semester hours at Southern Illinois University Carbondale. Only credit for those courses for which the student has *registered* and for which a *satisfactory grade has been recorded* at Southern Illinois University Carbondale may be applied toward the residence requirement hours. Students enrolled in an approved program delivered off-campus will have completed the residence requirement for the University upon completion of all courses required by the program. Credit for work experience, CLEP, Advanced Placement, military credit or proficiency credit is considered non-resident.

Average Requirements. Each student must have a C average for all work taken at Southern Illinois University Carbondale and a C average for all major work taken at the University.

Forgiveness Policy. The University has adopted a policy for students whose only graduation problem concerns the C average required for all work taken at the University. Such students may ask that the average be computed by one of the following methods: (1) by excluding from calculation of the grade point average a maximum of 13 semester hours of D or F grade earned at the University or, (2) by earning a grade point average of 2.10 or higher for the last 60 semester hours of work completed at the University. The student will be graduated if the average meets either of the two alternatives. It should be noted that the two alternatives are offered as a means of computing the GPA for graduation only and may not be used for any other purpose. Major requirements, including major GPA, are not subject to this policy. However, all grades, including those designated as repeats, are included in forgiveness calculation.

Course Requirements. Each student must meet the University requirements and the requirements of the academic unit, the major, and the minor, if required. The University Core Curriculum Requirements, which are explained in Chapter 3, total 41 semester hours of credit although there are methods available to reduce the number for certain students. The requirements of each college and for the specific major and minor programs are explained in Chapter 5.

SECOND BACHELOR'S DEGREE

Dual Degree

A student may earn two different degrees (e.g., B.A. and B.S.) at the same time by having completed the requirements for each degree and a total of at least 150 semester hours. An application for graduation must be submitted for both degrees. Students officially enrolled in a dual degree program who, for any reason, choose to graduate with a single bachelor's degree after having completed more than one-half of the requirements for the second degree will be granted seven years beyond the date of initial graduation for purposes of completing requirements for the second degree. It shall be the student's responsibility to monitor the passage of time and to complete degree requirements by the official deadline. The University assumes no responsibility for notifying students of pending deadlines.

Second Bachelor's Degree

A student may earn a second bachelor's degree upon completion of a minimum of 30 hours, making a total of 150 hours minimum, provided the student fulfills the requirements of the department or school and college for the second bachelor's degree. A prior bachelor's degree fulfills the Core Curriculum requirement. If a student's first bachelor's degree is from another university, 30 hours in residence is required to fulfill the requirements for the second bachelor's degree. If the first bachelor's degree was earned at the University, a minimum of 10 semester hours of the 30 required must be taken in residence at the University.

Three-Year Baccalaureate Degree Program

It is possible to complete a baccalaureate degree program in three years by utilizing proficiency examinations. The equivalent of one year of credit (30 semester hours) may be earned by this method. If you desire to follow the three-year program you should make that fact known to your academic advisor at the earliest possible date so that your eligibility can be determined. A combination of programs may be employed to accumulate these 30 hours as described above in the section on Credit by Means Other than Classroom Attendance.

Recognition of High Achievement

Dean's List. At the end of each semester, a dean's list is prepared. To be recognized as being on the dean's list, you must have been in attendance full-time (12 semester hours or more) and must have earned a grade point average of 3.50 for the semester. If at the end of the semester you have met the criteria established, a notation will appear on your academic record. The dean's list is recognition for a particular semester. It does not take into consideration your complete record.

University Honors Program. The University Honors program is explained in Chapter 5. Those who successfully complete the University Honors Program Diploma or Certificate receive recognition on the academic record at the time the degree is recorded.

Departmental Honors. Departments in the College of Agricultural Sciences, the College of Liberal Arts, and the College of Science offer honors courses, individual honors work, and

honors curricula, all designed to serve the student with high scholastic potential. A departmental or academic unit honors program consists of no fewer than six, nor more than fourteen semester hours in research or independent study which is counted toward the student's major. Some honors programs require a comprehensive examination at the end of the junior year and again at the end of the senior year. Grades may be deferred at the end of the first semester, but not from one school year to the next. Departmental honors will be noted on the academic record at the time degree is recorded.

Honors Day. Each spring semester an Honors Day Recognition Ceremony is held for students exhibiting high achievement. Qualification for recognition is determined at the end of the third week of the spring semester. Recognition at that time will be accorded to a full- or part-time student who has (1) attained an undergraduate grade point average at SIU Carbondale of 3.50 or better and, if applicable, a 3.50 average or better in all undergraduate work (including transfer credit) recognized by SIU Carbondale; and (2) reached the benchmarks of 12, 45, 75, or 105 credit hours of coursework. Such an honors student will be invited by the University to the next regularly scheduled Honors Day ceremony. An institution wide recognition event will take place, as well as each academic unit scheduling its own ceremony. Each honors student is recognized individually on Honors Day.

Honors Recognition at the Time of Graduation. The undergraduate student's degree honors designation is printed on transcripts and on diplomas, and is determined by first measuring the SIU GPA against the criteria below, then the cumulative All-Work GPA calculated by SIU from all undergraduate career work including work transferred in from other institutions.

Summa cum Laude – The Highest Honors designation awarded to graduating students with a scholastic average for SIU work of 3.900 - 4.000 and also All-Work GPA of 3.900 - 4.000.

Magna cum Laude – The High Honors designation awarded to graduating students with a scholastic average for SIU work of 3.750 - 3.899, and also All-Work GPA of 3.750 - 3.899.

Cum Laude – The Honors designation awarded to graduating students with a scholastic average for SIU work of 3.500 - 3.749 and also All-Work GPA of 3.500 - 3.749.

Graduation Procedures

The academic requirements for the various baccalaureate degrees are listed in Chapter 5. Presented here are the procedures that students expecting to graduate must follow. See details on the website: commencement.siu.edu.

Graduation ceremonies are held each year in May and December. These ceremonies are typically held in the SIU Arena on the Saturday after finals. There is no ceremony in August. The candidates who plan to complete degree requirements in August can choose to attend either the May or December ceremony. If you wish to attend the May ceremony, you should turn in your application early. The application deadline information is available online at commencement.siu.edu.

Attendance at commencement is not compulsory. If you do not plan to attend, please mark the corresponding option on the graduation application form. If you do plan to attend, the wear-

ing of a cap and gown is compulsory. Formal military attire is also acceptable.

Undergraduate degree candidates should apply for graduation via Salukinet. A non-refundable graduation application fee is assessed for each application term. Questions regarding the application or application fee should be referred to the Graduation Office by phone: 618-453-2054, by email: regstrar@siu.edu, or visit the website at commencement.siu.edu.

The graduation application fee does not cover the cost of the cap and gown rental or the invitations. Questions regarding the cap, gown and the invitations should be referred to the University Bookstore in the Student Center.

In addition to completing the graduation application, students are responsible for determining that they will meet all graduation requirements. Each academic unit provides a graduation check-up service through its academic advisement office in order to ensure that graduating students have met all requirements. Students should check with their academic advisors for the procedures they should follow as they approach graduation. Undergraduate students who started at SIU Fall 1990 or later may view their Degree Progress Report via SalukiNet online at: salukinet.siu.edu/.

Candidates who fail to meet the degree requirements by the deadline for the graduation term will be removed from the pending graduation list. It will then be the student's responsibility to submit a new graduation application form by the deadline for the term in which they plan to graduate. The new application will result in the assessment of another graduation application fee.

Any financial obligations with the university must be cleared by the Bursar's Office before the release of diplomas and official transcripts. Diplomas are mailed to the address on the graduation application form within two to ten weeks after the end of the term.

Graduation Appeal

The University has a Graduation Appeals Committee whose function is to review student petitions involving issues related to graduation. The Graduation Appeals Committee has the authority to graduate students even though they have not satisfied all University graduation requirements. The committee hears those cases involving University requirements for the associate or baccalaureate degree. Appeals relative to a major or academic unit requirement is through the appropriate administrative official. Ordinarily, the Graduation Appeals Committee will give consideration to an appeal if there is tangible evidence that the matter at issue is of an unusual nature and that it has resulted due to conditions beyond control of the student. Appeal is initiated through the advisement unit and the student's academic dean.

Issuance of Transcripts

The Registrar's Office will issue a transcript of the student's official educational record under the following conditions: A transcript is issued only upon a student's request or with the student's explicit permission, except that such permission is not required for an unofficial transcript when University faculty and administrative personnel request a transcript for official purpose. In addition, requests will be honored from a rec-

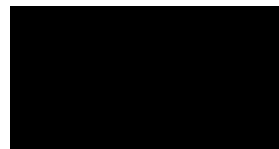
ognized research organization conducting educational research provided the confidential character of the transcript is protected. Transcripts will be sent to other recipients as requested in writing by the student. Also, there may be certain instances when transcripts will be released without the student's written permission. A transcript will not be issued if a student has an outstanding debt to the University.

For further information, see policy on release of student information and access to student records in Chapter 7. See the web site: <http://registrar.siu.edu/alumni/transcripts.html> to order your SIU transcript online. Students who started at SIU Fall 1990 or later, may view their unofficial transcript via SalukiNet on the world wide web: <http://salukinet.siu.edu/>.





3 / University Core Curriculum





University Core Curriculum

Pat A. Manfredi, *Director*

The University Core Curriculum is a carefully structured and deliberately sequenced program of study required of all *SIU Carbondale* undergraduate students. The program’s objectives are to develop students’ abilities to communicate orally and in writing, to think mathematically, and to analyze and conceptualize effectively. The Core is grounded in the traditional arts and sciences, and fosters a life of inquiry, creativity, and civic participation. As a matter of principle, the program limits curricular choice in favor of greater conceptual coherence.

Within the first 56 credit hours, every undergraduate must take 15 credit hours of Foundation Skills in English Composition, Foundations of Inquiry, Communication Studies, and Mathematics. Most undergraduates must also take a Foundations of Inquiry course. To introduce students to the universe of human knowledge, which underlies all undergraduate majors, the Core requires 23 credit hours of Disciplinary Studies in Fine Arts, Human Health, Humanities, Science, and Social Science. Finally, to emphasize the interconnectedness of our lives, culturally and intellectually, students are required to take three credit hours of Integrative Studies in Multicultural/Diversity courses.

The University Core Curriculum is administered by a faculty director, assisted by two University-wide committees, to oversee the implementation of curricular policy as set by the Provost and the Faculty Senate. To provide quality control, all Core courses are reviewed and student learning in them assessed at least once every five semesters by the Core Curriculum Executive Council. The Core is also subject to program review on a regular schedule established by the Illinois Board of Higher Education and the Higher Learning Commission of North Central Accreditation Association.

Further information about the University Core Curriculum is available from its director and the program’s webpage <http://corecurriculum.siu.edu>.

University Core Curriculum Goals

In 2005 the Association of American Colleges and Universities launched its LEAP campaign (Liberal Education and America’s Promise). Central to this campaign are a set of learning objectives that SIU has adopted as its Core Curriculum Goals. For more on the LEAP campaign visit, www.aacu.org/leap

1. Knowledge of Human Cultures and the Physical and Natural World

- Through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts

Focused by engagement with big questions, both contemporary and enduring

2. Intellectual and Practical Skills, Including

- Inquiry and analysis
- Critical and creative thinking
- Written and oral communication

- Quantitative literacy
- Information literacy
- Teamwork and problem solving

Practiced extensively, across the curriculum, in the context of progressively more challenging problems, projects, and standards for performance

3. Personal and Social Responsibility, Including

- Civic knowledge and engagement—local and global
- Intercultural knowledge and competence
- Ethical reasoning and action
- Foundations and skills for lifelong learning

Anchored through active involvement with diverse communities and real-world challenges

4. Integrative and Applied Learning, Including

- Synthesis and advanced accomplishment across general and specialized studies

Demonstrated through the application of knowledge, skills, and responsibilities to new settings and complex problems

University Core Curriculum Requirements

I. <i>Foundation Skills</i>	13-15
Foundations of Inquiry	1-3
Select either UCOL 100A, B, or C or one UCOL 101 course. Juniors and seniors may substitute UCOL 301. The “Foundations of Inquiry” Core Curriculum requirement applies only to on-campus undergraduates, first entering SIU in Summer 2012 or later, with fewer than 26 transferable hours earned after high school graduation (excluding AP, CLEP, IB and proficiency credits). For students entering SIU from Summer 2012 through Spring 2015, this is a 3-credit hour requirement. For students entering SIU beginning in Summer 2015, this is a 1-credit hour requirement.	
Some programs require all students (regardless of Transferable hours) to take a specific Foundations of Inquiry course. These courses range from 1 to 3 credit hours. Students should check with their academic advisor to determine whether the program they wish to enter requires a specific UCOL 101 course.	
Advanced University Core Curriculum Courses: BUS 302.	
Communication Studies 101	3
English Composition	6
Both English 101 and 102 are to be completed with a grade of C or better. English 120H, if completed with a grade of C or better, will complete the composition requirement. Linguistics 101 and 102, also to be completed with a grade of C or better, will satisfy the composition requirement for ESL students.	
Mathematics	3
Select one course from the following: MATH 101, 110. Advanced University Core Curriculum courses: Any mathematics course designated by a number greater than 105 except for 107, 120, and 300I.	
II. <i>Disciplinary Studies</i>	23

Fine Arts	3
Select one course from the following: Architectural Studies 314I; Art and Design 100A,B, 101; Cinema and Photography 101, 354I; English 119, 206A, 307I; Foreign Language 200A,B,C; History 201; Music 103; Radio, Television and Digital Media 362I, Theater 101.	
Advanced University Core Curriculum courses:	
Architectural Studies 231 and 232 or Interior Design 333 and 334; Music 357A,B; Theater 220.	
Human Health	2
Select one course from the following: Biology 202; Health Education 101; Human Nutrition and Dietetics 101; Kinesiology 101; Physiology 201; Rehabilitation 205.	
Advanced University Core Curriculum courses: Allied Health 241; Kinesiology 201; Physiology 310.	
Humanities	6
Select two courses from the following or select a sequence: Art and Design 207A,B,C; Cinema and Photography 358I; Classics 230, 270, 271, 315I; East Asian 102; English 121, 204; Geology 329I; German 101A,B; History 101A,B, 358I; Linguistics 200; Mathematics 300I; Philosophy 102, 103A,B, 104, 105, 303I, 307I, 309I.	
Sequence I:	Art and Design 207A,B,C (select two)
Sequence II:	English 121, 204
Sequence III:	German 101A,B
Sequence IV:	History 101A,B
Sequence V:	Philosophy 103A,B
Advanced University Core Curriculum courses:	
Art and Design 358; Classics 304, History 207; Philosophy 304, 305A or B, 340; a third semester of a foreign language or a first semester or more advanced course in Latin or Classical Greek.	
Science	6
Select one course from each group. <i>Lecture courses in Geology must be taken with the appropriate lab course.</i>	
Group I: Chemistry 106; Geography 104, 303I, 310I; Geology 111 and 112, 121 and 124, 122 and 123, 128 and 129; Physics 101, 103.	
Advanced University Core Curriculum courses: Chemistry 140A, 200 and 201, 200H and 201; Geology 113, 220 and 223, 221 and 224, 222 and 223; Physics 203A and 253A, 203B and 253B, 205A and 255A, 205B and 255B, 305 and 355; Science 210A.	
Group II: Anthropology 240A; Plant Biology 115, 117, 301I; Zoology 115.	
Advanced University Core Curriculum courses: Biology 200A,B; Microbiology 201; Physiology 201 and 208 (if not used for Human Health); Plant Biology 200; Science 210B; Zoology 118, 220.	
Social Science	6
Select two courses in <i>different disciplines</i> from the following: Agribusiness Economics 300I, Agricultural Sciences 300I, Anthropology 104; Economics 113, 114, 302I; Geography and Environmental Resources 100,	

103, 300I; History 110, 112; Journalism 306I, 314I; Liberal Arts 300I; Mass Communication and Media Arts 200; Political Science 114, 314I, 332I, 372I; Psychology 102; Sociology 108, 306I; Zoology 312I.

Advanced University Core Curriculum courses:
Agribusiness Economics 204; Economics 240, 241; Education 314; History 301.

III. Integrative Studies	3
Students are strongly advised to complete their Disciplinary Studies courses before enrolling in the Integrative Studies courses.	

Multicultural/Diversity: Improving Human Relations 3
Select one course from the following: Art and Design 227, 267, 307I, 317I; Africana Studies 215, 227, 303I; Anthropology 202, 204, 298; Communication Studies 201, 301I; Criminology and Criminal Justice 203; Engineering 304I; English 205 and 212; Foreign Languages and Literatures 301I; French 200; History 202, 212; Kinesiology 210; Linguistics 201, 320I; Mass Communication and Media Arts 204; Music 203, 303I; Philosophy 210, 211, 308I; Political Science 215, 352I; Psychology 223, 233; Sociology 215, 223; Women, Gender and Sexuality Studies 200, 201, 223, 233, 301I, 307I, 320I.

Advanced University Core Curriculum courses: Africana Studies 325; Education 311; English 225, 325; History 300, 368; Women, Gender and Sexuality Studies 225.

Total	39-41
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¹All majors in the College of Engineering may satisfy the science requirement by taking two physical science courses provided that they take BIOL 202, Human Genetics and Human Health.

Students whose catalog year is prior to Summer 2012 are not required to take a Foundations of Inquiry course. These students are required to take a 3 credit hour Interdisciplinary course from the list below. Most of these courses also satisfy Core requirements in other areas, as indicated in the lists above. But no course can be used to satisfy more than one Core Curriculum requirement.

Interdisciplinary	3
Select one course from the following: Africana Studies 303I, Agriculture 300I, Architecture 314I, Art and Design 307I, 317I, Cinema and Photography 354I, 358I, Classics 315I, Communication Studies 301I, Economics 302I, English 307I, Engineering 301I, 303I, 304I, Foreign Language 301I, Geography and Environmental Resources 300I, 303I, 310I, Geology 327I, 328I, 329I, 330I, History 358I, Journalism 306I, 314I, Liberal Arts 300I, Linguistics 320I, Mathematics 300I, Music 303I, Philosophy 303I, 307I, 308I, 309I, Plant Biology 301I, 303I, Political Science 314I, 332I, 352I, 372I, Radio, Television and Digital Media 362I, Sociology 304I, 306I, Women, Gender and Sexuality Studies 301I, 307I, 320I, Zoology 312I.	

Some programs and upper division academic units require specific Core Curriculum courses. A student may determine these requirements by referring to specific major requirements in Chapter 5.

Meeting University Core Curriculum Requirements

Core Curriculum requirements may be met by any of the following, subject to the rules and limitations listed:

1. Completion of Core Curriculum (or Advanced Core Curriculum) courses with a satisfactory grade. Each student must complete the Foundation courses (Composition, Foundations of Inquiry, Speech, Mathematics) or their approved Advanced Core courses prior to or upon completing 56 semester hours of coursework. The student, working with the academic advisor, shall have the responsibility of meeting this requirement.
2. Completion of an associate degree in a baccalaureate-oriented program (A.A. or A.S.) from an accredited Illinois public two-year institution; completion of an A.A. from an accredited Missouri public two-year institution; or completion of an A.A. or A.S. from a Kentucky Community and Technical College System institution. The student will: **(a)** be admitted to the University with junior standing and, **(b)** be considered to have completed the University Core Curriculum requirements for general graduation purposes.
3. Other associate's degrees will be reviewed by Transfer Student Services. If the degree is determined to be baccalaureate-oriented and to have comparable content and credit hour criteria, the same benefits will be extended to those graduates.
4. Transfer students may satisfy the requirements of the University Core Curriculum by successful completion of the Illinois Transferable General Education Curriculum. Transfer students who have not completed all Core Curriculum requirements prior to enrolling at SIU can have their transcripts evaluated and comparable courses will be applied toward the University Core Curriculum or the IAI General Education Core Curriculum requirements on a course-by-course basis. A student must have a minimum of 30 semester hours of transfer credit prior to enrollment at SIU in order to be eligible to complete the IAI GECC in lieu of the SIU UCC requirement subsequent to admission to the University.
5. Students who have received a bachelor's degree from an accredited institution will also be considered to have their University Core Curriculum complete. Additional information concerning admission of transfer students and the evaluation of transfer credit can be found in the sections of this catalog pertaining to those specific programs. (See Chapter 2 for admission and *University Core Curriculum*

and *Transfer Students* in this chapter for more information on transfer of courses.)

6. Proficiency credit by examination for Core Curriculum courses or Advanced Core courses. All Core Curriculum courses are eligible for proficiency credit, subject to specified restrictions. (See proficiency examinations in Chapter 2.) Students should contact the individual department for specific information. Completion of courses listed as Advanced Core courses are limited to 12 hours.
7. Proficiency credit via General Examinations of the College Level Examination Program (CLEP) or Advanced Placement (AP). Credit given through the High School AP or CLEP examinations will be nonresident, will not carry a grade, and will not be used in computing the student's grade point average. The credit will be validated after 12 hours of C grade or better in residence at Southern Illinois University Carbondale. A \$33 charge will be assessed for proficiency examinations taken at Testing Services.
8. No Core course or Advanced Core course may satisfy more than one requirement, nor may any Advanced Core course in combination with the Core course for which it substitutes be used to satisfy a Core requirement.

List of Advanced Core Courses. The following courses for the major have been approved for the University Core Curriculum requirement. In no case does an Advanced Core course satisfy more credit hours than the credit hours allowed in a comparable University Core Curriculum course. Under no circumstances can a Core course satisfy more than one Core requirement. Students should consult their academic advisors concerning any prerequisite for these courses.

A maximum of twelve semester hours of approved advanced coursework may be accepted for University Core Curriculum credit, with the exception of approved University Honors courses. A maximum of three semester hours of the University Honors Program may be accepted in each of the sub-areas of Fine Arts, Human Health, Diversity: Improving Human Relations, and Interdisciplinary; and a maximum of six semester hours of the University Honors Program may be accepted in each of the sub-areas of Humanities, Science and Social Science, subject to the advance determination by the director of the University Honors Program and the approval of the University Core Curriculum Executive Council.

Core Curriculum	Advanced Core Curriculum Courses
AD 207A	AD 358
AD 207A	AD 368
CHEM 106	CHEM 140A or 200 and 201 or CHEM 200H and 201
DH 298	DH 417
ECON 113/114	ECON 240, 241 or ABE 204

Core Curriculum	Advanced Core Curriculum Courses
ENGL 205	AFR 325, EDUC 311, ENGL 225, 325 or WGSS 225
GEOL 111/112	GEOL 220 and 223, 221 and 224, 222 and 223 ; GEOL 113 may be substituted for any of the lab sections.
HIST 101A,B	HIST 207
HIST 110	EDUC 314, HIST 301
HIST 202	HIST 300, HIST 368
KIN 101	KIN 201
MATH 110	Any Mathematics course designated by a number greater than 107 except for 114, 120, and 300I.
MUS 103	MUS 357A or 357B
PHIL 102	CLAS 304, PHIL 304 or 305 A or B
PHIL 104	PHIL 340
PHSL 201	PHSL 310 or AH 241
PHYS 101/103	PHYS 203A and 253A; 203B and 253B; 205A and 255A; 205B and 255B; 305 and 355
PLB 115	BIOL 200A or B, MICR 201, PHSL 201 and 208 (if not used for Human Health), PLB 200, ZOO 118, 220
THEA 101	THEA 220
ZOOL 115	BIOL 200A or B, MICR 201, PLB 200, ZOO 118, 220
Fine Arts	Architectural Studies 231 and 232 or Interior Design 333 and 334
Humanities	A student may substitute up to a maximum of three credit hours with either a third semester of foreign language or a first semester or more advanced course in Latin or Classical Greek.
Science Group I	Science 210A
Science Group 2	Science 210B or Physiology 201 and 208 (if not used for Human Health)

University Core Curriculum Courses

The first entry for each course is a three digit numeral plus, in some cases, a single letter which together with the subject area, serves to identify the course. The number followed by the dash represents the semester credit hours. Next is the title, followed by a description of the course. If certain requirements must be satisfied before enrollment in a course, they are listed as prerequisites.

I. FOUNDATION COURSES

CMST 101-3 Introduction to Oral Communication: Speech, Self and Society. (University Core Curriculum) [IAI Course: C2 900] This course provides theory and practical application relevant to students' development of basic oral communication competencies appropriate to a variety of contexts as situated in a culturally diverse world. Course Fee for Digital Materials: \$72.

ENGL101-3 English Composition I. [IAI Course: C1 900] Rhetorical foundations for demands of academic and professional writing, including recognition and deployment of strategies and processes for effective written products in various contexts and for various purposes. Class discussion and readings focus on the function and scope of professional and personal literacy. Course material fee: \$62.

ENGL102-3 English Composition II. [IAI Course: C1 901R] The second course in the two-course sequence of composition courses required of all students in the University. Using culturally diverse reading materials, the course focuses on the kinds of writing students will do in the University and in the world outside the University. The emphasis is on helping students understand the purpose of research, develop methods of research (using both primary and secondary sources), and report their findings in the appropriate form. Prerequisite: English 101 or equivalent with a minimum grade of C. To receive credit in the University Core Curriculum, a student must earn a C or better in English 102. Course material fee: \$62.

ENGL 120H-3 Honors Advanced Freshman Composition. (University Honors Program) [IAI Course: C1 901R] Fulfills Foundation Skills requirement for composition. Writing critical essays on important books in the following categories: autobiography; politics; fiction; eyewitness reporting; and an intellectual discipline. To receive credit in the University Core Curriculum, a student must earn a C or better. Prerequisite: ACT score of 29 or higher or CLEP test qualifying score of 57-60 or admission to the University Honors Program.

LING 101-3 English Composition I for ESL Students. [IAI Course: C1 900] The first course in the university's two-course required composition sequence designed for ESL students. This course helps ESL writers become more comfortable with and proficient in academic writing in English. To this end, Linguis-

tics 101 teaches students processes and strategies for planning, drafting, revising and editing their English writing for academic audiences. Course assignments focus on writing from primary and secondary sources. ESL equivalent to University Core Curriculum English 101.

LING 102-3 English Composition II for ESL Students. [IAI Course: C1 901R] The second course in the university's two-course required composition sequence designed for ESL students. This course helps ESL writers become more comfortable with and proficient in research writing for academic audiences. Linguistics 102 focuses on writing from secondary sources, teaching students processes and strategies for planning, drafting, revising and editing papers that incorporate published material. All aspects of the research process are addressed, from locating and evaluating relevant sources to incorporating and documenting these sources in papers written for various purposes. Students must earn a grade of C or better in LING 101 or ENGL 101 before beginning LING 102. For credit in the University Core Curriculum, students must earn a "C" or better in 102. Equivalent to University Core Curriculum ENGL 102. Prerequisite: LING 101 or ENGL 101.

MATH 101-3 Introduction to Contemporary Mathematics. [IAI Course: M1 904] Elementary mathematical principles as they relate to a variety of applications in contemporary society. Exponential growth, probability, geometric ideas and other topics. This course does not count towards the major in mathematics. Prerequisite: MATH 107 with a grade of C or better or high school Geometry and Algebra 2 with a grade of C or better, and satisfactory placement score. \$93 fee will cover student access to mylabsplus. Platform is used for assessment and online access to learning aids and e-textbook.

MATH 110-3 Non-Technical Calculus. The elements of differentiation and integration. The emphasis is on the concepts and the power of the calculus rather than on technique. It is intended to provide an introduction to calculus for non-technical students. Does not count towards the major in mathematics. No credit hours may be applied to fulfillment of any degree requirements if there is prior credit in Mathematics 140, 141 or 150. Prerequisite: 3 years of college preparatory mathematics including algebra I, algebra II and geometry with C or better. Students must present satisfactory placement scores or obtain the permission of the Department of Mathematics.

UCOL 100-1 to 3 Transfer Student College Planning. The course is designed to help first-year transfer students make a successful transition to college life. Students will be guided through the transfer process. Topics of discussion include the value of pursuing higher education, developing a career goal; identifying academic majors, admissions and academic requirements, university comparison, and options in financial aid. The content of the course is pertinent to any student who is planning to transfer to a four-year institution to complete a Bachelor's degree and satisfies transfer orientation requirements.

UCOL 100A-1 Foundations of Inquiry for Dual Admission Program Students: Part one of three. This online course supports transfer students who plan to attend SIU Carbondale and are participating in the SIU Dual Admission Program. Upon completion of this course, students will have started to prepare their transfer plans, built community among other prospective transfer students, and learned to cope with pressures affecting

college students. Students will acquire these capabilities as they are introduced to potential academic and career tracks associated with the disciplines offered at SIU. Students will take from one to three credit hours each semester beginning as early as their second semester at a community college. Completing parts A, B, and C satisfies the University Core Curriculum, Foundations of Inquiry requirement at SIU. Course material fee: \$49.

UCOL 100B-1 Foundations of Inquiry for Dual Admission Program Students: Part two of three. This online course supports transfer students who plan to attend SIU Carbondale and are participating in the SIU Dual Admission Program. Upon completion of this course, students will have started to prepare their transfer plans, built community among other prospective transfer students, and learned to cope with pressures affecting college students. Students will acquire these capabilities as they are introduced to potential academic and career tracks associated with the disciplines offered at SIU. Students will take from one to three credit hours per semester beginning as early as their second semester at a community college. Completing parts A, B, and C satisfies the University Core Curriculum, Foundations of Inquiry requirement at SIU.

UCOL 100C-1 Foundations of Inquiry for Dual Admission Program Students: Part three of three. This online course supports transfer students who plan to attend SIU Carbondale and are participating in the SIU Dual Admission Program. Upon completion of this course, students will have started to prepare their transfer plans, built community among other prospective transfer students, and learned to cope with pressures affecting college students. Students will acquire these capabilities as they are introduced to potential academic and career tracks associated with the disciplines offered at SIU. Students will take from one to three credit hours each semester beginning as early as their second semester at a community college. Completing parts A, B, and C satisfies the University Core Curriculum, Foundations of Inquiry requirement at SIU.

UCOL 101A-1 to 3 Foundations of Inquiry: Academic Success Seminar. This First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry through intentional delivery of the Academic Success Seminar student-centered materials and supplementary services. Sections will be limited to approximately 25 students each. [This course is a replacement for UNIV 100.] \$46 fee will cover access to Pearson's MyStudent-SuccessLabPlus and a bundled etext that students can use as part of SIU's tablet initiative that begins Fall 2013.

UCOL 101B-1 to 3 Foundations of Inquiry for Business. The First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry-the interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines of the College of Business at SIUC. \$49 fee will cover access to Pearson's MyStudentSuccessLabPlus and a bundled etext that students can use as part of SIU's tablet initia-

tive that begins Fall 2013.

UCOL 101C-1 to 3 Foundations of Inquiry: School of Art and Design. This First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines offered in the School of Art and Design at SIUC. Sections will be limited to approximately 25 students each. [Note: This is the replacement for SFY 101C.]

UCOL 101D-1 to 3 Foundations of Inquiry: Foreign Languages. This First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interest, assumptions, methodologies, and potential academic and career tracks associated with the study of a foreign language. In UCOL 101D: Foreign Language, you will study theories of second language acquisition, and how they can inform your learning across the curriculum, and you will discuss and debate the interaction between language and culture.

UCOL 101E-1 to 3 Foundations of Inquiry: Introduction to Engineering. (Same as ECE 101 and ENGR 101) Introduction to the engineering profession and the engineering programs in the College of Engineering. Lectures and hands-on laboratory projects aimed at stimulating interest in engineering and at guiding students in choosing an engineering curriculum. Seminars presented by distinguished speakers on engineering careers, ethics, and employment trends. No prerequisites.

UCOL 101F-1 to 3 Foundations of Inquiry: Women's Seminar. The first-year women's seminar course creates a collective environment where female students can discuss and examine their experiences, achievements, and positions in higher education and society. The primary goal is to build a community of first-year women leaders and provide a space to examine their academic experiences. The course supports the transition of first-year female students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. \$49 fee will cover access to Pearson's MyStudentSuccessLabPlus and a bundled etext that students can use as part of SIU's tablet initiative that begins Fall 2013.

UCOL 101G-1 to 3 Foundations of Inquiry: Campus Sustainability: SIU Environmental Activities. The First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines of a particular college at SIUC. Students will learn about, experience, and participate in sustainability activities on campus and in the southern Illinois region. Sections limited to approximately 20 students.

UCOL 101H-1 to 3 Foundations of Inquiry: Education and Human Services. This course provides a survey of various fields of study in the College of Education and Human Services. The course is oriented for students in their first year of university life, and supports the transition to a research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors that are required for academic and personal success. Students will develop these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career pathways found among the disciplines in this College. \$49 fee will cover access to Pearson's MyStudentSuccessLabPlus and a bundled etext that students can use as part of SIU's tablet initiative that begins Fall 2013.

UCOL 101I-1 to 3 Foundations of Inquiry: Introduction to Agriculture, Food and Forestry. This First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines of the College of Agricultural Sciences at SIUC. Sections will be limited to approximately 25 students each.

UCOL 101J-1 to 3 Foundations of Inquiry: Careers in Music. The First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with music. Students will explore what it means to be a music major, what careers they might pursue, activities, required skills, rewards, and expectations associated with majors in music, and how to navigate programs involving more than one school or college. Course material fee: \$49.

UCOL 101K-1 to 3 Foundations of Inquiry: Introduction to History. This first-year seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks-associated with history. This is a recommended course for potential history majors (in the College of Liberal Arts and the College of Education and Human Services), but is open to any interested students. Students will acquire an understanding of the basic analytical, writing, and research skills specific to the historical profession and general to the social sciences and the humanities. Course material fee: \$49.

UCOL 101L-1 to 3 Foundations of Inquiry in the Liberal Arts. Course provides a survey of various fields of study that comprise the liberal arts. The course is oriented for students in their first year of university life, and supports the transition to a research university. Upon completion of this course, students

will be able to demonstrate the knowledge, skills, and behaviors that are required for academic and personal success. Students will develop these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career pathways found among the social sciences, arts, and humanities.

UCOL 101M-1 to 3 Foundations of Inquiry: Introduction to Mass Communication and Media Arts. This First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines offered in the College of Mass Communication and Media Arts.

UCOL 101N-1 to 3 Foundations of Inquiry: Non-Traditional and Military. The First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines at SIU. This class focuses on concerns of Non-traditional and Military (Active, Guard, Reserve, Veterans) students, but it is open to any interested students.

UCOL 101O-1 to 3 Foundations of Inquiry in Anthropology. This First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks found among the social sciences, arts, and humanities. The specific content of this section of UCOL 101 adds an anthropological perspective to the topics discussed. [Modifies SFY 101D].

UCOL 101P-1 to 3 Foundations of Inquiry: Careers in Psychology. This First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with psychology. This is a required course for psychology majors but is open to any interested student.

UCOL 101R-1 to 3 Foundations of Inquiry: Communication Studies. This student success course supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. As students acquire these capabilities they will be introduced to the foundations of inquiry—those interests, assumptions, methodologies, and potential academic and career tracks—associated with the disciplines of a particular college at SIU. Specific to Communication Studies, this course will provide

a rich foundation for developing essential personal, academic, and professional communication skills. These skills will be explored in relation to everyday interactions, education, networking and mentoring relationships, the workplace, social media, cultural awareness, and civic engagement. \$49 fee will cover access to Pearson's MyStudentSuccessLabPlus and a bundled etext that students can use as part of SIU's tablet initiative that begins Fall 2013.

UCOL 101S-1 to 3 Foundations of Inquiry: Introduction to Scientific Research. This seminar-style course is designed to promote an understanding of the value and expectations of higher education and to explore the resources available to science majors. Students will learn study skills, time management, and explore strategies for success in classes. The nature and process of scientific investigation will be presented by SIUC and regional scientists who solved local and global problems and contribute to the science knowledge-base. Students will be exposed to the excitement of inquiry-based discovery and will explore the methods by which practicing scientists guide their work. Classroom activities will enhance communication skills and assist students in networking and integrating into the scientific community at SIUC.

UCOL 101T-1 to 3 Foundations of Inquiry in Aviation Technologies. This First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with a major in Aviation Technologies.

UCOL 101U-1 to 3 Foundations of Inquiry for Pre-Majors. This First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines offered at SIUC. Sections will be limited to approximately 25 students each. [Modification of UNIV 101]. \$49 fee will cover access to Pearson's MyStudentSuccessLabPlus and a bundled etext that students can use as part of SIU's tablet initiative that begins Fall 2013.

UCOL 101V-1 to 3 Foundations of Inquiry: Political Science. This course provides a survey of various fields of study that comprise the liberal arts. The course is oriented for students in their first year of university life, and supports the transition to a research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors that are required for academic and personal success. Students will develop these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career pathways found among the social sciences, arts, and humanities. Seminars presented by distinguished speakers on careers and topics of particular interest to Political Science majors. Open to students in any major.

UCOL 101W-1 to 3 Foundations of Inquiry: Gender and Sexuality in Higher Education. The First-Year Seminar

supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with the interdisciplinary subject of gender and sexuality studies. Course material fee: \$49.

UCOL 101X-1 to 3 Foundations of Inquiry: Introduction to Information Assurance and Cybersecurity. The First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines at SIU. Students will be exposed to concepts and terminology relating to computer security. Additional topics will include methods for identifying and avoiding common online security threats. Course material fee: \$49.

UCOL 101Y-1 to 3 Foundations of Inquiry: Black Men's Initiative. This first-year seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines offered at SIU. The particular focus of this course is on the black male experience. Through studying African American role models, students will investigate the triumphs, struggles, and complexities of the black male experience. Students will also learn how media and cultural representations affect expectations of academic success for black males. Enrollment in this course is open to all students. \$49 fee will cover access to Pearson's MyStudentSuccessLabPlus and a bundled etext that students can use as part of SIU's tablet initiative that begins Fall 2013.

UCOL 101Z-1 to 3 Foundations of Inquiry: Aviation Management and Flight. The First-Year Seminar supports the transition of first-year students as they enter our research university. Students will demonstrate the knowledge, skills and behaviors critical for academic and personal success; acquiring these capabilities as they are introduced to the foundations of inquiry. Successful completion of UCOL 101Z will fulfill the University Core Curriculum requirements for Area 1-Inquiry for Aviation Management and Flight students.

II. DISCIPLINARY STUDIES

Fine Arts

AD 100A-3 Foundation Studio A. A fundamental class with emphasis on contemporary and traditional two-dimensional processes, concepts and materials. Students will also experiment with digital and time-based work. Projects are designed to introduce and fuse content, skill and composition. Emphasis will be placed on solving visual problems and thinking critically and creatively. Incidental expenses will be incurred. Studio fee: \$30.

AD 100B-3 Foundation Studio B. A fundamental class with emphasis on contemporary and traditional three-dimensional processes, concepts and materials. Projects are designed to introduce and fuse content, skill and the principles of design and composition. Emphasis will be placed on solving visual problems and thinking critically, analytically and creatively. Incidental expenses will be incurred. Studio fee: \$30.

AD 101-3 Introduction to Visual Culture. [IAI Course: F2 900] This course aims to equip students with a critical awareness of contemporary visual culture - from art to advertising, from the built environment to cyberspace. Students will be encouraged to interrogate all varieties of visual forms and to consider the different viewing contexts, historical antecedents and cultural differences that condition their experience of the visual world. Weekly section meetings with a graduate assistant will provide an opportunity to discuss concepts presented in lectures and readings and to carry out assignments in the form of written reports and creative art and design projects. A field trip is required (a small fee will be required of those unable to provide their own transportation).

ARC 314I-3 Expressions in Architecture. A study of the interconnected nature of the arts, history, environmental psychology, and architecture using the built environment as the foundation for the study. Students will learn to critically examine the built environment by learning how architecture expresses human cultures, social structures, economic and political status, and spiritual beliefs.

CP 101-3 Film History and Analysis. An introduction to world history of cinema from its origins to the present, featuring important and influential films of various types and genres from many countries. Basic formal and technical aspects of the medium and means of analysis are also introduced. Students purchase texts. It is also the required foundation course for the Cinema Specialization in the Cinema and Photography major. Screening fee: \$30.

CP 354I-3 Mass Media Culture and American Studies. A study of the relationship between American Studies and American audio-visual culture. Sample topics include: the development of the 20th century American city with emphasis on the importance of mass media to that process; the American landscape in cinema; the American West. Students will learn the methods of American and cinema studies, and write papers and deliver oral presentations about those methods. No prerequisites. Screening fee: \$30.

ENGL 119-3 Introduction to Creative Writing. This course offers an introduction to the art and craft of writing poetry and short fiction. Requirements will include writing exercises, reading and analyzing published poetry and fiction, conferences, and the creation of a portfolio of original poetry and fiction. There may be examinations, journal writing, and/or compilation of an anthology of published or original works.

ENGL 206A-3 Literature Among the Arts: The Visual. A theoretical and historical examination of American graphic novellas, comic books and "comix" from their origins in the 1930s to the present, emphasizing the opportunities that a new and developing medium makes available for redefining narration, for social critique, and for examining the historical.

ENGL 307I-3 Film as Literary Art. [IAI Course: F2 908] This course proposes to examine the influential role literature has on the cinematic tradition both in the past and present. It intends to emphasize the artistic and visual debt cinema owes to literature by concentrating on major achievements and analyzing them accordingly.

FL 200A-3 Masterpieces of World Literature-France and Francophone Countries. Readings and discussions of Western literature taken from the Middle Ages to modern times. All readings and lectures in English.

FL 200B-3 Masterpieces of World Literature-Germany, Switzerland, Austria. Readings and discussions of Western literature taken from the Middle Ages to modern times. All readings and lectures in English.

FL 200C-3 Masterpieces of World Literature-Spain. Readings and discussions of Western literature taken from the Middle Ages to modern times. All readings and lectures in English.

HIST 201-3 Art, Music and Ideas in the Western World. [IAI Course: HF 902] The historical evolution of the visual arts, architecture and music in the context of society and literature, from ancient Greece to the present. It emphasizes the fundamental historical relationship of the different genres of human expression in Western culture.

MUS 103-3 Music Understanding. [IAI Course: F1 900] Through lectures, in-class individual and group activities, readings, and discussions, students will learn to place musical works in their historical and cultural contexts by understanding the development of western art music. Students will also learn the listening skills necessary to perceive various fundamental aspects of any work of music. Course material fee: \$73.

RTD 362I-3 Sound Art and Practice. This course will provide students with a philosophical understanding of the concepts and practices used in sound art and practice today and historically; and, in a variety of careers and in society in general. This course will introduce students to audio technology and terminology as well as expose them to the many applications of sound, as art and function, in society, regardless of their desire to pursue sound as a career. Lab fee: \$55.

THEA 101-3 Theater Insight. [IAI Course: F1 907] Through lectures, discussions, projects, text readings and written critiques, students examine how plays are written and produced and how these plays reflect the people and cultures that produce them. Theater Insight Fee: \$13.

Human Health

BIOL 202-2 Human Genetics and Human Health. Acquaints the student with the role played by genetic information in human development and disease. Discussion topics will include genetics and human diversity, the interaction of genetic information and the environment, the concept of genetic disease, the mechanisms and ethics of gene therapy, and the possibilities of manipulating the genetic material.

HED 101-2 Foundations of Human Health. This course is designed to examine contemporary health-related issues for all dimensions of the individual - physical, mental, social, emotional and spiritual - through focus on health promotion and disease prevention. Emphasis is placed on maintaining or improving quality of life by developing personal and social skills

(decision-making, communication, stress management, goal setting) across health education content areas, as well as identifying and accessing appropriate health-related resources.

HND 101-2 Personal Nutrition. This course integrates nutrition and promotion of health through prevention of disease and will answer questions found daily in the media regarding nutrition. Topics emphasized are functions of basic nutrients, impact of culture, gender, ethnicity, social environments and lifestyle on nutrition and health.

KIN 101-2 Current Concepts of Physical Fitness. To foster a thorough understanding of scientific principles of physical fitness and to enhance the ability to utilize physical exercise toward achievement of healthful living. Lab fee: \$3.

PHSL 201-3 Human Physiology. [IAI Course: L1 904] A course which relates the normal function of the human body to the disruptions which occur in a variety of disease states. Three lecture hours per week. Not open to students who have taken 310. With 208 (if not used for health) satisfies University Core Curriculum Science Group II requirement.

REHB 205-3 Disability and Chronic Disorders. This course focuses upon the common characteristics of physical, sensory, developmental, medical, and psychiatric disabilities. The course will discuss the definition and classification of each particular type of disability. Emphasized will be the diagnostic criteria and the biological, cognitive, behavioral, and social aspects of each particular disorder as they occur over the lifespan.

Humanities

AD 207A-3 Introduction to Art History I. [IAI Course: F2 901] Studies the origins and nature of art in a variety of ancient civilizations from around the world, such as Ancient Egypt, Greece, China and the Americas. Sculptures, painting, architecture, metalwork, ceramics, textiles and other art works are studied in their social and historical contexts, with consideration of issues of style, subject matter, meaning, technique and aesthetics.

AD 207B-3 Introduction to Art History II. Studies art from Ancient Rome to the Early Renaissance in Europe, Africa and Asia. Sculptures, paintings, architecture, metalwork, ceramics, textiles and other art works are studied in their social and historical contexts, with consideration of issues of style, subject matter, meaning, technique and aesthetics.

AD 207C-3 Introduction to Art History III. (University Core Curriculum course) This class studies art from the Renaissance to the present from around the world. Sculptures, painting, architecture, metalwork, ceramics, textiles and other art works are studied in their social and historical contexts, with consideration of issues of style, subject matter, meaning, technique and aesthetics.

CLAS 230-3 Classical Mythology. [IAI Course: H9 901] An inquiry into the nature of myth and its relevance today while studying selected myths principally of the Greeks and Romans.

CLAS 270-3 Greek Civilization. An introduction to the life and culture of ancient Greece. Greek contributions to western civilization in literature, art, history, and philosophy. No knowledge of Greek or Latin is required.

CLAS 271-3 Roman Civilization. An introduction to the life and culture of ancient Rome. Rome's function in assimilating, transforming, and passing on the Greek literary and intellectual

achievement. Rome's own contributions in the political, social, and cultural spheres. No knowledge of Greek or Latin is required.

CLAS 315I-3 to 9 Classical Themes and Contemporary Life: Seminar Series. [IAI Course: H9 900] Specific aspects of Classical Civilization are compared with aspects of our own society. In alternate years, the course will treat different themes, e.g., Drama's birthplace: Classical Athens; Roman heroes and Anti-Heroes, or Athletics, Sports and Games in the Ancient World. When offered in Europe, the course will focus on how these values are reflected in architecture, art, the military and the arena from ancient times through the Renaissance and beyond.

CP 358I-3 Introduction to Peace Studies. (Same as HIST 358I) Introduces students to Peace Studies as an interdisciplinary field, focusing on the history, theory, and practice of alternatives to violence. Considers the structural and systemic reasons for violence and war; the history of peace movements; the role of media in escalating violence and providing solutions. Lecture-discussion format with presentations by speakers from a variety of disciplines. No prerequisites.

EA 102-3 East Asian Civilization. [IAI course: H2 903N] An introduction to East Asian cultural traditions, literature, philosophy, history, art and social organization of China and Japan. Formerly FL 102. Credit will not be granted for both FL 102 and EA 102.

ENGL 121-3 The Western Literary Tradition. [IAI Course: H3 900] The course offers a critical introduction to some of the most influential and representative work in the Western literary tradition. Emphasis is on the interconnections between literature and the philosophical and social thought that has helped to shape Western culture.

ENGL 204-3 Literary Perspectives of the Modern World. [IAI Course: H3 900] This course introduces the literature of the twentieth century using representative works from the beginning through the close of the century. Course material may be drawn from fiction, verse, and drama, as well as including examples from supporting media (film, performance). Course may be taken as a sequence to English 121, "The Western Literary Tradition", but 121 is not a prerequisite for this course. Prerequisite: ENGL 102 or its equivalent.

GEOL 329I-3 Geomythology. Natural disasters have been the source of countless myths and legends throughout human history. This course will examine ways in which regional geology influenced ancient civilizations, and explore the possibility that some of their myths and legends preserve a record of actual geologic events. This class will include lectures, discussions, media sources and readings. An introductory geology course is recommended but not necessary. Prerequisite: GEOL 111, 220, 221 or 222 recommended.

GER 101A-3 German Language and Culture I. This course offers an introduction to the language and culture of the German-speaking peoples. It combines an overview of German political, economic, social and aesthetic developments with the acquisition of elementary-level written and spoken German. No previous knowledge of German required. Must be taken in A,B sequence. Lab fee: \$2 per credit hour.

GER 101B-3 German Language and Culture II. This course offers an introduction to the language and culture of the German-speaking peoples. It combines an overview of German political, economic, social and aesthetic developments with the

acquisition of elementary-level written and spoken German. Must be taken in A,B sequence. Prerequisite: GER 101A with a passing grade, or equivalent. Lab fee: \$2 per credit hour.

HIST 101A-3 The History of World Civilization I-To Industrialization. A survey of various civilizations in the world from prehistory to the present with particular attention to non-western cultures.

HIST 101B-3 The History of World Civilization II-Since the Age of Encounter. A survey of various civilizations in the world from prehistory to the present with particular attention to non-western cultures.

HIST 358I-3 Introduction to Peace Studies. (Same as CP 358I) Introduces students to Peace Studies as an interdisciplinary field, focusing on the history, theory, and practice of alternatives to violence. Considers the structural and systemic reasons for violence and war; the history of peace movements; the role of media in escalating violence and providing solutions. Lecture-discussion format with presentations by speakers from a variety of disciplines. No prerequisites.

LING 200-3 Language, Society and the Mind. What distinguishes humans from other animals? This course addresses how language is a uniquely human phenomenon by exploring issues in language and society and psychological aspects of language use. Topics include language in conversation, differences between speakers of different ages/genders/regions/social groups, first and second language acquisition, bilingualism, language meaning and change, and the relationship between language and culture.

MATH 300I-3 History of Mathematics. This course examines how diverse cultures and history from the ancient past to the present have shaped the development of mathematical thought and how developing mathematical ideas have influenced history and society. Particular attention will be given to the evolution of the concepts of number and space; the emergence and applications of calculus, probability theory, non-Euclidean geometries and technology; and to the changes in the concept of mathematical rigor. Does not count towards the mathematics requirements of the mathematics major. Open to all students. Prerequisite: MATH 150.

PHIL 102-3 Introduction to Philosophy. [IAI Course: H4 900] Introduction to fundamental philosophical issues across a broad spectrum. Problems in metaphysics, epistemology and ethics will be among the areas explored. Emphasis throughout is upon developing in the student an appreciation of the nature of philosophical questioning, analyzing and evaluating arguments and reflecting on the nature of human existence.

PHIL 103A-3 World Humanities. [IAI Course: HF 904N] This course will explore the rise, development and interaction of the major world civilizations as embodied in ideas and their expressions in religion, philosophy, literature and art. The great traditions of Near Eastern, European, Central Asian, Indian, Chinese and Japanese cultures will be examined. (A) The first semester will cover the early civilization of the Near East, the classical world of Greece and Rome, early China and India.

PHIL 103B-3 World Humanities. [IAI Course: H9 900] This course will explore the rise, development and interaction of the major world civilizations as embodied in ideas and their expressions in religion, philosophy, literature and art. The great traditions of Near Eastern, European, Central Asian, Indian, Chi-

nese and Japanese cultures will be examined. (B) The second semester will look at the integrative civilizations of Buddhism, Medieval Christianity and Islam, and Modern Europe.

PHIL 104-3 Ethics. [IAI Course: H4 904] Introduction to contemporary and perennial problems of personal and social morality, and to methods proposed for their resolution by great thinkers past and present.

PHIL 105-3 Elementary Logic. [IAI Course: H4 906] Study of the traditional and modern methods for evaluating arguments. Applications of logical analysis to practical, scientific and legal reasoning, and to the use of computers.

PHIL 303I-3 Philosophy and the Arts. [IAI Course: H9 900] An interdisciplinary examination of (1) literary and other artistic works which raise philosophic issues and (2) philosophic writings on the relationship between philosophy and literature. Possible topics include: source of and contemporary challenges to the traditional Western idea that literature cannot be or contribute to philosophy; the role of emotion, imagination and aesthetic value in philosophic reasoning; the role of literature in moral philosophy; and philosophic issues of interpretation.

PHIL 307I-3 Philosophy of Science, Nature and Technology. Interdisciplinary study of major humanistic critiques of technology, science and nature; analysis of topics such as ecology, the information revolution, aesthetics and ethics in various branches of science and technology, relation of science to technology.

PHIL 309I-3 Philosophy of Peace, Law, and Justice. An interdisciplinary exploration of classical and modern theories of peace, law, and justice with special attention to their implications for important contemporary political issues.

Science

ANTH 240A-3 Human Biology: An Introduction to Biological Anthropology. An introduction to humans as a biological species. Applies scientific method to exploring data on humans and our closest relatives, to better understand our place in the web of life as a biological organism. Includes genetics (particularly human genetics), evolutionary theory, primate behavior and evolution, human fossil record, and similarities and differences in modern humans, including blood groups, skin color, and disease susceptibility. Course material fee: \$103.

CHEM 106-3 Chemistry and Society. [IAI Course: P1 903L] Exploration of the many implications that chemistry has upon modern society. Topics include air and water quality, global warming, acid rain, fossil, solar and nuclear fuels, nutrition and drugs. Three lectures per week except that every other week a three-hour lab is substituted for one of the lectures that week. Lab fee: \$48.

GEOG 104-3 Weather, Climate, and Society. A scientific introduction to the physical processes responsible for weather and climate and the application of fundamental scientific skills to address aspects of weather and climate that are of particular importance to society at large. Lab fee: \$20.

GEOG 303I-3 Physical Geography. [IAI Course: P1 909L] This course explores how biogeography, geomorphology and climatology interact in shaping the Earth's environments. Case studies from North, Central, and South America illustrate how the physical environment plays a dynamic role in human lives. On-campus field trips, labs, and student projects stress applica-

tion of core concepts. Lab Fee: \$20.

GEOG 310I-3 Introduction to Geographic Information Systems. An interdisciplinary course that provides students the skills and knowledge to use geospatial technologies such as geographic information systems (GIS), global positioning systems (GPS), and remote sensing. Applications drawn from diverse fields: environmental science, ecology, social sciences and others. Course includes lectures, discussions, interactive and hands-on computer exercises and projects. Lab fee: \$20.

GEOG 111-2 Geology and the Environment. [IAI Course: P1 908] Examines human interaction with geologic processes and hazards, including earthquakes, volcanoes, landslides and flooding; occurrences and availability of geologic resources, such as energy, water and minerals; and human impacts on the environment including global warming, waste disposal, and pollution. Two lectures per week. Must be taken concurrently with or upon completion of Geology 112 or 113. If Geology 111 is dropped the laboratory course must also be dropped.

GEOG 112-1 Geology and the Environment Laboratory Learning. [IAI course: P1 908L] Laboratory to accompany Geology 111. Hands-on and inquiry-based learning in topics such as earth materials, topographic maps, stream dynamics, floods, coastal processes, landslides, groundwater, earthquakes, volcanoes, and human impacts on the environment. One laboratory session per week. Must be taken concurrently with or upon completion of Geology 111. Lab fee: \$10.

GEOG 121-2 The History of the Earth. Geological processes shape the surface of our planet over millions of years. These forces provide the ever changing conditions for life. Fossils are "footprints" in time which recorded those changes, giving us the opportunity to unravel Earth's past. This class will study the story of Earth's geological and evolutionary past events. Two lectures per week. Must be taken concurrently with or upon completion of GEOL 124 or GEOL 113. If GEOL 124 or GEOL 113 is dropped then GEOL 121 must be dropped.

GEOG 122-2 Natural Hazards and Catastrophes. The Earth is shaped by dynamic geological forces such as earthquakes, volcanoes, and floods. While these phenomena construct the landscapes around us, they can be extremely destructive when in contact with human civilization and/or infrastructure. This class examines the natural forces capable of catastrophic impact on society providing a greater understanding of the sometimes violent geologic processes that shape the planet along with their human impact. Two lectures per week. Must be taken concurrently with or upon completion of GEOL 123 or GEOL 113. If GEOL 123 or GEOL 113 is dropped then GEOL 122 must be dropped.

GEOG 123-1 Natural Hazards and Catastrophes Laboratory. Laboratory to accompany GEOL 122. This lab examines natural processes associated with hazard and catastrophe in human history and modern society, such as earthquakes, volcanoes, landslides, and floods. Labs provide a greater understanding of the processes and driving forces shaping the planet along with their human impact while fostering skills of scientific inquiry. One laboratory session per week. Must be taken concurrently with or upon completion of GEOL 122. If GEOL 123 is dropped then GEOL 122 must be dropped. \$10 Lab Fee.

GEOG 124-1 History of the Earth Laboratory. Laboratory to accompany GEOL 121. Inquiry based laboratory sessions teach-

ing the concepts of deep time, plate tectonics, evolution and the fossil record, biostratigraphy, rise and fall of the dinosaurs, evolution of mammals and humans. One laboratory session per week. Must be taken concurrently with or upon completion of GEOL 121. If GEOL 124 is dropped then GEOL 121 must be dropped. \$10 Field Trip Fee.

GEOL 129-1 DinoLab. A physical science lab that provides hands-on and inquiry based learning in geologic concepts necessary to fully understand dinosaur paleontology and paleobiology. Must be taken concurrently with or upon completion of GEOL 128, The Dinosaurian World. If GEOL 128 is dropped then GEOL 129 must be dropped. \$10 Lab Fee.

PHYS 101-3 Physics that Changed the World. [IAI course: P1 901L] This course will survey some of the most important developments in physics which have occurred over the past two millennia. Along the way, students will be introduced to fundamental physical principles such as energy conservation. Topics will include early astronomy, laws of motion, electricity, magnetism, waves, quantum mechanics and relatively. Lab fee: \$20.

PHYS 103-3 Astronomy. Fundamental concepts of the physical sciences are used in the exploration of the observable universe. Studies include the history and techniques of astronomy, planets, stars, black holes, galaxies and cosmology. Lectures are supplemented by outdoor astronomical observations and/or indoor laboratory exercises. Lab fee: \$20.

PLB 115-3 General Biology. (Same as ZOOL 115) [IAI Course: L1 900L] Introduction to fundamental biological concepts for non-life science majors interested in learning about interrelationships of human, plant and animal communities. Integrated lecture and laboratory cover topics that include structure and function of living systems, reproduction and inheritance, evolution, biological diversity and environmental biology. Laboratory applies scientific methods to the study of living systems. Lab fee: \$15.

PLB 117-3 Plants and Society. [IAI Course: L1 901L] A multidisciplinary approach to understanding the relationships between plants and humans: basic botanical principles (cell structure, morphology, anatomy, physiology, genetics, systematics, diversity and ecology); historical and modern uses of plant (fibers, building materials, crops, beverages, medicines); crops, poisonous plants, and biotechnology. Observational and experimental labs reinforce lecture topics. Lab fee: \$15.

PLB 301I-3 Environmental Issues. Fundamental biological and ecological processes important in the individual, population and community life of organisms integrating with the philosophical and ethical relationships of the contemporary, domestically diverse human society are examined. Emphasis is placed on a pragmatic understanding of environmental issues. Lab fee: \$15.

ZOOL 115-3 General Biology. (Same as PLB 115) [IAI Course: L1 900L] Introduction to fundamental biological concepts for non-life science majors interested in learning about interrelationships of human, plant and animal communities. Integrated lecture and laboratory cover topics that include structure and function of living systems, reproduction and inheritance, evolution, biological diversity and environmental biology. Laboratory applies scientific methods to the study of living systems. Laboratory/field trip fee: \$15.

Social Science

AGRI 300I-3 Social Perspectives on Environmental Issues. (Same as ABE/LAC 300I) Case studies (e.g., rural village in developing nation; small town in the U.S.; city in developing nation) are used to learn how different societies and groups deal with their specific environmental issues, and how culture and economic factors affect their perspectives and actions.

ANTH 104-3 The Human Experience-Anthropology. [IAI Course: S1 900N] This course explores different human life ways around the world, past and present. It investigates the question of what is universal to all humans and the myriad ways they differ, through studying modern people, the remains of past cultures through archaeology, and human origins and physical variation.

ECON 113-3 Economics of Contemporary Social Issues. The purpose of this course is to examine a number of major social issues from an economics perspective. Thus the student will be taught some basic economic concepts (tool kit) which will then be used to analyze a variety of social problems. The emphasis will be on policy. Once the causes of social problems have been analyzed, then specific policies effective in solving or dealing with the social problem will be discussed. Only one of the courses, Economics 113 or Economics 114, can count among those economics courses required for an economics major or minor.

ECON 114-3 Introduction to Economics: Class Simulations. Basic economic problems are analyzed with market simulations through the use of in-class experiments, in which the students act as the buyers and sellers. Topics usually include the effects of market-based taxes, illegal drug markets, minimum wage, pollution, monopoly, textbook pricing, measuring productivity and international trade. Only one of the courses, Economics 113 or Economics 114, can count among those economics courses required for an economics major or minor.

ECON 302I-3 History and Philosophy of the World's Economic Systems. An investigation into how economic systems coexist with, and determine, or are determined by, the political and social structures in internationally diverse countries. Utilizing both economic concepts and an institutional approach the evolution of systems in nations such as Russia, Japan, the United States, China and others will be explored.

FIN 200-3 Personal Finance. An introduction to the problems of personal financial asset management, including income and expense budgeting. Emphasis also placed on consumer credit, insurance, investments, home ownership, and taxation. Will not count toward a major in finance.

GEOG 100-3 Environmental Conservation. Human activity has changed every place on planet Earth. This course explores how and where these changes take place, and practical ways people can interact with the environment in a more sustainable manner. Themes to be explored include: biodiversity, global climate change, human population growth, and sustainability of food, soil, and water resources. Through lectures, discussions, and field trips students will investigate and map patterns integral to understanding environmental conservation issues. Lab fee: \$20.

GEOG 103-3 World Geography. [IAI Course: S4 900N] Examination of the world's major geographic patterns, the diversity of environments, cultures and economic activities, differences

between developing and developed nations, interdependence of nations and regions through communication and trade and in-depth assessment of representative environmental issues.

GEOG 300I-3 Geography, People and the Environment. The goal of this course is to understand complex contemporary environmental problems using case studies. The problems we will study are “wicked”; they are difficult to formulate exactly, and they have no simple technological solutions. The class aims at teaching how to use a variety of perspectives to understand complex problems, and how to analyze coupled human and natural systems across time and space. We will study four case studies such as deforestation, but you will acquire the methodological knowledge to assess other wicked problems. We will emphasize 1) a science-based systems approach; 2) the role of geography as a linchpin discipline that spans the social and physical sciences; 3) the importance of interdisciplinary perspectives; 4) issues of collaboration, institution building, and policy development.

HIST 110-3 Twentieth Century America. The history of the United States since 1900. Surveys cultural, social, economic and political development, with special emphasis on domestic pluralism and changing international roles.

HIST 112-3 The Twentieth Century World. The history of Europe, Asia, Africa and Latin America since 1900. Emphasis on political conflict, economic development, social change and cultural transformation in an increasingly integrated world.

JRNL 306I-3 International Media Systems. An overview of the mass media systems of the world; comparison of theoretical models and actual practice. Explores differing conceptual models of the mass media and their underlying philosophies; actual operations of different press systems with specific economic, political and cultural structures including historical development and current status.

JRNL 314I-3 American Politics and the Mass Media. (Same as POLS 314I) The role of the mass media in American politics. Emphasis will be on the way in which the news media covers political actors and institutions, the effects of media on political behavior, and the expanding role of the internet in politics.

LAC 300I-3 Social Perspectives on Environmental Issues. (Same as AGR/ABE 300I) Case studies (e.g., rural village in developing nation; small town in the U.S.; city in developing nation) are used to learn how different societies and groups deal with their specific environmental issues, and how culture and economic factors affect their perspectives and actions.

MCMA 200-3 Media and Information Literacy. The course will introduce students to the many roles media have in everyday lives, and their influence on individuals and societies. It will provide skills to critically analyze various contents offered by media (e.g., news, advertising, video games, facebook pages)-in all its forms: television, radio, print, internet, and mobile media; and an understanding of the institutions that produce these media and their economic and political interests. In this course we will ask ourselves: what does an educated person need to know about media today in order to take full advantage of everything they are offering us, and yet guard against potential negative influences?

POLS 114-3 Introduction to American Politics. [IAI Course: S5 900] The development and current state of the American political system.

POLS 314I-3 American Politics and the Mass Media. (Same as JRNL 314I) The role of the mass media in American politics. Emphasis will be on the way in which the news media covers political actors and institutions, the effects of media on political behavior, and the expanding role of the internet in politics.

POLS 332I-3 Introduction to Civil Liberties and Civil Rights. This course deals with civil liberties and civil rights in the United States and how the United States Supreme Court has interpreted and applied these rights over time. Specifically, our focus will be on the First Amendment, the Right to Privacy, Discrimination, and Voting Rights. We will also address how social, economic, and political forces have shaped the evolution and nature of these protections.

POLS 372I-3 Politics of the Global Economy. Examines the interaction of politics and economics and of states and markets at the international level. Special attention to inequalities of wealth and power and to the politics of international trade, finance, investment, production, energy, transportation, information, technology and development.

PSYC 102-3 Introduction to Psychology. [IAI Course: S6 900] An examination of the variables related to the origins and modifications of human behavior using the viewpoints and techniques of contemporary psychology. Purchase of syllabus from local vendor required.

SOC 108-3 Introduction to Sociology. [IAI Course: S7 900] An introduction to the sociological perspective on human behavior, the structure and processes involved in social relationships, social stratification and inequality, social institutions, and social change. A survey of major areas of interest in sociology. Required of majors and minors in Sociology.

SOC 306I-3 Popular Culture in Society. Examines the social organization of popular culture, treating popular culture objects as products that are created, manufactured, distributed and consumed. The focus is on the people, activities, organizations and institutions that are involved in popular culture.

ZOOL312I-3 Conservation of Natural Resources. [IAI Course: L1 905] This course adopts an interdisciplinary approach to the study of conservation of natural resources. It integrates environmental science and environmental economics. By examining the costs and benefits of resource consumption, we will attempt to determine the socially optimal level of resource utilization. We will look at ways in which governments attempt to achieve socially optimal resource use, and the effects of these government policies on the environment. Topics considered in the course include: solid waste, energy consumption, air pollution, agriculture and global environment change. Credit may not be used toward a major in zoology.

III. INTEGRATIVE STUDIES

Multicultural: Diversity in the United States

AD 227-3 History of African American Art. (Same as AFR 227) [IAI Course: F2 906D] A history of African American visual arts, with a brief examination of the arts of various nations of Africa and how they affected art in America. Craft arts, architecture, painting and sculpture will be considered from the slave trade era to the Civil War era; the Harlem Renaissance and other 20th Century movements to the present day.

AD 267-3 Picturing Difference: Native, African and Eu-

ropean Americans in American Art. This course examines paintings, sculpture, photographs and films representing Native, European, and African Americans. All have represented themselves and been represented by others, in works of visual art from the 18th century to the present. These will be examined within their own historical periods, within the history of art and within the historical development of multicultural American identities.

AD 307I-3 Women in Visual Arts: Social and Educational Contexts. (Same as WGSS 307I) This interdisciplinary course examines women's lives as artists, visual representations of women, and issues of gender distinction in the history of Western art from the medieval period to the present. From perspectives that include social history and cultural anthropology as well as both traditional and feminist art history, the course considers the ways in which the experiences of women and opportunities available to them have historically differed from those of men. The course examines how such differences have affected the emphases, subject matter, and traditions of women's art as well as the ways in which women have been represented.

AD 317I-3 Contemporary Native American Art: Anthropological Perspective. This interdisciplinary course considers contemporary Native American art and the social forces that have shaped it. Native American artistic traditions and the centrality of art to Native American life and culture will be addressed with an emphasis on 20th-century artists who have shaped the contemporary Native American art movement.

AFR 215-3 Black American Experience in a Pluralistic Society. A study and understanding of the evolution of issues of pluralism in contemporary African American society. This course provides an interdisciplinary analysis of ideological and practical problems of racism, integration, class, equity, social institutions as they relate to the Black American experience.

AFR 227-3 History of African American Art. (Same as AD 227) A history of African American visual arts, with a brief examination of the arts of various nations of Africa and how they affected art in America. Craft arts, architecture, painting and sculpture will be considered from the slave trade era to the Civil War era; the Harlem Renaissance and other 20th Century movements to the present day.

AFR 303I-3 Women, Blues & Literature. (Same as MUS 303I) Explores traditional aesthetic processes of the blues as a mode of self expression. Examines the images/voices projected by vaudeville blues women (1920s/30s), along with various manifestations/extensions-instrumental and vocal, musical and literary-from fiction and poetry to jazz, R&B, and rap. In depth analysis of blues music and literature.

ANTH 202-3 America's Diverse Cultures. The United States is a multicultural society in which differences of race, ethnicity, gender, class, region, and religion deeply shape individuals' life chances. This course studies America's diversity of family organization, livelihood and life chances, understanding of illness and health care, religious beliefs and practices, and other topics. It provides tools to understand different cultural codes and forms of power, and to understand key issues that students will face as individuals and citizens in a multicultural world.

ANTH 204-3 Latino Cultures in America. The central concern of this course is the cultural aspect of the Latino experience in the United States. It focuses on the contemporary popu-

lation, the political and economic issues that affect Latinos in this society, and the characteristics that Latinos share and yet that make Latinos the most diverse population in the United States. These characteristics include family, religion, socio-economic status, gender ideology, generational relations, and more. The course pivots around the construction of Latino identity: What helps shape it? How do Latinos perceive themselves? How do others perceive (us) them?

ANTH 298-1 Multicultural Applied Experience. An applied experience, service-oriented credit in American diversity involving a group different from the student's own. Difference can be manifested by age, gender, ethnicity, nationality, political affiliation, race, or class. Students can sign up for the one-credit experience in the same semester they fulfill the multicultural requirement for the University Core Curriculum or coordinate the credit with a particular core course on American diversity, although neither is required. Students should consult the department for course specifications regarding grading, work requirements and supervision.

CCJ 203-3 Crime, Justice and Social Diversity. Examination of how social heterogeneity and inequality influence the processes involved in the definition and regulation of behavior through law, particularly the criminal law. Factors such as race, ethnicity, gender and class are related to definitions of crime and justice, and to the likelihood of being the victim of crime. The differential influence of the operations and outcomes of the criminal justice system on diverse groups in U.S. society is emphasized.

CMST 201-3 Performing Culture. A critical examination of human communication - from everyday conversation to cultural formation - as performance. Lecture and discussion format with consideration of primary texts drawn from conversational transcripts, multicultural literature and popular culture.

CMST 301I-3 Communication Across Cultures. This course provides an introduction to communication between/among people from different cultures, focusing on the application of intercultural communication theory and research. Class assignments and exercises examine everyday encounters with individuals from different races, ethnicity, religions, gender, ages, sexual orientations and physical abilities. Credit cannot be earned in both CMST 301I and CMST 341.

ENGL 205-3 Cultural Diversity in American Literature. [IAI Course: H3 910D] This course explores the cultural diversity within American Literature. By studying the historical, philosophical, political and narrative contexts attributed to each culture, we will understand a particular culture's interpretation of what it means to be an American and, in turn, appreciate our racial and multicultural diversity. Topics include the initial encounters between Native Americans and European colonists; slavery; immigration; African Americans, Eastern and Western European Americans, Hispanic Americans, Asian Americans and others who represent the American experience as reflected in literature, both in fiction and non-fiction.

ENGL 212-3 Introduction to American Studies. (Same as HIST 212) Offers interdisciplinary approach to the study of America and American selfhood, and thus to the central question, "What is an American?". Texts range from novels and films to museums and shopping malls. Issues range from multiculturalism to abstract notions such as citizenship and authentic-

ity. Fulfills central requirement for American Studies Minor.

ENGR 304I-3 Social History of American Technology. Survey of some key technological transformations and their related social developments in the United States from colonial times to the present with emphasis on unequal effects on cultural groups defined by race, gender, and ethnicity.

FL 301I-3 Cross-Cultural Orientation. Students are introduced to a wide variety of interaction patterns in cross-cultural social and professional settings. Through readings, interactive classroom activities, and out-of-class contact with the international community at Southern Illinois University Carbondale they acquire conceptual tools, which allow them to discover appropriate behavior patterns in diverse cultural settings.

FR 200-3 Women in French and Francophone Literatures. (Same as WGSS 200) This course offers a study of the representation of women in 20th century French and Francophone literatures. The class will study female characters as they are represented in novels, short stories and essays of contemporary French and Francophone writers, and will analyze the development of women as characters from a psychological, sociological, and literary point of view. All readings and lectures are in English.

HIST 202-3 America's Religious Diversity. [IAI Course: H5 905] An introduction to the basic concepts and histories of the world's religions and their place in American society. The purpose is to increase our understanding of cultural and religious diversity and how the various religious traditions inform our world views.

HIST 212-3 Introduction to American Studies. (Same as ENGL 212) Offers interdisciplinary approach to the study of America and American selfhood, and thus to the central question, "What is an American?". Texts range from novels and films to museums and shopping malls. Issues range from multiculturalism to abstract notions such as citizenship and authenticity. Fulfills central requirement for American Studies Minor.

KIN 210-3 Diversity in American Sport. Explores how historical and contemporary forces have shaped opportunities and experiences of various cultural groupings in American sport. The course focuses on diversity issues related to race, ethnicity, gender, social class, sexuality and physical ability/disability. Class utilizes a variety of interactive classroom activities to explore multicultural dynamics in sport and society.

LING 201-3 Language Diversity in the USA. An examination of different varieties of English and the growing presence of other languages in the United States. Local, regional and national perspectives are used to review current patterns of language diversity and to explore the impact of language issues on policies and practices in education, the legal system and the work place.

LING 320I-3 Language, Gender and Power. (Same as WGSS 320I) This course looks at language practices and men and women from different cultures in terms of how speech reflects and shapes their social identities. Perspectives from the field of communication studies, linguistics, anthropology, psychology, and sociology will be used.

MCMA 204-3 Alternative Media in a Diverse Society. The freedoms guaranteed in the First Amendment have resulted in a multitude of alternatives to the establishment media. These alternative media give voice to a range of communities ignored

or suppressed by the dominant culture. Publications, alternative art spaces, film, radio and television messages and the groups and individuals who create them are examined.

MUS 203-3 Diversity and Popular Music in American Culture. [IAI Major Course: F1 905D] A study of the development of American popular music, particularly in relation to the different cultural groups which spawned it.

MUS 303I-3 Women, Blues and Literature. (Same as AFR 303I) Explores traditional aesthetic processes of the blues as a mode of self expression. Examines the images/voices projected by vaudeville blues women (1920s/30s), along with various manifestations/extensions - instrumental and vocal, musical and literary - from fiction and poetry to jazz, R&B, and rap. In-depth analysis of blues music and literature.

PHIL 210-3 The American Mind. [IAI Course: HF 906D] This course will survey the diverse traditions, ideas and ideals that have shaped American culture in the past and today. Major works from Native American, African American, feminist, Puritan, Quaker and American Zen Buddhist writers may be used as well as those from such intellectual movements as the Enlightenment, Transcendentalism and Pragmatism.

PHIL 211-3 Philosophy and Diversity: Gender, Race and Class. This course is a philosophical introduction to diverse perspectives within modern American culture. It will address through reading and discussion important contemporary moral and social issues from the perspective of nontraditional orientations including African American, Native American and American feminism. The resources of philosophy and other related disciplines such as psychology, sociology and literature will be used to develop a culturally enriched perspective on important contemporary issues.

PHIL 308I-3 Asian Religions: A Philosophical Approach. [IAI Course: H4 903N] This course examines three major areas of Asian religious traditions from a philosophical perspective: South Asia, East Asia, and Buddhist traditions. Since it is not possible to be all inclusive, concentration will be on those with continuing significant spiritual, philosophical, social, political, aesthetic and literary influence. More specifically, it is an introduction to some of the major Asian religious traditions, such as Hinduism, Buddhism, Confucianism, Taoism, and Zen Buddhism, approached through philosophical reflection. Emphasis is on classical traditions, since this provides a solid foundation upon which students are than able to pursue further independent readings in more recent developments. Furthermore, this emphasis permits an extended exploration of the interaction among contemporary economic, sociological and religious developments and classical traditions.

POLS 215-3 Politics of Diversity in the United States. This course analyzes identity politics in the United States. Students will study American ethnic, racial, religious, cultural and gender relations and the policies available for their improvement. Topics include affirmative action, immigration policy, multiculturalism, assimilation, feminist politics, and church-state relations.

POLS 352I-3 Ethnicity, Nationalism and Culture. This course examines the causes, consequences and management of ethnic conflict and nationalism. Theoretical analysis will be combined with empirical case studies of ethnic and cultural competition, conflict and cooperation both within and between

countries. Contributions from various scholarly disciplines will be incorporated into the examination of these issues. Additionally, moral dilemmas in the sphere of ethnicity and nationalism will be discussed.

PSYC 223-3 Diversity in the Workplace. Examination of factors affecting the full utilization of women, racioethnic minorities, older workers, disabled workers and workers with nontraditional sexual orientations in the workplace. Individual processes, such as group identities, stereotyping, prejudice; group processes such as intergroup conflict; and organizational processes such as structural barriers and informal integration will be studied. The class utilizes a lecture and small discussion-section format with in-class, team, and individual exercises and projects.

PSYC 233-3 Psychology of Gender in Diverse Context. (Same as WGSS 233) The course examines how gender affects all aspects of our lives at the individual, societal and cultural levels. It will cover psychological theories and topics related to gender, and will examine issues of diversity, such as race/ethnicity, class, sexuality, disability and age as they interact with gender.

SOC 215-3 Race and Ethnic Relations in the United States. [IAI Course: S7 903D] Current theory, research and events in race-ethnic relations in the United States, including the intersection of class, gender and sexuality. Topics include the European colonization of North America, dynamics of immigration, identity formation among ethno-racial groups and political economy of racism.

SOC 223-3 Women and Men in Contemporary Society. (Same as WGSS 223) [IAI Course: S7 904D] Examines theories of women's and men's roles in society. Surveys contemporary gender inequalities in the U.S. and developing countries. Special attention given to employment, race, sexual assault, feminist movements, alternative family/lifestyles and childrearing.

SOC 304I-3 Global Perspectives on the Family. People around the world experience family life under different circumstances and from different perspectives. This course will focus on these differences and how societies have evolved to meet the needs of family units within their different social settings. Other key topics that affect families around the world will be discussed: global economy and families, gender inequality, familial violence, and environment concerns.

WGSS 200-3 Women in French and Francophone Literatures. (Same as FR 200) This course offers a study of the representation of women in 20th century French and Francophone literatures. The class will study female characters as they are represented in novels, short stories and essays of contemporary French and Francophone writers, and will analyze the development of women as characters from a psychological, sociological, and literary point of view. All readings and lectures are in English.

WGSS 201-3 Multicultural Perspectives on Women, Gender and Sexuality. This interdisciplinary and multicultural survey course covers important issues of women, gender and sexuality studies in the United States. Topics include language, media, education, family, labor, politics, literature and the arts. Within each topic, issues of race, class, ability, and other intersecting aspects of identity are also addressed.

WGSS 223-3 Women and Men in Contemporary Society.

[IAI Course: S7 904D] (Same as SOC 223) Examines theories of women and men's roles in society. Surveys contemporary gender inequalities in the U.S. and developing countries. Special attention given to employment, race, sexual assault, feminist movements, alternative family/lifestyles and childrearing.

WGSS 233-3 Psychology of Gender in Diverse Context. (Same as PSYC 233) The course examines how gender affects all aspects of our lives at the individual, societal and cultural levels. It will cover psychological theories and topics related to gender, and will examine issues of diversity, such as race/ethnicity, class, sexuality, disability and age as they interact with gender.

WGSS 301I-3 Women in Science, Engineering and Technology. This course will explore the historical contributions of women and challenges they faced as they entered educational programs and careers in various fields of engineering, science and technology. The course will also consider the current status of women in these fields.

WGSS 307I-3 Women in the Visual Arts: Social and Educational Contexts. (Same as AD 307I) This interdisciplinary course examines women's lives as artists, visual representations of women, and issues of gender distinction in the history of Western art from the medieval period to the present. From perspectives that include social history and cultural anthropology as well as both traditional and feminist art history, the course considers the ways in which the experiences of women and opportunities available to them have historically differed from those of men. The course examines how such differences have affected the emphases, subject matter, and traditions of women's art as well as the ways in which women have been represented.

WGSS 320I-3 Language, Gender and Power. (Same as LING 320I) This course looks at language practices and men and women from different cultures in terms of how speech reflects and shapes their social identities. Perspectives from the fields of communication studies, linguistics, anthropology, psychology, and sociology will be used.

Interdisciplinary

AD 307I-3 Women in Visual Arts: Social and Educational Contexts. (Same as WGSS 307I) This interdisciplinary course examines women's lives as artists, visual representations of women, and issues of gender distinction in the history of Western art from the medieval period to the present. From perspectives that include social history and cultural anthropology as well as both traditional and feminist art history, the course considers the ways in which the experiences of women and opportunities available to them have historically differed from those of men. The course examines how such differences have affected the emphases, subject matter, and traditions of women's art as well as the ways in which women have been represented.

AD 317I-3 Contemporary Native American Art: Anthropological Perspective. This interdisciplinary course considers contemporary Native American art and the social forces that have shaped it. Native American artistic traditions and the centrality of art to Native American life and culture will be addressed with an emphasis on 20th-century artists who have shaped the contemporary Native American art movement.

AFR 303I-3 Women, Blues & Literature. (Same as MUS

303I) Explores traditional aesthetic processes of the blues as a mode of self expression. Examines the images/voices projected by vaudeville blues women (1920s/30s), along with various manifestations/extensions-instrumental and vocal, musical and literary-from fiction and poetry to jazz, R&B, and rap. In depth analysis of blues music and literature.

AGRI 300I-3 Social Perspectives on Environmental Issues. (Same as ABE/LAC 300I) Case studies (e.g., rural village in developing nation; small town in the U.S.; city in developing nation) are used to learn how different societies and groups deal with their specific environmental issues, and how culture and economic factors affect their perspectives and actions.

ARC 314I-3 Expressions in Architecture. A study of the interconnected nature of the arts, history, environmental psychology, and architecture using the built environment as the foundation for the study. Students will learn to critically examine the built environment by learning how architecture expresses human cultures, social structures, economic and political status, and spiritual beliefs.

CLAS 315I-3 to 9 Classical Themes and Contemporary Life: Seminar Series. [IAI Course: H9 900] Specific aspects of Classical Civilization are compared with aspects of our own society. In alternate years, the course will treat different themes, e.g., Drama's birthplace: Classical Athens; Roman heroes and Anti-Heroes, or Athletics, Sports and Games in the Ancient World. When offered in Europe, the course will focus on how these values are reflected in architecture, art, the military and the arena from ancient times through the Renaissance and beyond.

CMST 301I-3 Communication Across Cultures. This course provides an introduction to communication between/among people from different cultures, focusing on the application of intercultural communication theory and research. Class assignments and exercises examine everyday encounters with individuals from different races, ethnicity, religions, gender, ages, sexual orientations and physical abilities. Credit cannot be earned in both CMST 301I and CMST 341.

CP 354I-3 Mass Media Culture and American Studies. A study of the relationship between American Studies and American audio-visual culture. Sample topics include: the development of the 20th century American city with emphasis on the importance of mass media to that process; the American landscape in cinema; the American West. Students will learn the methods of American and cinema studies, and write papers and deliver oral presentations about those methods. No prerequisites. Screening fee: \$30.

CP 358I-3 Introduction to Peace Studies. (Same as HIST 358I) Introduces students to Peace Studies as an interdisciplinary field, focusing on the history, theory, and practice of alternatives to violence. Considers the structural and systemic reasons for violence and war; the history of peace movements; the role of media in escalating violence and providing solutions. Lecture-discussion format with presentations by speakers from a variety of disciplines. No prerequisites.

ECON 302I-3 History and Philosophy of the World's Economic Systems. An investigation into how economic

systems coexist with, and determine, or are determined by, the political and social structures in internationally diverse countries. Utilizing both economic concepts and an institutional approach the evolution of systems in nations such as Russia, Japan, the United States, China and others will be explored.

ENGL 307I-3 Film as Literary Art. [IAI Course: F2 908] This course proposes to examine the influential role literature has on the cinematic tradition both in the past and present. It intends to emphasize the artistic and visual debt cinema owes to literature by concentrating on major achievements and analyzing them accordingly.

ENGR 301I-3 Humans and Their Environment. (Students with a catalog year prior to Summer, 2012 only) [IAI Course: L1 905] An introduction to the study of the relationship between humans, resource consumption, pollution and the resulting environment. The effects of current human pollution and resource consumption on the environmental quality of the future. The interrelation of human population resource consumption and pollution. Methods of minimizing resource consumption and human pollution through both technological controls and changes in human behavior. Prerequisite: high school chemistry or equivalent.

ENGR 303I-3 The Role of Energy in Society. (Students with a catalog year prior to Summer, 2012 only) Lectures, discussions and class projects directed at understanding the role of energy, power and related concepts in society in the past, the present and the future. Review of current energy resources and use patterns, as well as projections for new energy conservation techniques and the development of alternative energy technology. An overview of worldwide energy needs, seeking to identify future limits on energy use attributable to environmental, economic, political and other technological and evolutionary constraints. Prerequisite: satisfactory completion of three hours of University Core Curriculum science requirements.

ENGR 304I-3 Social History of American Technology. Survey of some key technological transformations and their related social developments in the United States from colonial times to the present with emphasis on unequal effects on cultural groups defined by race, gender, and ethnicity.

FL 301I-3 Cross-Cultural Orientation. Students are introduced to a wide variety of interaction patterns in cross-cultural social and professional settings. Through readings, interactive classroom activities, and out-of-class contact with the international community at Southern Illinois University Carbondale they acquire conceptual tools, which allow them to discover appropriate behavior patterns in diverse cultural settings.

GEOG 300I-3 Geography, People and the Environment. The goal of this course is to understand complex contemporary environmental problems using case studies. The problems we will study are "wicked"; they are difficult to formulate exactly, and they have no simple technological solutions. The class aims at teaching how to use a variety of perspectives to understand complex problems, and how to analyze coupled human and natural systems across time and space. We will study four case studies such as deforestation, but you will acquire the methodological knowledge to assess other wicked problems. We will emphasize 1) a science-based systems approach; 2) the role of geography as a linchpin discipline that spans the social and physical sciences; 3) the importance of interdisciplinary per-

spectives; 4) issues of collaboration, institution building, and policy development.

GEOG 303I-3 Physical Geography. [IAI Course: P1 909L] This course explores how biogeography, geomorphology and climatology interact in shaping the Earth's environments. Case studies from North, Central, and South America illustrate how the physical environment plays a dynamic role in human lives. On-campus field trips, labs, and student projects stress application of core concepts. Lab Fee: \$20.

GEOG 310I-3 Introduction to Geographic Information Systems. An interdisciplinary course that provides students the skills and knowledge to use geospatial technologies such as geographic information systems (GIS), global positioning systems (GPS), and remote sensing. Applications drawn from diverse fields: environmental science, ecology, social sciences and others. Course includes lectures, discussions, interactive and hands-on computer exercises and projects. Lab fee: \$20.

GEOL327I-3 The World's Oceans. (Students with a catalog year prior to Summer, 2012 only) The world's ocean comprises up to 80% of the earth's surface. It plays a significant role in global climate, contains mineral resources and harbors a wealth of plant and animal life. "The World's Oceans", through the scientific method, will provide a greater understanding of the processes and components of the oceans and their importance to our everyday life. The course will include lectures, discussion sessions, readings and exercises from the text, laboratory exercises and short field excursions.

GEOL 328I-3 Dinosaurs and the Age of Reptiles. (Students with a catalog year prior to Summer, 2012 only) What we know about dinosaurs - their fossils, morphologies, origin, types, relatives, relationships, lifestyles, distributions (in time, in space, in paleoenvironments,), biotic associates and extinction; and how we know it - interdisciplinary application of basic scientific concepts of geology, paleobiology, paleoecology and paleoenvironmental analysis.

GEOL 329I-3 Geomorphology. Natural disasters have been the source of countless myths and legends throughout human history. This course will examine ways in which regional geology influenced ancient civilizations, and explore the possibility that some of their myths and legends preserve a record of actual geologic events. This class will include lectures, discussions, media sources and readings. An introductory geology course is recommended but not necessary. Prerequisite: GEOL 111, 220, 221 or 222 recommended.

GEOL 330I-3 The Planets. (Students with a catalog year prior to Summer 2012 only) The geology of the planets and moons of the solar system, their origin and history, the origin of the universe and the solar system and the search for other planetary systems and life in the universe. The geologic processes of vulcanism, tectonism, weathering and meteorite impact on the various planets will be examined and compared. A main focus of the course will be examining the methods for discovering information about the solar system involving the interdisciplinary application of pertinent basic scientific concepts of geology, geochemistry, geophysics, meteorology and cosmology.

HIST 358I-3 Introduction to Peace Studies. (Same as CP 358I) Introduces students to Peace Studies as an interdisciplinary field, focusing on the history, theory, and practice of alternatives to violence. Considers the structural and systemic

reasons for violence and war; the history of peace movements; the role of media in escalating violence and providing solutions. Lecture-discussion format with presentations by speakers from a variety of disciplines. No prerequisites.

JRNL 306I-3 International Media Systems. An overview of the mass media systems of the world; comparison of theoretical models and actual practice. Explores differing conceptual models of the mass media and their underlying philosophies; actual operations of different press systems with specific economic, political and cultural structures including historical development and current status.

JRNL 314I-3 American Politics and the Mass Media. (Same as POLS 314I) The role of the mass media in American politics. Emphasis will be on the way in which the news media covers political actors and institutions, the effects of media on political behavior, and the expanding role of the internet in politics.

LAC 300I-3 Social Perspectives on Environmental Issues. (Same as AGRI/ABE 300I) Case studies (e.g., rural village in developing nation; small town in the U.S.; city in developing nation) are used to learn how different societies and groups deal with their specific environmental issues, and how culture and economic factors affect their perspectives and actions.

LING 320I-3 Language, Gender and Power. (Same as WGSS 320I) This course looks at language practices and men and women from different cultures in terms of how speech reflects and shapes their social identities. Perspectives from the field of communication studies, linguistics, anthropology, psychology, and sociology will be used.

MATH 300I-3 History of Mathematics. This course examines how diverse cultures and history from the ancient past to the present have shaped the development of mathematical thought and how developing mathematical ideas have influenced history and society. Particular attention will be given to the evolution of the concepts of number and space; the emergence and applications of calculus, probability theory, non-Euclidean geometries and technology; and to the changes in the concept of mathematical rigor. Does not count towards the mathematics requirements of the mathematics major. Open to all students. Prerequisite: MATH 150.

MUS 303I-3 Women, Blues and Literature. (Same as AFR 303I) Explores traditional aesthetic processes of the blues as a mode of self expression. Examines the images/voices projected by vaudeville blues women (1920s/30s), along with various manifestations/extensions - instrumental and vocal, musical and literary - from fiction and poetry to jazz, R&B, and rap. In-depth analysis of blues music and literature.

PHIL 303I-3 Philosophy and the Arts. [IAI Course: H9 900] An interdisciplinary examination of (1) literary and other artistic works which raise philosophic issues and (2) philosophic writings on the relationship between philosophy and literature. Possible topics include: source of and contemporary challenges to the traditional Western idea that literature cannot be or contribute to philosophy; the role of emotion, imagination and aesthetic value in philosophic reasoning; the role of literature in moral philosophy; and philosophic issues of interpretation.

PHIL 307I-3 Philosophy of Science, Nature and Technology. Interdisciplinary study of major humanistic critiques of technology, science and nature; analysis of topics such as ecology, the information revolution, aesthetics and ethics in vari-

ous branches of science and technology, relation of science to technology.

PHIL 308I-3 Asian Religions: A Philosophical Approach. [IAI Course: H4 903N] This course examines three major areas of Asian religious traditions from a philosophical perspective: South Asia, East Asia, and Buddhist traditions. Since it is not possible to be all inclusive, concentration will be on those with continuing significant spiritual, philosophical, social, political, aesthetic and literary influence. More specifically, it is an introduction to some of the major Asian religious traditions, such as Hinduism, Buddhism, Confucianism, Taoism, and Zen Buddhism, approached through philosophical reflection. Emphasis is on classical traditions, since this provides a solid foundation upon which students are then able to pursue further independent readings in more recent developments. Furthermore, this emphasis permits an extended exploration of the interaction among contemporary economic, sociological and religious developments and classical traditions.

PHIL 309I-3 Philosophy of Peace, Law, and Justice. (University Core Curriculum) An interdisciplinary exploration of classical and modern theories of peace, law, and justice with special attention to their implications for important contemporary political issues.

PLB 301I-3 Environmental Issues. Fundamental biological and ecological processes important in the individual, population and community life of organisms integrating with the philosophical and ethical relationships of the contemporary, domestically diverse human society are examined. Emphasis is placed on a pragmatic understanding of environmental issues. Lab fee: \$15.

PLB 303I-3 Evolution and Society. (Students with a catalog year prior to Summer, 2012 only) An introduction to the basics of biological evolution and the effect of biological evolution on society. Historical and modern interpretations of biological evolution on the human experience will be developed. This will include legal, political, religious, scientific, racist, sexist, philosophical and educational aspects. Topics will be covered via discussions, presentations, papers and debates. Prerequisite: strongly recommend completion of University Core Curriculum Science requirements. Lab fee: \$15.

POLS 314I-3 American Politics and the Mass Media. (Same as JRNL 314I) The role of the mass media in American politics. Emphasis will be on the way in which the news media covers political actors and institutions, the effects of media on political behavior, and the expanding role of the internet in politics.

POLS 332I-3 Introduction to Civil Liberties and Civil Rights. This course deals with civil liberties and civil rights in the United States and how the United States Supreme Court has interpreted and applied these rights over time. Specifically, our focus will be on the First Amendment, the Right to Privacy, Discrimination, and Voting Rights. We will also address how social, economic, and political forces have shaped the evolution and nature of these protections.

POLS 352I-3 Ethnicity, Nationalism and Culture. This course examines the causes, consequences and management of ethnic conflict and nationalism. Theoretical analysis will be combined with empirical case studies of ethnic and cultural competition, conflict and cooperation both within and between countries. Contributions from various scholarly disciplines will

be incorporated into the examination of these issues. Additionally, moral dilemmas in the sphere of ethnicity and nationalism will be discussed.

POLS 372I-3 Politics of the Global Economy. Examines the interaction of politics and economics and of states and markets at the international level. Special attention to inequalities of wealth and power and to the politics of international trade, finance, investment, production, energy, transportation, information, technology and development.

RTD 362I-3 Sound Art and Practice. This course will provide students with a philosophical understanding of the concepts and practices used in sound art and practice today and historically; and, in a variety of careers and in society in general. This course will introduce students to audio technology and terminology as well as expose them to the many applications of sound, as art and function, in society, regardless of their desire to pursue sound as a career. Lab fee: \$55.

SOC 304I-3 Global Perspectives on the Family. People around the world experience family life under different circumstances and from different perspectives. This course will focus on these differences and how societies have evolved to meet the needs of family units within their different social settings. Other key topics that affect families around the world will be discussed: global economy and families, gender inequality, familial violence, and environment concerns.

SOC 306I-3 Popular Culture in Society. Examines the social organization of popular culture, treating popular culture objects as products that are created, manufactured, distributed and consumed. The focus is on the people, activities, organizations and institutions that are involved in popular culture.

WGSS 301I-3 Women in Science, Engineering and Technology. This course will explore the historical contributions of women and challenges they faced as they entered educational programs and careers in various fields of engineering, science and technology. The course will also consider the current status of women in these fields.

WGSS 307I-3 Women in the Visual Arts: Social and Educational Contexts. (Same as AD 307I) This interdisciplinary course examines women's lives as artists, visual representations of women, and issues of gender distinction in the history of Western art from the medieval period to the present. From perspectives that include social history and cultural anthropology as well as both traditional and feminist art history, the course considers the ways in which the experiences of women and opportunities available to them have historically differed from those of men. The course examines how such differences have affected the emphases, subject matter, and traditions of women's art as well as the ways in which women have been represented.

WGSS 320I-3 Language, Gender and Power. (Same as LING 320I) This course looks at language practices and men and women from different cultures in terms of how speech reflects and shapes their social identities. Perspectives from the fields of communication studies, linguistics, anthropology, psychology, and sociology will be used.

ZOOL 312I-3 Conservation of Natural Resources. [IAI Course: L1 905] This course adopts an interdisciplinary approach to the study of conservation of natural resources. It integrates environmental science and environmental economics. By

examining the costs and benefits of resource consumption, we will attempt to determine the socially optimal level of resource utilization. We will look at ways in which governments attempt to achieve socially optimal resource use, and the effects of these government policies on the environment. Topics considered in the course include: solid waste, energy consumption, air pollution, agriculture and global environment change. Credit may not be used toward a major in zoology.

Multicultural Applied Experience Option

The Multicultural Applied Experience option is intended to deepen student and faculty involvement in extra-academic service. With prior approval from the director of the University Core Curriculum and the participating academic units, students may take non-Core service learning courses to satisfy the diversity requirement in the University Core Curriculum. Students who elect this option may also wish to sign up for Saluki Volunteers. The Saluki Volunteers can evaluate the Multicultural Applied Experience and those hours may be counted toward the 30-hour minimum per year for participation in the Volunteers. In addition to having their Volunteer hours noted on their transcript, the student will receive an involvement transcript from the Volunteers documenting their activities. This can be added to the resume. For more information about Saluki Volunteers, contact Saluki Volunteers in Student Development.

Multicultural Applied Experience Courses

These courses offer credits applicable to the University Core Curriculum diversity requirement for service-oriented experiences involving a group different from the student who elects the credit. Things such as age, gender, ethnicity, nationality, political affiliation, race or class can manifest difference. Students should consult individual departments for course specifications regarding grading, work requirements, and supervision.

ANTH 298-1 Multicultural Applied Experience. An applied experience, service-oriented credit in American diversity involving a group different from the student's own. Difference can be manifested by age, gender, ethnicity, nationality, political affiliation, race, or class. Students can sign up for the one-credit experience in the same semester they fulfill the multicultural requirement for the University Core Curriculum or coordinate the credit with a particular core course on American diversity, although neither is required. Students should consult the department for course specifications regarding grading, work requirements and supervision.

AVM 298-1 298-1 Multicultural Applied Experience. An applied experience, service-oriented credit in American diversity involving a group different from the student who elects the credit. Difference can be manifested by things such as age, gender, ethnicity, nationality, political affiliation, race, or class. The student can sign up for the one credit experience in the same semester he or she fulfills the multicultural requirement for the University Core Curriculum, or the credit can be coordinated with a particular Core Course on American diversity,

although neither is a requirement. Students should consult the respective program for course specifications regarding grading, work requirements and supervision. Special approval needed from the site representative, faculty supervisor, and department chair.

DH 298-3 Multicultural Applied Experience. An applied experience, service-oriented course in American diversity involving a group different from the student who elects the course. Difference can be manifested by things such as age, gender, ethnicity, nationality, political affiliation, race, or class. Satisfies the multicultural requirement in the University Core Curriculum.

FL 298-3 Multicultural Applied Experience. An applied experience, service-oriented credit in American diversity involving a group different from the student's own. Difference can be manifested by age, gender, ethnicity, nationality, political affiliation, race or class. Students should consult the department for course specifications regarding grading, work requirements, and supervision. Grade Pass/Fail. Prerequisite: written approval from the instructor of record.

LING 298-1 Multicultural Applied Experience. An applied experience, service-oriented credit in American diversity involving a group different from the student's own. Difference can be manifested by age, gender, ethnicity, nationality, political affiliation, race or class. Students can sign up for the one-credit experience in the same semester they fulfill the multicultural requirement for the University Core Curriculum or coordinate the credit with a particular core course on American diversity, although neither is required. Students should consult the department for course specifications regarding grading, work requirements and supervision. Graded Pass/Fail.

SOC 298-1 Multicultural Applied Experience. An applied experience, service-oriented credit in American diversity involving a group different from the student's own. Difference can be manifested by age, gender, ethnicity, nationality, political affiliation, race, or class. Students can sign up for the one-credit experience in the same semester they fulfill the multicultural requirement for the University Core Curriculum or coordinate the credit with a particular core course on American diversity, although neither is required. Students should consult the department for course specifications regarding grading, work requirements and supervision. Graded Pass/Fail only.

WGSS 298-3 Multicultural Applied Experience Option. An applied experience, service-oriented credit in American diversity involving interaction with those exemplifying life experiences centering on women's issues, organizations, services, etc. Students should consult the Women, Gender and Sexuality Studies Program staff to discuss placement options and supervision. Special approval needed from the Women, Gender and Sexuality Studies Director. Not for graduate credit.

Capstone Option

The Capstone Option is for the student who has earned or will soon earn an Associate in Applied Science (AAS) degree or equivalent certification and whose SIU major is one that participates in the option. The Capstone Option advantage allows students to complete an abbreviated University Core Curriculum (UCC) requirement of 30 hours rather than 41 hours.

Key features of the Capstone Option are: (1) gives occupation-

al students who have changed their educational and occupational goals an opportunity to pursue a four-year degree; (2) is an alternative option to obtaining the four-year degree typically involving no more than two additional years of college; (3) seeks to recognize similar objectives in both two-year occupational programs and four-year baccalaureate degree programs; and (4) seeks to recognize similar objectives in certain work experiences and in four-year baccalaureate degree programs.

The baccalaureate degrees in the following academic colleges participate in the Capstone Option at Southern Illinois University Carbondale:

College of Agricultural Sciences

- Agribusiness Economics
- Agricultural Systems and Education
- Animal Science
- Crop, Soil and Environmental Management
- Horticulture
- Hospitality and Tourism Administration

College of Applied Sciences and Arts

- Automotive Technology
- Aviation Management
- Aviation Technologies
- Dental Hygiene
- Electronic Systems Technologies
- Fire Service Management (off-campus only)
- Health Care Management
- Information Systems Technologies
- Mortuary Science and Funeral Service
- Radiologic Sciences
- Technical Resource Management

College of Business

- Accounting
- Business and Administration
- Business Economics
- Finance
- Management
- Marketing

College of Education and Human Services

- Early Childhood-Child and Family Services
- Rehabilitation Services
- Workforce Education and Development

College of Engineering

- Engineering Technology
- Industrial Technology

College of Liberal Arts

- Paralegal Studies

Requirements for the Baccalaureate Degree through Capstone

A student completing the degree through the Capstone Option must complete the University’s hour requirement, residence requirement, and average requirement for the bachelor’s degrees. These requirements are explained in Chapter 2. The course requirements for the UCC under the Capstone Option are explained below.

University Core Curriculum Requirements for Capstone

English Composition	3
English 101, 102, or 120H or equivalent with a grade of C or better.	
Communication Studies 101	3
Mathematics	3
Mathematics course numbered 101 or above, with the exception of 107, 120 and 300I.	
Science	6
Select one physical and one biological science.*	
Social Science	6
Select two courses from different disciplines on approved list.*	
Humanities	3
Select one course from the approved list.*	
Fine Arts	3
Select one course from the approved list.*	
Multicultural	3
Select one course from the approved list.*	
<i>Minimum Total</i>	30

*For explanation of groups or list of approved courses see University Core Curriculum requirements in Chapter 3.

In addition to the University Core Curriculum requirements, the student must complete the requirements specified in a contract or academic plan to be developed between the student and the academic unit or department representative. The contract must list the program requirements as well as all University Core Curriculum requirements to be completed.

Eligibility for the Capstone Option Requires the Student to:

1. Have entered a bachelor’s degree program at SIU which participates in the Capstone Option.
2. The student must not have earned more than 12 semester hours of major coursework toward the bachelor’s degree program prior to approval for Capstone.
3. A student who changes their major will require recertification for Capstone for the new program by no later than the end of the first semester in the new program and have earned no more than 12 semester hours toward the new bachelor’s degree program. Recertification occurs when the student requests a unit major change with Capstone Option indicated from the new degree program to be processed through the Registrar’s Office.
4. Have earned an associate degree, or equivalent certification, in a non-baccalaureate-oriented program of at least 60 semester hours by no later than the end of the first semester in the bachelor’s degree program at SIU. Equivalent certification, for the purposes of Capstone eligibility, is defined as the formal completion of a technically-oriented program of two years duration (60 semester hours), resulting in the receipt of the equivalent of an associate degree (certificate, diploma, or other documentation as provided by the student’s educational institution).
5. Have submitted all transfer work including the associate degree by no later than the end of the first semester at SIU. This documentation includes all official transcripts from

other institutions and may include test reports, evaluation of military experience, work experience, or whatever other kind of training has been used to award the associate degree. Official transcripts from other institutions must not be more than 30 days old when received by SIU.

6. Have earned a minimum grade point average of 2.0 (4.0 scale) as calculated by SIU grading regulations. An applicant determined ineligible for Capstone as a result of a low grade point average may not be considered again after raising the average in subsequent work (credit beyond the associate degree).

The official recognition of Capstone benefits will be determined after application to SIU has been made. Additional information about the Capstone Option is available from Transfer Student Services or on the Web at <http://transfer.siu.edu>.

The Capstone Option will automatically be considered as a part of the Undergraduate Admission application process for those applicants who indicate they are transferring an AAS degree or the equivalent certificate. Students are recommended to consult with their academic advisor for more information about their eligibility to the Capstone Option.

University Core Curriculum and Transfer Students

There are several different ways to complete Core Curriculum requirements:

1. Completion of an Associate in Arts or an Associate in Science degree at a public Illinois community college (see Compact Agreement below);
2. Completion of the “42 Hour Block” or an AA degree in a baccalaureate-oriented program in an accredited Missouri two-year institution that participates in the 42 Hour Block program will be considered to have completed the University Core Curriculum.
3. Completion of an associate degree in a baccalaureate-oriented program (A.A. or A.S.) from an accredited Illinois public two-year institution; completion of an A.A. from an accredited Missouri public two-year institution; or completion of an A.A. or A.S. from a Kentucky Community and Technical College System institution. The student will: **(a)** be admitted to the University with junior standing and, **(b)** be considered to have completed the University Core Curriculum requirements for general graduation purposes; and,
4. Completion of the Illinois Transferable General Education Core Curriculum as certified by a participating Illinois Articulation Initiative institution;
5. Completion of SIU’s Core Curriculum requirements; or
6. Admission to and completion of SIU’s Capstone Option for students with an AAS.

The Compact Agreement

SIU has recognized the Illinois regionally accredited community college transferable baccalaureate oriented Associate of Arts or Associate of Science degrees under the Compact Agreement since 1970. SIU will continue to recognize the baccalaureate

oriented associate degree (A.A. or A.S. degree) under the Illinois Articulation Initiative. The Associate in Engineering Science (A.E.S.), the Associate in General Studies (A.G.S.), and the Associate in Fine Arts (A.F.A.) do not carry the same benefits as the A.A. and A.S. as described below.

Illinois public community college graduates who hold an A.A. or an A.S. will be:

1. Admitted to SIU if enrollment occurs after earning the associate degree and prior to coursework attempted at another institution;
2. Considered a junior in class standing; and
3. Evaluated as having completed the SIU University Core Curriculum (general education) requirements required for general graduation purposes. Major courses that are also Core Curriculum courses may not automatically be completed by earning the A.A. or A.S. degree.

Students without an A.A. or A.S. from an Illinois Accredited Community College

Transfer students who have not earned a baccalaureate oriented Associate of Arts or Associate of Science degree from an accredited Illinois public community college prior to attending SIU, but who have been certified by a participating Illinois Articulation Initiative institution as having completed the Illinois Transferable General Education Core Curriculum (IAI GECC) will be considered as having fulfilled the SIU Core Curriculum requirements required for general graduation.

SIU will waive a fraction of a semester hour of an SIU Core Curriculum course requirement for a satisfactorily completed and approved course from an accredited institution participating in the Illinois Articulation Initiative. Students must complete a minimum of 37 semester (56 quarter) hours to satisfy the SIU Core Curriculum requirements.

Transfer students with an AA or AS from a regionally accredited out-of-state institution or an Illinois institution that does not participate in IAI, who present 37 or more semester hours of general education credit prior to initial enrollment will be evaluated to determine completion of the SIU Core Curriculum model. If the student has completed the SIU model, the student will be considered as having fulfilled the SIU Core Curriculum requirements.

Transfer students who have earned the Associate in Applied Science (AAS) degree may qualify to complete their University Core Curriculum requirements under the Capstone Option. Information about the Capstone Option and the participating majors is explained in a previous section of this chapter.

Evaluation of courses taken at regionally accredited colleges and universities will be completed by Transfer Student Services at the time of the student’s admission to the University. Any Illinois Transferable General Education Core (IAI) course that is articulated to a SIU Core Curriculum course will be utilized toward completion of the SIU Core Curriculum. Transcripts submitted for evaluation must be issued within the last thirty days.

The Illinois Articulation Initiative Transferable General Education Core (IAI) is in effect for students who began an associate or baccalaureate degree as first-time freshmen Summer 1998 or thereafter. Students transferring from SIU to another

institution may request that SIU audit their record for completion of the Illinois Transferable General Education Core. If this is complete, the student will receive certification of that completion on the transcript. The student must have 37 or more semester hours of general education credits prior to this request. IAI general education core courses are listed in Chapter 3 under the Illinois Articulation Initiative section.

SIU reentry students who have not earned an Illinois baccalaureate oriented AA or AS degree, or students concurrently enrolled at another institution while attending SIU, must complete the SIU Core Curriculum or the IAI General Education Core Curriculum requirements. A student must have a minimum of 30 semester hours of transfer credit prior to enrollment at SIU in order to be eligible to complete the IAI GECC in lieu of the SIU UCC requirement subsequent to admission to the University. Concurrently enrolled students should seek advice from Transfer Student Services on acceptable course equivalents to the SIU Core Curriculum or visit the web site: transfer.siu.edu.

Illinois Articulation Initiative

SIU is a participant in the Illinois Articulation Initiative (IAI), a statewide agreement that allows transfer of the completed Transferable General Education Core Curriculum between participating institutions. Completion of the General Education Core Curriculum at any participating college or university in Illinois assures transferring students that general education requirements for the bachelor's degree have been satisfied. This agreement is in effect for students entering an associate or baccalaureate degree-granting institution as a first-time freshman in summer 1998 (and thereafter).

Students who have completed the Illinois Transferable General Education Core and have been certified as complete by the sending institution will have completed the University Core Curriculum requirements for general graduation purposes at Southern Illinois University Carbondale.

Certification of the Illinois Transferable General Education Core must contain the minimum requirements shown on following chart:

ILLINOIS TRANSFERABLE GENERAL EDUCATION CORE CURRICULUM MINIMUM REQUIREMENTS

Area	Number Courses	Semester Hours	Special Requirements
Communication	3	9	Two Writing, one oral communication (C or better is required for the writing sequence)
Mathematics	1 or 2	3-6	
Physical & Life Sciences ¹	2	7-8	One Life Science and one Physical Science; one must have a lab
Humanities & Fine Arts	3	9	At least one course selected from Humanities and one course from the Fine Arts
Social & Behavioral Science	3	9	Two Disciplines must be represented: Anthropology, History, Economics, Human Geography, Political Science, Psychology, Sociology, Interdisciplinary Social/Behavioral Science
Total	12-13	37-41	

¹Students with appropriate preparation may substitute an initial major course designed for science majors.

Transfer courses from 1996 and forward will be audited to determine if they will fulfill the model above.

Students Completing IAI GECC Requirements

Students may take SIU courses to complete the Illinois Transferable General Education Core Curriculum prior to transferring to another participating institution. The following IAI codes identify qualifying general education courses:

C (Communications)
 F (Fine Arts)
 H (Humanities)
 HF (Interdisciplinary Humanities and Fine Arts)
 L (Life Sciences)
 M (Mathematics)
 P (Physical Sciences)
 S (Social Sciences)

The courses listed on the following page are the SIU courses that have been approved for inclusion in the Illinois Transferable General Education Core. These same courses can be found throughout the catalog in their major departments and are designated by [IAI: course number]. Major IAI courses that can be used for lower division major requirements may also be found in their major departments.

IAI GENERAL EDUCATION CORE COURSES OFFERED AT SIU

IAI Course Number and Title	SIU Course	SIU Course Title
C1 900 (Writing Course Sequence)	ENGL 101	English Composition I
C1 900 (Writing Course Sequence)	LING 101	English Composition I
C1 901R (Writing Course Sequence)	ENGL 102	English Composition II
C1 901R (Writing Course Sequence)	ENGL 120	Honors Composition
C1 901R (Writing Course Sequence)	LING 102	English Composition II
C2 900 (Oral Communication)	CMST 101	Intro: Oral Comm
F1 900 (Music Appreciation)	MUS 103	Music Understanding
F1 905D (Ethnic Tradition Am Music)	MUS 203	Diversity/Popular Music
F1 907 (Theatre Appreciation)	THEA 101	Theater Insight
F2 900 (Art Appreciation)	AD 101	Introduction to Art
F2 901 (History of Western Art I)	AD 207A	Intro to Art History I
F2 906D (Ethnic Traditions in Am Art)	AD 227	History African Am Art
F2 908 (Film Appreciation)	ENGL 307I	Film as Literary Art
H1 900 (Foreign Language IV)	CHIN 201B	Interm Chinese
H1 900 (Foreign Language IV)	CLAS 201B	Interm Greek II
H1 900 (Foreign Language IV)	FR 201B	Interm French
H1 900 (Foreign Language IV)	GER 201B	Interm German
H1 900 (Foreign Language IV)	JPN 201B	Interm Japanese II
H1 900 (Foreign Language IV)	SPAN 201B	Interm Spanish
H2 903N (Non-Western Civilizations)	EA 102	East Asian Civilization
H3 900 (Introduction to Literature)	ENGL 121	Western Lit Tradition
H3 900 (Introduction to Literature)	ENGL 204	Lit Prspect Mod World
H3 900 (Introduction to Literature) ¹	ENGL 209	Forms of Literature
H3 901 (Introduction to Fiction) ¹	ENGL 210	Introduction to Fiction
H3 902 (Introduction to Drama) ¹	ENGL 201	Introduction to Drama
H3 903 (Introduction to Poetry) ¹	ENGL 202	Introduction to Poetry
H3 910D (American Ethnic Literature)	ENGL 205	Am Mosaic Literature
H3 910D (American Ethnic Literature)	ENGL 325/AFR 325	Black American Writers
H3 911D (Literature and Gender)	ENGL 225/ WGSS 225	Women in Literature
H4 900 (Introduction to Philosophy)	PHIL 102	Intro to Philosophy
H4 903N (Non-Western Philosophy)	PHIL 308I	Asian Philosophy
H4 904 (Ethics)	PHIL 104	Ethics
H4 904 (Ethics)	PHIL 340	Ethical Theories
H4 906 (Intro to Logic/Critical Thinking)	PHIL 105	Elementary Logic
H5 905 (Religion in American Society)	HIST 202	Am Religious Diversity
H9 900 (Interdisciplinary Humanities)	CLAS 315I	Classical Themes

IAI Course Number and Title	SIU Course	SIU Course Title
H9 900 (Interdisciplinary Humanities)	PHIL 103B	World Humanities II
H9 900 (Interdisciplinary Humanities)	PHIL 303I	Philosophy/Literature
H9 901 (Mythology)	CLAS 230/WGSS 230	Classical Mythology
HF 902 (Western Humanities I)	HIST 201	Art, Music, Ideas
HF 904N (Non-Western Humanities)	PHIL 103A	World Humanities I
HF 906D (Am Ethnic Cultr Expression)	PHIL 210	The American Mind
L1 900L (General Education Biology)	PLB 115/ZOOL 115	General Biology
L1 901L (Plants and Society)	PLB 117	Plants and Society
L1 902 (Animals and Society)	ANS 121	Intro to Animal Science
L1 902L (Animals and Society)	ZOOL 118	Animal Biology
L1 904 (Human Biology)	PHSL 201	Human Physiology
L1 904L (Human Biology)	PHSL 208	Lab Experiences in Physiology
L1 905 (Environmental Biology)	ENGR 301I	Humans/Environment
L1 905 (Environmental Biology)	ZOOL 312I	Consrv Natrl Resources
L1 910L (Human Biology)	BIOL 200A	Cell & Molecular Biology, Genetics & Evolution
L1 910L (Human Biology)	BIOL 200B	Organismal & Ecological Biology
M1 900 (College-Level Calculus)	MATH 141	Calculus for Bio Sci
M1 900-1 (College-Level Calculus I)	MATH 150	Calculus I
M1 900-2 (College-Level Calculus II)	MATH 250	Calculus II
M1 900-3 (College-Level Calculus III)	MATH 251	Calculus III
M1 903 Math for Elem Teachers I	MATH 314	Geometry Elem Teachers
M1 904 (General Ed Mathematics)	MATH 101	Contemporary Math
M1 905 (Discrete Mathematics) ¹	CS 215	Discrete Mathematics
P1 900 (General Education Physics)	PHYS 203A	College Physics
P1 900L (General Education Physics)	PHYS 253A	College Physics Lab
P1 901L (Physics and Society)	PHYS 101	Phys That Changed World
P1 902 (General Education Chemistry)	CHEM 200	Intro Chem Principles
P1 902L (General Education Chemistry)	CHEM 140A	Chemistry
P1 902L (General Education Chemistry)	CHEM 201	Gen Chemistry Lab I
P1 903L (Chemistry and Society)	CHEM 106	Chemistry and Society
P1 907 (Introduction to Geology)	GEOL 220	Physical Geology
P1 907 (Introduction to Geology)	GEOL 221	Earth Through Time
P1 908 (Environmental Geology)	GEOL 111	Geol and Environment
P1 908L (Environmental Geology)	GEOL 112	Geol Environment Lab
P1 909L (Physical Geography)	GEOG 303I	Earth's Bio Environ
P2 900 (Calculus-based Physics I)	PHYS 205A	University Physics
P2 900L (Calculus-based Physics I)	PHYS 255A	University Physics Lab
S1 900N (Introduction to Anthropology)	ANTH 104	Human Experience
S2 900 (United States History I)	HIST 300	Origins Am: 1492-1877
S2 901 (United States History II)	HIST 301	Mod Am Hist:1877-Pres
S2 902 (Hist of Western Civilization I) ¹	HIST 205A	Hist of Western Civ
S2 903 (Hist of Western Civilization II) ¹	HIST 205B	Hist of Western Civ
S2 910N (History of Latin America I) ¹	ANTH 205	Latin American Civ
S3 901 (Principles of Macroeconomics)	ECON 241	Intro to Macroecon
S3 902 (Principles of Microeconomics)	ECON 240	Intro to Microecon
S4 900N (Intro to Human Geography)	GEOG 103	World Geography
S5 900 (Am/U.S. Natl Government I)	POLS 114	Am Govt and Politics

IAI Course Number and Title	SIU Course	SIU Course Title
S5 902 (U.S. State and Local Govt) ¹	POLS 213	State and Local Govt
S5 904N (International Relations) ¹	POLS 170	Global Politics
S5 905 (Comparative Government) ¹	POLS 207	Political Ideologies
S5 905 (Comparative Government) ¹	POLS 250	Politics-Foreign Nations
S6 900 (General Psychology I)	PSYC 102	Intro to Psychology
S7 900 (Introduction to Sociology)	SOC 108	Intro to Sociology
S7 902 (Marriage and Family) ¹	CI 227	Intimate Relationships and Family Development
S7 902 (Marriage and Family) ¹	WGSS 286	Intimate Relationships and Family Development
S7 903D (Racial and Ethnic Relations)	SOC 215	Race/Ethnic Relatn: US
S7 904D (Racial and Ethnic Relations)	SOC 223	Women/Men Cntmp Soc
S7 904D (The Sociology of Sex & Gender)	WGSS 223	Women/Men Cntmp Soc

¹These SIU and corresponding IAI courses will not satisfy SIU's University Core Curriculum requirement, but will satisfy the Illinois Transferable General Education Core.

Illinois Articulation Initiative Major Courses

The IAI Major Panels have identified a Common Core of no more than four courses in a subject area generally required at the lower-division at major senior institutions in the State of Illinois. The intention of the Common Core is to provide some guidance to those students who know they would like to major in a particular subject area, but are unsure as to which senior institution they plan to attend to complete their baccalaureate studies.

SIU is a participant in IAI individual baccalaureate major agreements. The courses listed below are the SIU courses that have been approved for inclusion in the Major Common Core. Check the Illinois Articulation Initiative website for the IAI Baccalaureate Majors' Recommendations for specific majors at: <http://www.itransfer.org/iai/majors>.

IAI MAJOR COMMON CORE COURSES OFFERED AT SIU

IAI Major Course	SIU Course	SIU Course Title
AG 901	ABE 204	Intro to Agricultural Economics
AG 902	ANS 121	Intro to Animal Science
AG 902	ANS 122	Livestock Production Laboratory
AG 903	CSEM 200	Intro to Crop Science
AG 904	CSEM 240	Soil Science
AG 905	HORT 220	General Horticulture
AG 906	AGSE170	Intro Physical Principles in Agriculture
AG 911	AGSE 110	Intro to Agriculture Education
AG 913	AGSE 118	Intro Computers in Agriculture
BIO 910	BIOL 200A	Cell and Molecular Biology
BIO 910	BIOL 200B	Organismal and Ecological Biology
BUS 901	ACCT 208	Business Data Analysis
BUS 901	MGMT 208	Business Data Analysis
BUS 902	CS 200B	Computer Concepts
BUS 902	ISAT 229	Computing for Business Administration
BUS 903	ACCT 220	Accounting I - Financial
BUS 904	ACCT 230	Accounting II - Managerial
CHM 911	CHEM 200	Intro to Chemical Principles
CRJ 901	CCJ 201	Intro to Criminal Justice System
CRJ 911	CCJ 384	Intro to Corrections
CRJ 912	CCJ 290	Intro to Criminal Behavior
CRJ 914	CCJ 374	Juvenile Justice
CS 911	CS 202	Intro to Computer Science

IAI Major Course	SIU Course	SIU Course Title
CS 912	CS 220	Programming with Data Structures
EGR 931	ENGR 335	Electric Circuits
EGR 931L	ECE 235	Electric Circuits
EGR 932L	ECE 225	Intro Discrete Logic and Digital Systems
BUS 901	FIN 208	Business Data Analysis
IND 913	IT 208	Fundamentals of Manufacturing Processes
MC 912	JRNL 301	Principles of Advertising/IMC
MC 913	SPCM 281	Intro to Public Relations
MC 914	RTD 200	Understanding Media
MC 916	RTD 300	Introduction to Media Production
MC 917	RTD 310	News Writing for Electronic Media
MC 918	RTD 360	Electronic Media Performance
MC 919	JRNL 310	Writing for the Mass Media
MC 920	JRNL 312	Editing
MTH 901	MATH 150	Calculus I
MTH 902	MATH 250	Calculus II
MTH 903	MATH 251	Calculus III
MTH 912	MATH 305	Intro to Ordinary Differential Equations I
PLS 913	POLS 207	Contemporary Political Ideologies
PSY 905	PSYC 331	Abnormal Psychology
TA 911	THEA 218A	Beginning Stagecraft-Scenery



4 / Colleges, Academic Services and Programs





College of Agricultural Sciences

Mickey A. Latour, *Dean*

The College of Agricultural Sciences offers the following majors with specializations leading to the Bachelor of Science degree.

Major (B.S. degree)	Specialization
Agribusiness Economics ¹	Agribusiness Economics: curriculum individually designed to fit student needs
Agricultural Systems and Education ¹	Ag Education Ag Communications Ag Production Management Ag Systems Technology Management General Agriculture Food & Process Engineering Technology
Animal Science ¹	Animal Production Equine Science Pre-Veterinary Medicine Science
Crop, Soil and Environmental Management ¹	Crop Production & Management Soil Science
Horticulture ¹	Production Horticulture Landscape Horticulture Turf Management
Human Nutrition and Dietetics	
Hospitality and Tourism Administration	Event Planning Food Service Management Lodging Management Tourism
Forestry	Forest Resources Management Forest Recreation & Park Management Wildlife Habitat Management & Conservation Urban Forest Management Forest Hydrology

¹Minor available

It is recommended that high school students who are planning to pursue one of the above majors include the following in their high school program: four years of English, three years of mathematics (algebra, geometry, advanced mathematics); three years of science (biology, chemistry, physics); three years of social studies; and two years of art, music, vocational education (may include agriculture), or foreign languages. For prospective agriculture majors or human nutrition and dietetics majors, high school classes in agriculture or family and consumer sciences education respectively are beneficial but are not specifically required.

For transfer students wishing to pursue a major in one of the agricultural, human nutrition and dietetics, or forestry areas,

courses taken prior to entering the University should include physical and biological sciences, social sciences, and humanities. In addition, courses in speech and appropriate sequences in English composition and college algebra should be included as well as a general botany course. A potential transfer student who has already identified a major for the bachelor's degree may select with greater precision the courses, which will be transferred by consulting the curriculum for that major.

A student planning to take preprofessional courses in veterinary science should register in the College of Agricultural Science's four-year curriculum in Animal Science (Science and Pre-Veterinary specialization).

Qualified candidates for the Capstone Option are accepted into Agribusiness Economics, Animal Science, Agricultural Systems and Education, Crop, Soil and Environmental Management, Horticulture, and Hospitality and Tourism. The Capstone Option is described in Chapter 3.

Of the recent graduates of the College of Agricultural Sciences, about 45% have been employed in private industry, 10% management and about 15% have been employed in each of: government (federal, state, county, and city); education or extension; graduate study or professional schooling.

Typical employment opportunities for Agribusiness Economics graduates include positions in credit and financial management, professional farm management, sales, and grain merchandising. A graduate from the Agricultural Systems and Education major can be employed in the farm machinery or implement industry, as a high school agricultural educator, as a news editor, or in agricultural sales or service. Animal Science majors seeking employment can investigate positions in livestock management or sales, and governmental positions such as meat inspectors, as well as veterinary school. Human Nutrition and Dietetics majors will find numerous opportunities as registered dietitians or in the hospitality and tourism industry. The major employer of Forestry graduates is the federal or state government, but they also work as private forestry consultants, in urban forestry, in private industry, or not-for-profit organizations. The Crop, Soil and Environmental Management graduate with a concentration in agronomy will find opportunities in industry such as agricultural chemical sales, in production agriculture, or with a governmental agency such as the Soil Conservation Service. Horticulture graduates can seek employment in nursery management, golf course and turf management, in the florist or interior plant maintenance industry, or with landscape design firms.

College of Agricultural Sciences students come from both rural and urban homes. Almost 40% of the undergraduates and nearly 45% of the graduates are women. Individual faculty advisors prior to registration counsel students who elect any one of the eight majors in the College of Agricultural Sciences. Faculty members offer an open-door policy and much personal attention to their advisees as well as to students enrolled in their classes.

The Agriculture Building houses the offices, classrooms, and laboratories for the agriculture and forestry programs. The Human Nutrition and Dietetics and Hospitality and Tourism programs have offices, classrooms, and laboratories in Quigley Hall. Other research and teaching facilities include over one-third acre in greenhouses plus 2,000 acres of farm and timberland.

The College of Agricultural Sciences assesses College of Agricultural Sciences undergraduate majors a technology fee of \$4.58 per credit hour up to twelve credit hours. The fee is charged Fall and Spring semesters.

College of Applied Sciences and Arts

Ju An Wang, *Dean*

Career and technically oriented academic programs in the College of Applied Sciences and Arts can lead to one of fourteen Bachelor of Science degrees and two Associate in Applied Science degrees. These programs provide career paths for first-time students or transfer students from SIU Carbondale or other institutions.

Requirements for Bachelor of Science and Associate in Applied Science degrees as well as additional information for each major offered can be found in specific program information in Chapter 5. Schools and programs within the College are:

School Name	Major	Degree
Architecture	Architectural Studies	Baccalaureate
	Fashion Design and Merchandising	Baccalaureate
	Fire Service Management	Baccalaureate
	Interior Design	Baccalaureate
Transportation	Aircraft Product Support	Minor
	Airport Management & Planning	Minor
	Air Traffic Control	Minor
	Automotive Technology	Baccalaureate
	Aviation Flight	Associate
	Aviation Management	Baccalaureate
	Aviation Technologies	Baccalaureate
	Aircraft Maintenance Specialization	
	Aviation Electronics Specialization	
Helicopter Specialization		
Allied Health	Dental Hygiene	Baccalaureate
	Health Care Management	Baccalaureate
	Mortuary Science and Funeral Service	Baccalaureate
	Physical Therapist Assistant	Associate
	Radiologic Sciences	Associate/Baccalaureate
	Magnetic Resonance Imaging and Computed Tomography Option Medical Diagnostic Sonography (Ultrasound) Option Radiation Therapy Option	
Information Systems and Applied Technologies	Electronic Systems Technologies	Baccalaureate
	Electronics Management Specialization	
	Information Systems Technologies	Baccalaureate
	Technical Resource Management	Baccalaureate
	Construction Management	

Students with educational and/or occupational backgrounds or with career objectives in the fields of architecture, automotive technology, aviation, electronics, fashion design and merchandising, fire service, health care, information systems or interior design are encouraged to apply for admission to these career-specific programs. Students also may choose to apply for admission to Technical Resource Management which is a baccalaureate degree program designed especially for technically oriented students seeking career enhancement where no other specific Bachelor of Science degree in the college is available. Requirements for degree programs and information for each of these majors can be found in Chapter 5.

Students eligible for admission to the Bachelor of Science programs must meet University entrance requirements and program requirements for admission to the major. Transfer students admitted to SIU in good standing are eligible to apply for admission to one of the college's programs. Students must complete all course work with a 2.0 average C or better on a 4.0 point scale to qualify for completion. Students may be admitted to the college's off-campus academic programs if requirements stated in the *Undergraduate Catalog* have been met. Additionally, students must fulfill all SIU requirements including the University Core Curriculum, total hour, residence, and GPA requirements to qualify for completion.

The Capstone Option is available in some majors to qualified students. Capstone reduces the University Core Curriculum from 41 to 30 semester hours. Qualifications and a list of participating programs can be found in Chapter 3.

The College of Applied Sciences and Arts has several articulation agreements with community colleges located in California, Illinois, Indiana, Iowa, New Jersey, Texas, and Wisconsin. Agreements exist for the following programs: Architectural Studies, Automotive Technology, Aviation Management, Aviation Technologies, Electronic Systems Technologies, Fire Service Management, Information Systems Technologies, and Technical Resource Management. Additionally, linkage agreements exist for several health care programs. For specifics, refer to the program information in Chapter 5.

Anyone interested in the following online or off-campus programs should contact SIU Extended Campus at (618) 453-3430: Automotive Technology; Aviation Management; Electronic Systems Technologies; Fire Service Management; Health Care Management; Technical Resource Management.

Additional information on the College of Applied Sciences and Arts programs and course offerings is available on the college's website at <http://www.asa.siu.edu/> or by calling (618)453-7283 or emailing casa@siu.edu.

College of Business

Jason Greene, *Interim Dean*

Departments: Finance; Management; Marketing

School: Accountancy

The College of Business aims to prepare students to perform successfully in business and other organizations such as government and other not-for-profit organizations functioning within a changing social, economic, and political environment. Study provides the student with fundamental principles and practices of organizational behavior and allows the mastering of knowl-

edge and skills for effective management. The curriculum provides a broad base for understanding business while simultaneously allowing in-depth study within an area of concentration and exposure to current information technology. Students find business, governmental units, and other public institutions desire the professional education they receive in the college. The advanced curriculum and related programs provide students not only with a meaningful education but also with a means of relating that education to organizations and commerce.

The College of Business offers the following majors leading to the Bachelor of Science degree:

- Accounting (online and residential programs available)
- Business and Administration (online program)
- Business Economics
- Finance
- Management
- Marketing

All programs offered in the College of Business are accredited by AACSB International, The Association to Advance Collegiate Schools of Business International, 777 South Harbour Island Boulevard, Suite 750, Tampa, FL, 33602-5730.

The College of Business offices are located in Henry J. Rehn Hall; and classes are conducted in various buildings throughout the campus.

Pre-College Preparation

High school and preparatory school students are urged to follow a program which includes at least four units of English and three units of mathematics, with a substantial portion of the remainder of their study programs devoted to such academic subject areas as humanities, the sciences, and social studies.

Transferred Credits in Business Courses

Subject to the policies of the University and of AACSB International regarding acceptance of transferred credits, the college accepts college-level credit earned in business and economics courses from accredited two- or four-year institutions of higher education and counts such credit toward the 120 semester hours required for graduation. However, if such courses are offered at the lower division (freshman and sophomore level) at the institution where completed, only those courses shown below will be treated as equivalencies to college- or departmental-required courses.

Subject Hours

Principles of Accounting	6
Economic principles	6
Business economics statistics	3
(where college algebra is a prerequisite)	
Legal and social environment of business	3

Students also have the opportunity of validating additional coursework and nothing in the above statement abridges a student's right to satisfy graduation requirements by proficiency (or competency) examinations. Such examinations are treated as a student right by the college and are available for most courses.

Admission Policy

The College of Business admission policy shall be the same as that of the University. All qualified new students are admitted

to the College of Business with a specific departmental major classification, undecided business, or as an unclassified student.

Reentering and Southern Illinois University Carbondale Students. Students who are currently enrolled or were previously enrolled at the University in a major outside the College of Business may request admission to a Business program. These students will be considered for admission to the College of Business provided that they are in good standing with the University. Students with academic issues may be required to participate in an academic support program as a condition of readmission.

Business and Administration online degree-completion program. The Bachelor of Science degree program with a major in Business and Administration is an online degree program intended for those students residing outside the Carbondale community or who have work and/or family commitments that make traditional campus attendance impractical. The following should be met for admission to this program:

- Completion of at least 60 hours of prerequisite post-secondary course work fulfilling:
 - * University Core Curriculum requirements.
 - * Completion of the Professional Business Core required for the online program.

International Students. International students must meet admission requirements comparable to those of native students. While admission credentials such as ACT and class rank are generally not submitted by international students, applicants do submit credentials which reflect their achievement in some subject areas similar to those of the United States students. Beginning international freshmen as well as transfer students will have their applications and documents reviewed in a manner similar to domestic students for admission to the College of Business.

Grade Point Average Calculation. In calculating a student's grade point average for admission purposes for continuing, new, and reentering students, the admission office will follow the SIU grading policy and procedures for all collegiate (not remedial) work attempted at SIU and other collegiate institutions.

Grade Point Average Requirement

Graduation from the College of Business requires achievement of a 2.0 grade point average in all business-prefix (ACCT, BUS, ECON, FIN, MGMT, MKTG) courses taken at Southern Illinois University Carbondale. ACCT 210, ECON 113 and 302I, and MGMT 170 are not calculated into the business-prefix grade point average. In addition, students must earn a minimum grade of C in each of the courses taken to satisfy the requirements for their major (Accounting, Business and Administration, Business Economics, Finance, Management, or Marketing), and students must earn a minimum 2.0 grade point average for those major courses. Business courses may be repeated for a grade only twice, unless an individual department restricts course repeats to only once. Pursuant to University policy, students seeking to repeat a course a second time (third enrollment) must obtain permission from the Office of the Provost.

A minor from the College of Business requires students to

earn a minimum grade of C in each of the courses taken to satisfy the requirements for their minor, and students must earn a minimum 2.0 grade point average for those minor courses.

Pass/Fail Policy of the College

Business majors may not register on a Pass/Fail basis for courses used to satisfy requirements in the College of Business unless the course is designated Mandatory Pass/Fail. Exception to this policy is based on extenuating circumstances as approved by the Dean.

Course Sequencing

It is of the utmost importance that required courses be sequenced properly. Sequencing guides are available from the college’s academic advisement center and are published in the College of Business’ *Student Handbook*. Courses on the 300 to 400 levels are restricted to juniors and seniors.

The Capstone Option for Transfer Students

The Capstone Option is available to students who have earned an Associate in Applied Science (AAS) in an approved business area degree and who have a cumulative 2.0/4.0 GPA on all accredited coursework prior to the completion of the AAS, as calculated by SIU. The Capstone Option reduces the University Core Curriculum requirements from 41 to 30 hours, therefore reducing the time to degree completion. See Chapter 3 for more information on this option. Students who apply for Capstone will work with the College of Business Advisement Office for approval of the Capstone Option and will complete a personal contract for a degree completion plan.

Technology Fee and Differential Tuition

The College of Business assesses College of Business majors a technology fee of \$6.00 per credit hour for Fall and Spring semesters up to twelve semester hours and Summer up to six semester hours. The technology fee is being phased out and will be subsumed under the differential tuition surcharge (see item below). Consequently, students will be charged either the technology fee or the differential tuition surcharge but not both. Starting Fall 2008, the College of Business has implemented a differential tuition surcharge of 15% of applicable tuition for declared College of Business majors that are new students. The differential tuition surcharge will be assessed at the in-state tuition rate. If students are charged the differential tuition surcharge, the technology fee (in above item) will not be assessed. Starting Fall 2008, the College of Business has implemented a “minor program fee” for other than College of Business majors that is equal to 15% of 15 credit hours of applicable tuition for declared College of Business minors. This fee is applicable for new students.

Business GPA Forgiveness Policy

The College of Business has adopted a policy for students whose only graduation problem concerns the 2.0 grade point average in all business prefix (ACCT, BUS, ECON, FIN, MGMT, MKTG) courses taken at the University. This is referred to as the Business grade point average (BUS GPA). Such students may petition to have a maximum of twelve semester hours of D or F grade(s) earned outside of the Professional Business Core and outside the major excluded from calculation of the BUS GPA. It should be noted that the College of Business Forgive-

ness Policy is offered as a means of computing the BUS GPA for graduation purposes only and may not be used for any other purpose. Only students with a University grade point average (SIU GPA) of 2.0 or above are eligible to petition to have the College of Business Forgiveness Policy applied for the purpose of BUS GPA calculation.

University Core Curriculum Courses Prescribed for Business Majors

Students in the College of Business must complete the University Core Curriculum requirements. The following courses are required and will count toward partial fulfillment of these:

- Psychology 102 or Sociology 108 (to satisfy UCC Social Science requirement)
- Economics 241 (to satisfy UCC Social Science requirement)
- English 101, 102 (to satisfy English Foundation for UCC)
- Mathematics 139 (to satisfy UCC Math requirement)
- Speech Communication 101 (to satisfy Speech Foundation for UCC)

Professional Business Core

The professional business core, required of all College of Business students, is comprised of the following courses:

<i>Courses</i>	<i>Semester Hours</i>
Accounting 220, 230	6
Business 302	2
English 291 ⁵	3
Management 304, 318, 345, 481	12
Economics 241 ¹ , 240	(3) ¹ + 3
Finance 208 ⁴ , 270 ² , 330	9
Marketing 304	3
Mathematics 139 ¹ and 140 ³	(3) ¹ + 4
300-400 level CoB elective course (ACCT, FIN, MGMT, MKTG)	3
<i>Total</i>	45

Professional Business Core (online program)

The professional business core, required of all College of Business students admitted to the online Business and Administration degree program, is comprised of the following courses:

<i>Courses</i>	<i>Semester Hours</i>
Accounting 220, 230	6
Finance 208 ⁴	3
Economics 241 ¹ , 240	(3) ¹ + 3
Mathematics 139 ¹ and 140 ³	(3) ¹ + 4
<i>Total</i>	16

¹See University Core Curriculum courses prescribed for business majors.
²The combination of Finance 280 and 380 may be substituted for 270.
³Mathematics 150 may be substituted for 140.
⁴Also listed as Accounting 208 or Management 208.
⁵May substitute English 290 or Management 202.

College of Education and Human Services

Keith B. Wilson, *Dean*

Departments: Curriculum and Instruction; Educational Administration and Higher Education; Counseling, Quantitative Methods, and Special Education; Health Education and Recreation; Kinesiology; Rehabilitation Institute; School of Social

Work; Workforce Education and Development.

The College hosts graduate and undergraduate programs in which students can prepare for careers in teaching, counseling, and administration in a range of levels, from private and public preschool to university level. All programs carrying licensure throughout the university emanate through the Office of Teacher Education within the College. Those majoring in teaching fields take a sequence of professional education courses and four semesters of clinical field experiences and student teaching in public schools through the College of Education and Human Services. Subject-matter courses to prepare our graduates to be highly qualified in their majors, specializations, and endorsements are taken by elementary, secondary, and K-12 majors through the College of Liberal Arts, College of Science, College of Education and Human Services, and College of Agricultural Sciences. Methods courses are taken in those colleges or in the College of Education and Human Services, depending on one's major. Graduates of the College of Education and Human Services receive a Bachelor of Science degree.

The College of Education and Human Services offers the following programs¹ leading to the Bachelor of Science degree:

Programs with Educator Licensure:

Agriculture Education¹
 Business Marketing & Computer Education² (des.req.)
 Early Childhood
 Elementary Education
 English Language Arts¹
 Family & Consumer Sciences² (des.req.)
 French
 German
 Spanish
 Health Careers² (des.req.)
 History Education¹
 Learning Behavior Specialist (LBS1/Special Education)
 Mathematics Education¹
 Music Education¹
 Physical Education
 Sciences – Biology¹
 Social Science Education
 Technology Education² (des.req.)
 Visual Arts

Programs in Human Services

Curriculum and Instruction
 Child & Family Services
 Health Education
 Community Health
 Kinesiology
 Exercise Science
 Sport Administration
 Recreation
 Leisure Services Management
 Outdoor Recreation Leadership and Management
 Therapeutic Recreation
 Rehabilitation Institute
 Behavior Analysis and Therapy
 Communication Disorders & Sciences
 Rehabilitation Services

School of Social Work

Workforce Education and Development

Organizational Training & Development³

Career and Technical Education

¹In addition to programs offered almost entirely within the College of Education and Human Services, certain programs are offered in cooperation with the College of Liberal Arts (e.g. English, foreign language, music), or with the College of Agricultural Sciences and the College of Science (e.g., math, science with a designation in biology).

²Workforce Education and Development (WED) is the academic major. A designation in the content area is required.

³Specialty Areas available.

The College of Education and Human Services is a multipurpose college in which students can prepare for professional careers in teaching and human service.

Those who wish to become principals or superintendents in the public schools or teachers or administrators at the college or university level may take graduate work in the Department of Educational Administration and Higher Education.

The College of Education and Human Services is the oldest unit of the University, which was originally chartered as Southern Illinois Normal University almost 150 years ago. The college is housed in the Wham Education Building, Rehn Hall, Pulliam Hall, Quigley Hall, and Davies Hall.

College of Engineering

John J. Warwick, *Dean*

Engineering is the profession in which a knowledge of the mathematical and natural sciences gained by study, experience and practice is applied with judgment to develop ways to utilize economically the materials and forces of nature for the benefit of people.

Vision. The College of Engineering at Southern Illinois University Carbondale will excel in engineering and technology education and research through the quality of its faculty, graduates, students, staff, facilities, and programs.

The College of Engineering at Southern Illinois University Carbondale will be the engineering and technology programs of choice where parents want to send their children, where students want to learn, where employers seek engineers and technologists, where industry and government find technological innovations, and where underrepresented and underserved populations are encouraged and supported to obtain a quality education.

The College will respond to the needs of its constituencies. Our constituencies include: students, parents, employers, alumni, faculty, public communities, and the sponsors of our funded research. We will listen to all of our constituencies and will be responsive to their needs consistent with the University mission. The College administration will regularly and constantly seek the input of the faculty to determine the direction of the College.

Mission. To provide world-class programs in engineering and technology education, research, and service so as to enhance the economic and social well being of the citizens of Illinois, the nation, and the world.

In order to accomplish our mission we will:

- Provide a world-class education for our students by continually assessing and improving our educational programs

- Support and expand the undergraduate technology program to military bases in the nation and industrial sites in Illinois
- Perform state-of-the-art research that will improve the nation's strategic engineering and environmental technologies
- Build productive and mutually beneficial partnerships with our external constituencies
- Continuously improve the critical student and faculty support processes that are key to the College's mission
- Develop partnerships with industries to improve the economy of Southern Illinois

The College's strategic and educational objective, consistent with the vision and mission statements, are to prepare students:

- To communicate clearly and concisely in written and oral formats with audiences ranging from technical to lay persons
- To be effective engineering and technology practitioners, with the ability to employ modern techniques, skills, and engineering tools, emphasizing computer capability and the access and use of information resources
- To be cognizant of current societal issues as well as technology issues so that they can function as effective partners with citizen groups; industries; local, state, federal, and international governing bodies; and other interest groups, in formulating policies and plans to address the contemporary and emerging problems
- To translate scientific, mathematical, and engineering theories into practical solutions of engineering problems through classroom presentations, laboratory and other experimentation, data analysis, employment opportunities such as those offered by cooperative education, internships, association with research projects, and other out of class experiences
- To function as interdisciplinary team members and/or team leaders in addressing multi-faceted engineering and social problems having ethical, public health, environmental, political, economic, international and/or other dimensions
- To recognize engineering problems, have the skills to develop strategies for solving such problems, be competent to carry out relevant design processes, recognize the need for considering alternative approaches to problem-solving, and to understand the realities of what society will and will not accept as feasible solutions
- To be responsible practitioners, having full understanding of the ethical and professional dimensions of good engineering and technology practice and the need for life-long learning

The college has four Engineering Departments and one Technology Department. The four Engineering Departments are:

- Civil and Environmental Engineering
- Electrical and Computer Engineering
- Mechanical Engineering and Energy Processes
- Mining and Mineral Resources Engineering

These departments offer undergraduate and graduate degree programs ranging from Bachelor of Science to Doctor of Philosophy. The undergraduate engineering programs in civil engineering, computer engineering, electrical engineering, mechanical engi-

neering, and mining engineering are accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

Undergraduates who major in civil engineering have the option for a specialization in environmental engineering. Students can also earn a dual degree in electrical and computer engineering.

Detailed descriptions of these programs, including educational objectives, curricula and suggested curricular guides are presented in Chapter 5.

The Department of Technology offers the following undergraduate programs leading to the Bachelor of Science degree:

- Engineering Technology–Electrical Engineering Technology Specialization
- Industrial Technology–Manufacturing Technology Specialization

Detailed descriptions of these programs including, educational objectives, curricula, areas of specialization and suggested curricular guides are presented in Chapter 5.

The engineering technology program is accredited by the Engineering Technology Accreditation Commission of ABET, <http://www.abet.org>. The industrial technology program is accredited by the Association of Technology, Management, and Applied Engineering (ATMAE).

Civil and Environmental Engineering. Civil and Environmental Engineers are responsible for the design, construction, maintenance, and management of the infrastructure consisting of highways, bridges, dams, water and wastewater systems, power generating stations, pollution control systems, airports, skyscrapers, and other industrial and commercial buildings. Design and management decisions consider a wide range of factors, including earthquakes, hurricanes, progressive collapse and environmental impact.

The civil engineering program leading to the Bachelor of Science degree in Civil Engineering is designed to provide the student with the broad educational background essential to be a successful entry level Civil Engineer in practice and to meet the technological challenges of the 21st century. The program also provides additional coursework to the student who prefers to obtain a Civil Engineering degree with emphasis on Environmental Engineering. The technical electives in the senior year permit greater breadth and additional depth in the areas of structural engineering, geotechnical engineering, hydraulic engineering, and environmental engineering.

The graduates from this program are eligible to become registered professional engineers (PE) after satisfying the state registration board's requirements. In addition, the program offers the coursework required for admission to the Structural Engineer License (SE) examination.

Electrical and Computer Engineering. The Department of Electrical and Computer Engineering offers Bachelor of Science degrees in Electrical Engineering and Computer Engineering. The Department offers the option for a dual degree in Electrical and in Computer Engineering.

The electrical engineering curriculum provides students with the opportunity to choose among advanced courses in the theory and applications of circuits, systems, control, signal processing, communications, digital systems, power systems, electronics, gaseous electronics, optics, electrooptics, electromagnetics, an-

tennas and propagation.

The computer engineering curriculum provides emphasis on problem solving and design experiences through understanding of the fundamentals of both the hardware and software aspects of computer engineering.

Employment opportunities for electrical and computer engineers exist within a wide range of organizations, such as computer, semiconductor, aviation, electronics, microelectronics, broadcasting, telecommunications, defense, automotive, manufacturing and electric power companies, state and federal agencies and laboratories. Employment opportunities cover the spectrum of engineering activities, ranging from research and development, to systems analysis, automation, manufacturing, customer service and support, marketing and sales.

Mechanical Engineering. Mechanical engineering is one of the most broadly based of the traditional engineering disciplines. Mechanical engineers design and develop a wide variety of systems for conversion, transmission, and utilization of energy; for material processing and handling and packaging; for transportation; for environmental control; and for many other purposes for the benefit of humanity. Therefore, the curriculum contains a broad foundation in mathematics and the basics of engineering sciences, followed by more concentrated study in energy and machine systems. Mechanical engineers may be found in a variety of assignments including planning and design, research and development, supervision of installation and operation of complex systems, and management.

Mining and Mineral Resources Engineering. Mining engineers engage in planning, design, development, and management of surface and underground mining operations for extraction of the earth's mineral deposits. The mining engineering program prepares graduates to meet the challenges of the mining industry with emphasis on the coal and aggregate industries. Coursework in the program includes such areas as surface and underground mining systems, mine ventilation, ground control and rock mechanics, mineral and coal processing, material handling systems, mineral economics, mine health and safety engineering, operations research, and computer-aided mine design.

After completing the program, the graduate may work in an engineering or management position for mining industries, equipment manufacturers, research organizations, or government agencies. The coursework also provides strong preparation for further study at the graduate level.

Engineering Technology. Engineering technology is that part of the technological field in which engineering knowledge and scientific methods are combined with hands-on technical skills to support engineering activities. It lies in the occupational spectrum between that of the technician and the engineer with specific responsibilities depending upon the nature of the training and requirements of the job but lying more closely to engineering. Graduates are prepared to deal with technical and production problems, and to apply their knowledge to such activities as development, design, construction, maintenance, and operational problems.

Industrial Technology. Industrial technology is a management-oriented technical profession that is built upon a sound knowledge and understanding of materials, processes, technical man-

agement, and human relations; and a proficiency level in the physical sciences, mathematics, and technical skills to permit the graduate to capably resolve technical-managerial and production problems. Graduates of this program are prepared for positions in processes, safety, quality control, supervision, robotics, methods analysis, and computer-aided manufacturing.

Admittance to the College

SIUC engineering students are an exceptional and committed group. Success in the engineering programs demands academic dedication, personal discipline, and sufficient preparation at the high-school level. Admission to the College of Engineering is selective and competitive and it is based on an individual review of each application. Emphasis is placed on the ACT composite and math sub-scores, science and math course work, and math placement. Students can apply to a specific departmental major or as an undeclared engineering major. For more information please contact the College of Engineering at (618) 453-4321.

Admittance to the Pre-Engineering Program

The pre-engineering program is designed for students who apply to our college with the potential to be successful, but who do not meet admission requirements for the College of Engineering. The pre-engineering advisor in the University College will develop an individualized program of study aligned with the curricular guides of programs offered in the College of Engineering with the goal of preparing these students to enter a major in engineering. All students must achieve satisfactory math placement, as determined by the college of engineering, before being formally admitted to one of the engineering majors, listed below:

- Civil Engineering
- Civil Engineering with a Specialization in Environmental Engineering
- Computer Engineering
- Electrical Engineering
- Engineering Technology
- Industrial Technology
- Mechanical Engineering
- Mining Engineering

The curriculum guides for these degree programs can be found in the program sections of the catalog. The pre-engineering advisor will consider math placement when developing the individualized program of study.

As with students admitted to the College of Engineering, pre-engineering students will be required to live in the engineering Living-Learning-Community and to enroll in UCOL 101E. In addition, pre-engineering students will be invited to participate in the many different learning and social activities of the College of Engineering. The maximum time limit for the pre-engineering program is four semesters.

Course Sequence

It is important that required courses in the program be taken in the proper sequence. Sequence guidelines are available from the college advisement office and the departmental offices. Courses on the 300-and 400-levels are reserved for juniors and seniors.

Transfer Students

Students enrolled in community colleges who plan to transfer to the College of Engineering at Southern Illinois University

Carbondale should take courses that provide backgrounds in mathematics, physical sciences, social sciences, and humanities. Students may transfer at any time, but there are advantages in having completed a baccalaureate-oriented associate-degree program. Community college students may contact the Engineering Advisement Office for course recommendations applicable to majors in the College of Engineering.

All transfer credit from an accredited institution that is deemed acceptable at the University, both two-year and four-year, will be used in fulfillment of program requirements. Equivalencies for courses will be determined by the departmental chair, advisement office, or office of the dean, College of Engineering.

Students who are attending a public Illinois community college and contemplating application to the College of Engineering should obtain program information that has been prepared for their particular community college.

Qualified candidates for the Capstone Option are accepted with majors in Engineering Technology and Industrial Technology. The Capstone Option is described in Chapter 3.

Location

Administrative offices of the college are located in the Engineering Building, 1230 Lincoln Drive.

College of Liberal Arts

Jane L. Swanson, *Interim Dean*

Departments: Africana Studies; Anthropology; Art and Design; Communication Studies; Criminology and Criminal Justice; Economics; English; Geography and Environmental Resources; History; Languages, Cultures and International Trade; Linguistics; Music; Philosophy; Political Science; Psychology; Sociology; Theater.

The College of Liberal Arts offers the following majors leading to the Bachelor of Arts, Bachelor of Fine Arts, Bachelor of Music or Bachelor of Science degrees. Minors are possible in most of these areas. For exceptions, refer to footnotes.

Africana Studies
 American Studies¹
 Ancient Greek¹
 Anthropology
 Art
 Asian Studies¹
 Chinese¹
 Classical Civilization¹
 Classics²
 Criminology and Criminal Justice
 Design
 East Asian Studies²
 Economics
 English
 Foreign Languages and International Trade²
 French²
 Geography and Environmental Resources
 German²
 GIS¹
 Global Studies¹
 History

International Studies²
 Japanese¹
 Latin¹
 Latino and Latin American Studies¹
 Linguistics
 Mathematics
 Museum Studies¹
 Music
 Native American Studies¹
 Paralegal Studies
 Peace Studies¹
 Philosophy
 Political Science
 Psychology
 Sociology
 Spanish²
 Speech Communication (see Communication Studies)
 Sustainability¹
 Theater
 University Studies
 Women, Gender, and Sexuality Studies¹

¹Minor Only.

²Available as a specialization within the Languages, Cultures and International Studies major offered by the Department of Languages, Cultures and International Trade.

The College of Liberal Arts provides instruction in basic subject matter courses for the University Core Curriculum; majors in twenty-four subject areas; graduate programs for students pursuing Master's and Ph.D. degrees; and preprofessional curricula for specialized schools such as law and courses offered through the Division of Continuing Education. The Bachelor of Arts, the Bachelor of Fine Arts, the Bachelor of Music, or the Bachelor of Science degree is granted to students who fulfill requirements for graduation from the College of Liberal Arts. The courses of study outlined by the departments determine the degree awarded. Students in the College of Liberal Arts may also prepare directly for teaching at the secondary level by including in their studies certain professional courses offered by the College of Education and Human Services.

Through the diversified offerings of the College of Liberal Arts, students develop the ability to seek and weigh evidence and to think critically and independently; they gain a fundamental understanding of the ever changing social, political, and physical environment, and a deeper understanding of people, cultures, art, and literature.

ACADEMIC REQUIREMENTS

To receive a degree from the College of Liberal Arts students must fulfill the following:

1. University requirements including those relating to University Core Curriculum, residency, total hours completed, and grade point average.
2. College of Liberal Arts academic requirements:
 - a. *Writing*: (i) one English Composition course at 200-level or higher (ENGL 290, LING 290, ENGL 291, ENGL 390, ENGL 391, ENGL 392; creative writing courses may not be used to fulfill this requirement) and one approved writing-intensive course designated by the major department as fulfilling the Writing-Across-the-Curriculum (WAC) re-

quirement; **or** (ii) two approved writing-intensive courses designated by the major department as fulfilling the Writing-Across-the-Curriculum (WAC) requirement.

b. *Foreign Language*: A minimum of one year (two courses) or higher of one foreign language, satisfaction by coursework or exam. Students may not use the same language course to fulfill requirements in both the University Core Curriculum and the College of Liberal Arts. International students who have met the Office of International Admissions competency requirement may satisfy this requirement with their native language by providing a secondary school certificate from their native country. (Bachelor of Fine Arts degree students in Art, Bachelor of Fine Arts degree students in Musical Theater, Bachelor of Music degree students, Bachelor of Arts degree students in Music Business Specialization, and Bachelor of Science degree students in University Studies do not have to fulfill the foreign language requirement.)

c. *International Coursework*: Successful completion of 2 courses providing a global or comparative perspective on the world, and selected from the 30+ courses from ~12 disciplines listed in Section A of the Global Studies Minor [<http://cola.siu.edu/undergraduate/documents/CollegeofLiberalArtsGlobalStudies.html>] (or comparable list of the International Studies major/minor). Some courses *may* be used to fulfill the international coursework requirement *as well as* a University Core Curriculum requirement. (Bachelor of Fine Arts degree students in Art, Bachelor of Fine Arts degree students in Musical Theater, Bachelor of Music degree students and Bachelor of Arts degree students in Music Business Specialization do not have to fulfill the International coursework requirement, though they are strongly *encouraged* to take Core Curriculum courses that would also meet the requirement.)

3. Completion of an approved major in the College of Liberal Arts.

4. Completion of a minimum of 39 hours of course work at the 300- or 400-level.

Liberal arts major requirements provide for a number of elective courses, giving students maximum flexibility in planning their overall program of study at the University. To assist students in planning their programs, the college maintains an academic advisement office in Faner Hall 1229, as well as faculty advisors in each department. Students are urged to consult these academic advisors on how they can best use their electives to fulfill their intellectual interests and to prepare for particular career opportunities. A carefully planned minor or second major field can lead to additional career opportunities for the liberal arts major. Students who are planning to attend graduate school or one of the professional schools such as law or medicine should consult with their advisors on how best to plan their undergraduate curriculum.

Instructional Support Equipment Fee

The School of Art and Design assesses all undergraduate art and design majors an instructional support equipment fee of \$10.00 per credit hour; a maximum of 12 credit hours will be charged each for fall and spring semesters and six for summer.

Writing-Across-the-Curriculum Courses

Anthropology 300; Art and Design 308, 318, 358, 368, 389, 400C, 401C, 402C, 403C, 404C, 405C, 414C, 438, 452, 489B, 489D; Communication Studies: Speech Communication 262, 310, 326, 381, 401, 411, 471, 476, 481; Criminology and Criminal Justice 316, 492; Economics 308; English 301, 365, 471; Geography and Environmental Resources 304; History 359, 392 and 499, 406B, 410, 412A, 412B, 413, 417, 418, 420, 426, 427, 429, 442, 447, 455, 464, 467A, 467B; Languages, Cultures, and International Trade: Chinese 370, 435; Classics 415, 416, 491, 496; French 320B, 410; German 320B, 410; Japanese 410, 435; Spanish 320B, 410; Linguistics 406; Music 357 sequence, 471; Paralegal Studies 300A, 300B; Philosophy 304, 305A, 305B, 405; Political Science 405, 406, 416, 420, 435, 455, 459, 480; Psychology 211, 451; Sociology 312, 497, 498; and Theater 311A.

Pre-Law

The College of Liberal Arts has a pre-law designation to identify and assist students interested in pursuing a career in the law and/or enrolling in law school. Students planning to apply to law school may select any major course of study and, because their undergraduate grades are important in the law school application process, they are encouraged to select a major in which they can perform very well.

APPLYING TO LAW SCHOOL

Students who plan on applying to law school will need to take the Law School Admission Test (LSAT) sometime during their junior or senior year. The LSAT is administered by a company called Law Services and is offered at SIU. A practice LSAT is offered by SIU Testing Services and the SIU Division of Continuing Education offers a LSAT preparatory course. Students who perform exceptionally on the LSAT may be subject to certain conditions, enroll and be admitted into the SIU School of Law as a junior.

More information about the LSAT and the law school application process can be obtained from advisors in the College of Liberal Arts (CoLA) Advisement Office (Faner 1229), from Law Service at <<http://www.lsac.org>>, or from the SIU School of Law, Office of Admissions and Student Affairs at <<http://www.law.siu.edu>>.

STUDENT ORGANIZATIONS

Students interested in a career in the law and/or enrolling in Law School can join the Pre-Law Association, a registered student organization that schedules speakers and events related to a legal career. Students are encouraged to visit the Pre-Law Association website at <<http://www.prelaw.rso.siu.edu>>. In conjunction with the Pre-Law Association, the Department of political science sponsors an annual moot court competition for pre-law students that are held in conjunction with the Model Illinois Government simulation.

SUGGESTED COURSES

Students interested in pursuing a legal career should recognize that certain courses available in the College of Liberal Arts might be helpful in preparing either for the LSAT, the study of law, and/or a career in the law.

For example, the Paralegal Studies program is one course of pre-law study in which a student takes a variety of legal courses

including legal writing and research, civil procedure and torts. Students in the Political Science program can declare a pre-law specialization within their major, which includes courses in administrative law, civil liberties and constitutional law.

Any course, however, that develops or improves a student's analytical reasoning, reading comprehension, logical reasoning, or writing skills will be beneficial for the LSAT, the study of law, and/or a career in the law. Development or improvement of oral communication skills, which are currently not tested on the LSAT but are very important for the study of law or a legal career, is also strongly recommended.

A list of courses that offer the opportunity to improve or develop these skills appears below. This is not an exhaustive list. With some exceptions, students do not need to be enrolled in a particular major to take any or all of these courses. Students who are not in a CoLA program, therefore, are strongly advised to take one or more of these courses to supplement their studies. For more information about these courses, contact an academic advisor in the CoLA Advisement Office. Anthropology 202, 298, 370, 410A and 410E; Criminology and Criminal Justice 203, 310, 320, 374 and 408; Economics 240, 241, 340 and 341; English 290, 291, 300, 391 and 491; History 330A, 400, 450B, 467A,B, and 490; Linguistics 104, 200, 201 and 415; Philosophy 105, 309I, 320, 344 and 441; Political Science 332I, 334, 435, 436, and 437; Psychology 211, 223, 301, 304, 311, 431 and 420; Sociology 308, 312, 372, 424, and 473; Speech Communication 221, 310, 325, 326, 411, 421 and 463.

University Studies Degree Program

In the University Studies Program students pursue either a Bachelor of Arts or Bachelor of Science degree through an individually designed, broad-based curriculum rather than a traditional specialization. The program accommodates multidisciplinary and non-traditional approaches to education and to related careers.

To determine eligibility for the University Studies Program as well as to explore specific possibilities, students should consult the website at <http://cola.siu.edu/academics/undergraduate/university-studies-degree/index.html>.

College of Mass Communication and Media Arts

Dafna Lemish, *Dean*

Departments: Cinema and Photography; Radio, Television, & Digital Media
Schools: Journalism

The College of Mass Communication and Media Arts (MCMA) offers the Bachelor of Arts degree in Cinema and Photography and Radio, Television, & Digital Media. The Bachelor of Science degree is awarded in Journalism.

Admission to the University is handled through the Office of Undergraduate Admissions, but those students who desire more specific information about a major should make an appointment with the academic advisor of that department or school. An academic advisor for each department or school of the college advises prospective students about major requirements, curriculum, extracurricular activities, careers, and op-

portunities. Transfer students may also discuss transfer credit and placement in courses at Southern Illinois University Carbondale.

Faculty of the college is engaged in research and creative activities concerning mass communication and media arts. They also provide consulting service and other community services to schools, newspapers, radio and television stations, museums, businesses, and government. They hold professional memberships and serve as officers in various local, state, national, and international organizations in mass communication and media arts. The college plans a number of special events each year, including lectures by noted artists and media professionals, photography exhibits, and film showings.

Opportunities for practical learning in real world settings include student employment at the *Daily Egyptian*, a student-run newspaper with a circulation of 27,000, a PBS television station, an NPR radio station, the Saluki Advertising Agency, and the Big Muddy Film Festival, all housed in the College. The *River Region Evening Edition*, a live newscast aired on PBS, is produced entirely by students under the supervision of a faculty member. Students can participate in internships in media centers across the country, such as Hollywood, Chicago, Nashville, New York City, Washington, D.C., as well as locally.

Administrative offices of the college are located in the Communications Building, which includes the broadcasting facilities, film, video, and multimedia production facilities, the New Media Center, the *Daily Egyptian*, and the *River Region Evening Edition*.

College of Science

Laurie Achenbach, *Dean*

Departments: Chemistry and Biochemistry; Computer Science; Geology; Mathematics; Microbiology; Physics; Plant Biology; Zoology

The College of Science offers majors leading to the Bachelor of Arts and/or Bachelor of Science degrees in the following fields of study:

- Biological Sciences
- Chemistry
- Computer Science
- Geology
- Mathematics
- Microbiology
- Physics
- Physiology
- Plant Biology
- Zoology

Included in the curriculum of each department are survey courses that provide an introduction to the subject matter of that discipline while fulfilling the University Core Curriculum requirements of Southern Illinois University Carbondale. These courses enable students to develop an understanding and appreciation of the impact of science on our daily lives. Elementary and advanced courses are provided to prepare students for professional employment or entrance into professional and graduate schools. Graduate training is also provided by each of the science departments leading to the M.S. or Ph.D. degree.

Research interests of the faculty are extremely diverse.

Students in the College of Science may prepare for teaching at the secondary level by fulfilling the additional requirements of the College of Education and Human Services.

The Bachelor of Arts or the Bachelor of Science degree is granted to students who fulfill the University requirements for graduation, the College of Science requirements as given below, and the requirements of the departments in which the students declare their majors.

Regularly enrolled students must declare a College of Science major by the beginning of their sophomore year. Transfer students must declare a College of Science major by the beginning of their second semester following transfer. Students planning post-baccalaureate work in a professional field may designate their intention by declaring a preprofessional area as a secondary concentration, e.g., pre-medicine.

Each department has specific requirements for students to major in the selected field of interest. The College of Science has some minimum general requirements listed below.

ACADEMIC REQUIREMENTS

None of these general academic requirements may be satisfied by taking the required courses on a Pass/Fail grading basis.

Biological Sciences. Six semester hours in courses offered by the biological sciences departments in the college, with the proviso that this requirement cannot be satisfied in whole or in part by the University Core Curriculum courses, but may be substituted for the latter in meeting the University Core Curriculum requirements.

Mathematics. The mathematics requirement can be met: (a) by passing Mathematics 108 and 109, or 111 or its equivalent, or Mathematics 141 or 150 or equivalent, or (b) by proficiency credit.

Physical Sciences. Six semester hours in courses offered by the physical science departments of the college, with the proviso that this requirement cannot be satisfied in whole or in part by University Core courses, but may be substituted for the latter in meeting the University Core Curriculum requirements.

Supportive Skills. Two courses, totaling at least six credit hours must be completed as supportive skills. Supportive skills courses are courses in communication or computation skills that have been approved by the major program and must be chosen from the following subject areas: (a) foreign language; (b) English composition or technical writing; (c) statistics; or (d) computer science. Because departments have different supportive skills requirements, students should consult individual program descriptions for approved courses for each major.

PRE-HEALTH PROFESSIONAL PROGRAMS

SIU admits students with majors in pre-chiropractic, pre-dentistry, pre-medicine, pre-occupational therapy, pre-optometry, pre-physician assistant, pre-physical therapy, pre-podiatry, and pre-veterinary. These are not degree programs, but indicate the students' plans upon completion of the baccalaureate degree. Therefore, students should declare a degree-oriented major as soon as possible. They will complete their degree requirements and fulfill additional professional school requirements with the guidance of a Health Care Professions Advisor (located in the

College of Science). Students who choose to pursue these careers must be dedicated and have good academic ability in both the sciences and humanities.

International students should be aware that acceptance at American public professional schools is difficult. As a general rule, no financial aid is available for non-citizens. A small number of international students are accepted at private schools, which are costly.

Students pursuing a career in veterinary medicine have the option of registering in the College of Science or the College of Agricultural Sciences. Typically, students are either Zoology (Science) or Animal Science (Agriculture) majors. Pre-veterinary requirements can be met through either college.

SIU Carbondale has a collaborative nursing program with SIUE on the Carbondale campus; students desiring to obtain their Bachelor of Science in nursing must complete one year of pre-nursing (E-track), then apply to the three-year program. All four years are offered in Carbondale; however, students are awarded a nursing degree through SIUE. SIU Carbondale also has a traditional pre-nursing program for students who plan to apply to other schools of nursing besides SIU. Pre-pharmacy students may apply to pharmacy schools at SIUE and other locations after two to three years of rigorous prerequisite course work.

For a listing of SIU Carbondale Pre-Health program curricula requirements, see the corresponding link to the specific programs at the Health Professions Information Office page at: http://www.science.siu.edu/advisement/health_advisement/index.html.

STEM Education Research Center

Gregory Budzban, Director

With the approval of the Illinois Board of Higher Education, SIU and the College of Science have created a Research Center of Science, Technology, Engineering, and Mathematics (STEM) Education. The need for such a Center flows from critical issues that have emerged or are emerging in STEM education at the national, state, and local level.

At the national level, there is a clarion call for an increase in college graduates in STEM programs to address the critical need in the very industries that will be at the center of the continuing transformation of the world economy. National reports indicate the danger of the U.S. economy losing ground internationally unless our educational system becomes more effective at producing students interested in and capable of the rigors of the educational programs in the STEM disciplines. In addition, once these students enter university-level STEM programs, they must be greeted with effective state-of-the-art STEM content and pedagogy.

At the state and local level, one of the key components of an increase in the effectiveness of STEM education is the implementation of the Common Core State Standards (<http://www.corestandards.org/>) and the Next Generation Science Standards (NGSS; <http://www.nextgenscience.org/>) at the state level. While adopting these national standards is voluntary at the state level, Illinois has agreed to implement the Common Core and is an active lead state partner in the NGSS efforts. The implications of these decisions are just beginning to emerge

and will completely transform the content and pedagogy employed in K-12 classrooms across the state. In addition, new high-stakes assessments (PARCC) have been prepared that have replaced the Prairie State Exam at the high school level. As the state research University in the Southern Illinois region, SIU has an obligation to provide as much support as possible during this important transition period to our local school districts.

The structure and programs of the STEM Education Research Center will correspond to the primary areas of interest: K-12 STEM education, undergraduate STEM education, and graduate STEM education. As indicated above, K-12 STEM education is in a period of rapid transformation. One area of emphasis of the Center will be coordination of the existing programs already implemented at SIU, many of which reside in the College of Science.

STEM education at the undergraduate level is under increasing scrutiny. From finding ways to improve success rates in lower-level undergraduate STEM classes to identifying new and innovative ways to deliver undergraduate STEM content in our courses, our programs are undergoing rapid change. SIU must continue to ensure that the content and structure of undergraduate STEM courses provide the optimal preparation either for graduate school or for our students' chosen professions. In support of our undergraduates, the Center will be the natural leader in developing internship opportunities. One important collection of current programs that will be natural candidates for continued research will be the research experience for undergraduates (REU) programs that exist in the STEM disciplines.

Graduate STEM education must also stay current with the massive technological changes that are affecting our entire educational system. While the advisor-student mentorship which is at the heart of graduate education will almost certainly be preserved, the optimal uses of technology should be explored, and this will also be included under the umbrella of research programs at the STEM Education Research Center.

University College

Laurie Bell, *Interim Dean*

The University College is a comprehensive administrative structure that promotes student engagement, connection and investment in the university community. By focusing on student learning through intentional, holistic, and student-centered programs and services, the University College provides a pathway to guide new students in the development of academic and personal skills essential for student success. The University College welcomes and orients new students to campus, and helps them maximize their university experiences and fully engage with the university community by becoming life-long, self-directed learners. Additional information is available at universitycollege.siu.edu. Several departments and programs are part of the University College. These include:

Career Services

Career Services is available to assist students as they explore their career options and develop their job search and interviewing skills. Services include individual career advising, professional development seminars, career interest assessments, mock interviews, access to Saluki Recruiting (an on-line job

search database), various career fairs, writing professional job search correspondence, and developing networking strategies.

Career Services provides a wide variety of electronic and print resources e.g., resume creation, exploration of majors and occupations, and researching job and internship opportunities.

For more information, stop by the office at Student Services 179, contact us at (618) 453-2391 or visit us online at www.careerservices.siu.edu.

Core Curriculum

The University Core Curriculum is a carefully structured and deliberately sequenced program of study required of all SIU undergraduate students. The program's objectives are to develop knowledge of human cultures and the physical and natural world; intellectual and practical skills; personal and social responsibility; and integrative learning across general and specialized studies. More information on Core Curriculum can be found in Chapter 3 and at corecurriculum.siu.edu.

First Scholars Program

First Scholars, a scholarship program designed to help support first-generation college students as they make the transition to college and throughout their undergraduate career, is open to incoming first-time, full-time freshmen whose parents have no more than two years of education beyond high school and no post-secondary degree. Selected students develop an individualized success plan, with assistance from the program coordinator, and participate in a variety of group activities tailored to enhance their college experience. If program requirements continue to be met, this scholarship can be renewed for three additional years. For more information call (618) 453-1843 or visit us online at firstscholars.siu.edu.

First-Year Advisement

First Year Advisement (FYA) is the advisement home for students in the process of deciding on a major. This office provides students the opportunity to learn about various majors and careers before committing to a degree program. Because undeclared students are completing University Core Curriculum requirements, their participation in this program does not lengthen their time to degree nor does it add to the cost of their education. Professional academic advisors help students explore and select majors in relation to their interests and abilities. Career counseling is also available.

For students who have been provisionally admitted to SIU, FYA offers comprehensive support services along with academic advisement, including peer mentoring, tutorial assistance, study/learning skills, and career counseling. For additional information, call (618) 453-4351 or visit us online at exploratory.siu.edu.

Pre-Engineering Program

The pre-engineering program is designed for students who apply to the College of Engineering with the potential to be successful, but who do not meet admission requirements for that College. The pre-engineering advisor in FYA will develop an individualized program of study aligned with the curricular guides of programs offered in the College of Engineering with the goal of preparing these students to enter a major in engineering. All students must achieve satisfactory math placement, as determined by the College of Engineering, before be-

ing formally admitted to one of the engineering majors, listed below:

- Civil Engineering
- Civil Engineering-with a Specialization in Environmental Engineering
- Computer Engineering
- Electrical Engineering
- Engineering Technology
- Industrial Technology
- Mechanical Engineering
- Mining Engineering

The curriculum guides for these degree programs can be found in the program sections of the catalog. The pre-engineering advisor will consider math placement when developing the individualized program of study.

As with students admitted to the College of Engineering, pre-engineering students will be required to live in the engineering Living-Learning-Community and to enroll in UCOL 101E. In addition, pre-engineering students will be invited to participate in the many different learning and social activities of the College of Engineering. The maximum time limit for the pre-engineering program is four semesters.

Learning Support and Testing Services

tutoring.siu.edu

618-453-1369

Think. Learn. Change. LSTS's goal is to provide academic support to students of all cultures, abilities, backgrounds, and identities. Through tutoring, academic coaching, group study sessions, and peer mentoring, our staff members help students learn and understand course content. We also help with interdependent learning skills that employers will demand on the job (i.e. how to work collaboratively) and self-management skills that lead to success (time management, writing notes, getting organized, etc.).

Tutoring

Individualized tutoring for 100- and 200-level courses is available free of charge in the Tutoring Center located in room 710 of Morris Library. To request a tutor, students should complete the online application found on our webpage (tutoring.siu.edu).

Group Study Sessions

Several science classes have Group Study Leaders (students who have previously earned an A in the course and/or are recommended by the faculty for this position). Group Study Leaders attend the class and get to know the students, then offer two weekly, out-of-class study sessions throughout the entire semester. Students are encouraged to attend at least once a week. Special exam reviews may be offered as well.

Academic Coaching

Academic Coaches help students with both how to learn and what to learn. Coaching is more general than tutoring. Students who meet with academic coaches will review all their courses, and the focus centers on strategies for success.

Saluki Peer Mentors

These undergraduate students are assigned to sections of UCOL 101, and serve as mentors and role models for students who are new to SIU. The Saluki Peer Mentor is trained to provide both academic, social and personal support as needed during the students' first semester of enrollment at SIU.

Learning and Metacognitive Strategies Course

UCOL 103 is a course offered during the spring semester for students who are at risk of academic suspension. Each student enrolled in UCOL 103 is assigned an academic coach who provides the academic support needed to help students achieve passing grades in all their classes.

Peer Leadership

UCOL 251 is a leadership development course through which our student staff are trained to become tutors, group study leaders, math lab assistants, academic coaches, and Saluki Peer Mentors. As our student staff members gain experience and demonstrate leadership potential, they are selected to undergo additional training to become peer supervisors. This training course is certified by the College Reading and Learning Association.

Testing Services

testingservices.siu.edu

618-453-6003

Testing Services is a regional testing center which administers and proctors a full array of examinations for SIU students and Southern Illinois community members. Located on the 7th floor of Morris Library, the testing lab supports computer-based and paper/pencil based tests.

Professional certification exams are offered (see our webpage for a listing of tests). Exams offered through SIU Extended Campus can be proctored in our facilities. Students who wish to "test out" of some classes may take the proficiency exam (please check with your academic advisor to discuss the procedure and impact for these exams). Credit for prior learning are offered through exams such as the CLEP and DSST.

Testing services also helps to check credentials of proctor candidates for off-site testing. For example, an SIU student taking Distance Education classes anywhere in the world can work with our staff to find and certify educational professionals who can proctor exams in their area.

Students who need extended time for tests, and are registered with the office of Disability Support Services, may take exams in the Testing Center. Additionally, if any student misses an in-class exam, the professor may allow the student to take a make-up exam in the testing lab.

Please visit our website at testingservices.siu.edu for services and fees associated with the many exams and proctoring services offered.

New Student Programs

New Student Programs is responsible for the programs listed below to assist new students and their families with their orientation and transition to all aspects of campus life.

New Student Orientation

New Student Orientation offers students the opportunity to meet with their academic advisor, register for classes, connect with other new and current students, and meet faculty and staff. You will learn more about the City of Carbondale as well as about the resources in place to help students succeed both inside and outside of the classroom. Students who attend orientation tend to have higher first-semester GPAs and feel better prepared to begin their academic careers at SIU, therefore attendance at New Student Orientation is required for freshmen

and highly recommended for transfer students. Students leave New Student Orientation with everything in place and eager to start classes, including Financial Aid, Academic Advisement, University Housing, and all the other essentials. Families leave New Student Orientation feeling excited about their student's decision to attend SIU. Visit us online at orientation.siu.edu.

Saluki Startup

Saluki Startup offers educational and entertaining days of activities prior to the beginning of the semester to help students start the academic year on the right foot. Saluki Startup helps students learn more about what it takes to be a successful college student, gives them the opportunity to meet other students, faculty, staff, and community members, and gets them excited for the semester to begin. For more information, visit salukistartup.siu.edu.

Week of Welcome

Held during the first week of the fall semester, multiple activities are offered to welcome both new and returning students to campus. For more information, visit wow.siu.edu.

Saluki Family Association

Membership in the Saluki Family Association has its rewards. Take advantage of our vast array of resources, ongoing communication and information focused on supporting students at SIU, Saluki Family Weekend advanced information, among many other important ways to engage families in the SIU experience. Visit salukifamily.siu.edu for more information.

Saluki Summer Bridge

This program provides academic enrichment, articulates institutional and faculty expectations, and exposes students to behaviors characteristic of successful students attending the university. The two-week residential program provides students the opportunity to gain an early start to their undergraduate career and transition to campus life. In addition, during the first year Summer Bridge students participate in academic support services that continue the process of academic and social adjustment and enhance skills that will build a solid foundation for future success. These support services include UCOL 101 SSB section, peer mentoring, academic counseling, and workshops.

Student Support Services

Student Support Services, a TRIO program, provides comprehensive services to a select group of undergraduate students who meet specific educational and financial criteria. Services include peer academic coaching and mentoring, academic advisement, workshops, financial aid counseling and other support services designed to help the students excel in their academic studies, graduate, and reach their career goals. For additional information call (618) 453-6973 or visit us online at triostudentsupport.siu.edu.

Upward Bound

This is a pre-college support program funded by the federal government for students that meet specific income and educational requirements, which identifies and recruits ninth to twelfth grade students in specific areas of southern Illinois who have the potential for serious academic work. The program provides

developmental, personal, and academic opportunities for students who might not otherwise see themselves as future college students. Persons interested should direct inquiries to the director, Upward Bound, 618-453-3354.

Graduate School

James E. Garvey,
Acting Graduate Dean

Southern Illinois University Carbondale is a comprehensive university with an extensive offering of graduate programs and an equally strong commitment to research.

More than 4000 graduate students pursue advanced study and research under the leadership and direction of over 900 graduate faculty members. The Graduate School offers master's degrees in over sixty programs, and the doctoral degree in thirty programs.

The highest degree awarded is the Doctor of Philosophy.

In addition to the Master of Arts and the Master of Science degrees, the master's degrees awarded are Master of Accountancy, Master of Architecture, Master of Arts in Teaching, Master of Business Administration, Master of Engineering, Master of Fine Arts, Master of Legal Studies, Master of Music, Master of Public Administration, Master of Public Health, Master of Science in Education, Master of Science in Physician Assistant, Master of Social Work, and Professional Science Masters.

The Graduate School is fully accredited by the North Central Association of Colleges and Secondary Schools, and appropriate state and national accrediting associations have accredited specific programs.

SIU is classified as a Carnegie Doctoral/Research-Extensive University. This Carnegie ranking places SIU in the top 5.0% of U.S. institutions of higher learning.

A separate catalog describing admission, courses and graduation requirements for various programs in the Graduate School may be accessed at: <http://www.gradschool.siu.edu/about-us/grad-catalog/index.html>.

Library Affairs

Anne Cooper Moore, *Dean*

Morris Library is named after the late Delyte W. Morris, University president from 1948 to 1970. Students, faculty, and staff of the University benefit from unlimited access to millions of dollars of research materials carefully selected and maintained by professional, library faculty and staff through <http://lib.siu.edu>. The catalog, I-Share@Morris Library, is the gateway to identify and request items held in Morris Library, as well as in over 85 other libraries in Illinois. Items requested from other libraries arrive within a few days through I-Share or Interlibrary Loan. Online resources include academic journals, e-books (250,000), full-text databases, and freely-available resources. The building houses three and a half million volumes, three and a half million microforms, and 43,000 currently-received periodicals and serials. The physical collections also include government documents, maps, films, DVDs, and sound recordings. Morris Library is a selective U.S. Federal Depository Library and an Illinois State Depository Library. With the exception of materials in the Special Collections Research Center, library materials are

arranged on open shelves for convenient browsing.

Nearly 300 openly-available computers distributed throughout the building provide access to the catalog and to all of the online resources while patrons are in the Morris Library building. Throughout the building, patrons find wireless access, study tables with integrated power outlets, comfortable seating, and group study rooms/areas of various sizes and configurations. Students may reserve group study rooms online.

The basement, 4th, and 5th floors are silent floors; the 2nd, 3rd, and 4th floors are reserved for quiet study; and the 1st, 6th, and 7th floors are for collaborative study and work.

The 6th and 7th floors opened in January 2014. The 6th floor features Math Central, which provides classrooms and labs for all pre-calculus courses. The 7th floor is the new home for the Center for Learning Support Services where students can visit the Tutoring Center and benefit from academic coaching, learning consultants, group study sessions, and Saluki peer mentors. Testing Services proctors several types of exams: make-up, distance education course, nationally-standardized, placement, and professional certification. The two new floors feature flexible classrooms, technology-equipped collaborative tables and spaces, and book stacks.

Other frequently-used services available in the building include copiers, scanners, printers, Debit Dawg machine, fax machine and vending machines.

Morris Library has been transformed into a spectacular center of academic, social, and aesthetic activity for the University and local community during the last decade. In addition to abundant natural light, a variety of seating arrangements cater to every patron's study preference. Visitors enjoy intellectual, historical, cultural, and artistic events in the 200-seat Guyon Auditorium, Hall of Presidents and Chancellors, and two Rotundas. Events are also scheduled in meeting rooms, classrooms, and computer labs/classrooms. Art and exhibits adorn many areas of the building with receptions and lectures announced frequently.

Delyte's Café serves coffee and other beverages as well as sandwiches, soups, salads, baked goods, and snacks from early morning into the early evening. Delyte's is located in the lobby on the north side of the building. The building is open Sundays from 11 a.m.–Midnight, Mondays – Thursdays 7:30 a.m.–Midnight, Fridays 7:30 a.m.–9 p.m. and Saturdays 9 a.m.–7 p.m.

Library services provided in Morris Library include:

- The Information Desk invites patrons to ask any question, obtain assistance with academic, professional, and personal research, and get technology help (Saluki Tech). The Information Desk and the "Ask a Librarian" service (<http://libguides.lib.siu.edu/askalibrarian>) are staffed by library faculty and staff who are eager to help students, faculty, staff, and others in fulfilling their research needs. Consultations, instructional sessions, online tutorials, and guides are provided free of charge on a continuous basis.
- Disability Support Services features software, hardware, and assistance for those who need adaptive technologies.
- Circulation Services checks out library materials, course reserves, interlibrary loan items, room keys, laptops, adaptors, and other devices.
- Instructional Materials Center (IMC) contains a collec-

tion of PreK-12 materials designed to provide students, teachers, and school administrators both on-campus and in southern Illinois with sample teaching materials that can be used in the classroom or in evaluating curricular materials.

- Geospatial Resources includes the Map Library and Geographic Information Services (GIS). The Map Library houses more than a quarter of a million maps and nearly 100,000 aerial photographs. GIS assists patrons in locating existing digital maps or in creating customized maps.

The Special Collections Research Center (SCRC) is located off the Hall of Presidents and Chancellors. SCRC houses unique materials such as rare books, manuscript collections, and the University archives. It contains significant research collections in American Philosophy, First Amendment Freedoms, American and British twentieth century literature and theatre, a Political Papers archive, and the history of southern Illinois.

In addition to comprehensive library services, the Morris Library building is home to the Center for Teaching Excellence, the University Honor's Program, the Writing Center, Math Central, Saluki Tech (walk-up technology support and personal device configuration), Speaker's Center, and the Center for Learning Support Services.

School of Law

Cynthia L. Fountaine, *Dean*

The Southern Illinois University School of Law has established a positive, individualized learning environment that allows students to develop the skills necessary to compete in today's legal market. The low student/faculty ratio (13- to- 1) illustrates the School's commitment to personal education. Students receive the very best in instruction from faculty drawn from distinguished practice and academic settings. The curriculum balances traditional legal education with practical skills training to produce an attorney who understands the law and how to apply it in real-world situations.

In the first year, students take fundamental law courses as well as Lawyering Skills classes that combine legal research and writing, interviewing, counseling, negotiation and oral advocacy. All first-year students take a Professionalism and the Law class. The School has been recognized by the Illinois Supreme Court and the American Bar Association for its leadership in the development of professionalism programs.

Students also have a variety of experiential learning and extracurricular opportunities including legal clinics, in which they assist actual clients under the supervision of licensed attorneys; externships; moot court; pro bono activities; study abroad; writing and editing for the *Southern Illinois University Law Journal* or the *Journal of Legal Medicine*; and more than twenty student organizations.

All law students enjoy 24-hour access to the Lesar Law Building and Library. Professionals who have expertise in the intersection of information systems and the law staff the Library and teach in the Lawyering Skills program.

The School also offers interdisciplinary courses including seven joint degree programs in Accountancy (MACC), Social Work (MSW), Public Administration (MPA), Educational Administration (M.S.Ed), Business Administration (MBA), Electrical Com-

puter Engineering (ECE), and Medicine (MD). The School's joint JD/MD program, offered in conjunction with the SIU School of Medicine, is one of only a few concurrent law/medicine programs available in the country.

The relationship between the schools of law and medicine offers law students unique opportunities for collaborative learning through the Center for Health Law and Policy.

The School also offers a Masters of Legal Studies (MLS) degree for those who wish to obtain an advanced knowledge of the law and the U.S. legal system, but who do not wish to become lawyers. This degree can enhance a broad range of careers - journalism, health, engineering, arts, education - just to name a few. The School also offers a Masters of Laws (LL.M.), the first degree beyond the Juris Doctor. Two degree programs are available: a general LL.M. with customizable specialization, and a highly specialized LL.M. in Health Law and Policy. The LL.M. benefits those who have earned a J.D. and want to further their studies in a particular area of the law. The program is also open to International students who have earned a law-related undergraduate degree (or equivalent) in their own country and desire to learn about the American legal system, either as a prerequisite to sitting for a bar examination in select states, or to enhance their marketability as a practicing lawyer in their native country.

Interested students can contact the Office of Admissions by email at lawadmit@siu.edu, by phone at (800) 739-9187, or by mail at SIU School of Law, 1150 Douglas Drive, Carbondale, Illinois 62901. Students are also encouraged to visit the School of Law's website at www.law.siu.edu.

With advance notice, students and parents can request a tour, a meeting with law school staff, and an opportunity to sit in on a current law school class (when class is in session).

The School of Law is fully accredited by the American Bar Association and is a member of the Association of American Law Schools.

School of Medicine

J. Kevin Dorsey, M.D., Ph.D., *Dean and Provost*
www.siumed.edu

Southern Illinois University School of Medicine was established in 1970 after the Illinois General Assembly passed a bill calling for a second state medical school to be established in downstate Illinois. The School graduated an advanced standing class in 1975 and its charter class of all Illinois students in 1976. Currently, 72 students are admitted each year. Today, the School encompasses a complete sequence of medical education beginning with the M.D. degree and progressing through residency training and on to continuing medical education for practicing physicians.

The medical education curriculum has brought the school national attention. Since students are not evaluated in competition with their peers, they are stimulated to cooperate with one another, a situation that more closely resembles what takes place in the actual practice of medicine. Problem-based learning concepts, including active learning situations with virtual and simulated patients, are used to help students work toward clinical competency throughout the four-year curriculum. The first year of the four-year M.D. degree is taught on the Carbondale campus where students concentrate on the basic sciences. The

remaining three years are taught in Springfield where students study clinical medicine along with medical humanities and various electives.

The instructional program in Carbondale is based in Lindgren Hall and Memorial Hospital. In Springfield, it is based in the Medical Instructional Facility, the SIU Clinics, Memorial Medical Center, St. John's Hospital and other locations.

The school offers an M.D.-J.D. dual degree program in conjunction with the SIU School of Law and an M.D.-MPH degree with the SIU College of Education and Human Services. The school also oversees a Physician Assistant program in Carbondale.

The School's Medical/Dental Education Preparatory Program (MEDPREP) in Carbondale is designed to assist underrepresented populations and others with educationally disadvantaged backgrounds to prepare for success in medical and dental schools.

The School's residency programs include dermatology, emergency medicine, family medicine, internal medicine, medicine/psychiatry, neurology, neurosurgery, obstetrics and gynecology, pediatrics, psychiatry, radiology and six surgical specialties. There are twelve fellowships for advanced clinical work.

The School's continuing medical education program provides an extensive schedule of accredited conferences and symposia for physicians and other health-care professionals in central and southern Illinois. Programs are held in Springfield, Carbondale and throughout the School's service area.

The School also offers graduate programs for master's and doctoral degrees in physiology, pharmacology and molecular biology, microbiology and biochemistry, and a teaching certificate of anatomy. The faculty in Carbondale's and Springfield's basic science departments divide their time between teaching responsibilities and research. Both clinical investigators and basic scientists collaborate on a wide-range of medical and scientific projects; they work in the various basic science laboratories on both campuses and in the clinical facilities located in the affiliated hospitals in Springfield.

Interfaced with its various educational and research programs is the provision of patient care through the various clinical departments and specialized clinics of the School and the practice of its physician faculty.

Preference for admission is given to applicants from central and southern Illinois and other underserved (inner-city, rural) portions of the state. Inquiries regarding admissions and requests for a catalog from the School of Medicine should be addressed to the Director of Admissions, Southern Illinois University School of Medicine, P.O. Box 19624, Springfield, Illinois 62794-9624. More information can be found at www.siumed.edu.

University Honors Program

The University Honors Program (UHP) is a university-wide undergraduate program intended to reward SIU's best students for their high academic achievement. It provides students a taste of the private-college experience at a state-university price. The heart of the UHP is its curriculum of small classes, unique in character and specially designed for UHP students by outstanding SIU faculty, to satisfy requirements in the University Core Curriculum as well as in the student's major. More information on the University Honors Program can be found at the beginning of Chapter 5 and at honors.siu.edu.

Academic Services and Programs

SIU Extended Campus

SIU Extended Campus extends resources to individuals both on and off campus. Administrative support services for distance education are provided through this area for the SIU Campus. Online programs and courses, off campus programs and courses, evening and weekend courses enable educational, cultural, and physical resources of the university to be extended beyond the traditional campus.

Online, Off Campus, & Military. Quality academic programs and courses are offered via online, blended (hybrid), and face-to-face instruction at various off campus and military installations. For more information about our online programs and courses, please visit our website at: distanceeducation.siu.edu.

Contact information:
 extendedcampus@siu.edu email
 618-453-3430 phone
 618-453-5668 fax
 extendedcampus.siu.edu website

The Paul Simon Public Policy Institute

The Paul Simon Public Policy Institute (also called the Paul Simon Institute) is a resource for SIU students, the campus community, the region and the State of Illinois. The Institute's mission focuses on fostering ethical conduct in government, opportunity and fair treatment for people in America and throughout the world, and promoting responsible citizenship for all Americans--but particularly for young Americans.

The Institute executes its mission by :Conducting nationally known public opinion polls (The Simon Institute Poll™ and The Southern Illinois Poll™) to inform decision makers and citizens; Publishing analysis of public policy issues in its occasion papers (The Simon Review); Providing and supervising paid internships, graduate assistantships and fellowships for undergraduate and graduate students in Carbondale, Springfield and elsewhere; hosting noted leaders in public policy, politics, journalism and other fields to campus for speeches, conferences, and hosting leadership and civic education opportunities for high school students.

The Institute's popular "Pizza and Politics" programs are geared to both undergraduate and graduate students of all majors to interact with Institute guests. Other Institute undergraduate opportunities include the Vince Demuzio Internship program where juniors and seniors learn about public service during paid internships in local governmental offices. Undergraduate students can learn about public service while working paid internships in Springfield state government offices through the Gene Callahan Internship and the Alexander Lane Internship. The Institute has also sponsored learning opportunities for students in Washington D.C. and Pittsburgh, PA.

Student and parents can learn more at our website, www.paulsimoninstitute.org, and are encouraged to contact us at 618-453-4009 with questions, or stop by the Institute on campus at 1231 Lincoln Dr. (the Forestry Building). Like us on Facebook at <https://www.facebook.com/paulsimoninstitute>.

Paul Simon established the Public Policy Institute in 1997

upon his retirement from more than 40 years in elected office. Simon was a state Representative, state Senator and Illinois Lieutenant Governor before being elected to five terms in the U.S. House of Representatives beginning in 1974 and then serving two terms as U.S. Senator. Additionally, he was a candidate for the Democratic nomination for President of the United States in 1988 and a political mentor to many, including President Barack Obama. He remains one of Illinois' most revered political leaders and enjoyed broad bipartisan support from voters most of his career.

After Sen. Simon's passing in 2003, Mike Lawrence, who had been press secretary and senior adviser to Illinois Governor Jim Edgar in the 1990s and who served as the Institute's associate director since its inception, was named director. He retired in 2008. David Yepsen, a political columnist at the Des Moines Register for more than 30 years, was named director in 2009. Yepsen covered the Iowa caucuses dating back to the 1976 presidential race and has been a frequent guest on national news shows. Like his predecessors, Yepsen teaches courses in journalism as Institute director.

The Writing Center

The Writing Center staff, composed of English Department graduate assistants and specially trained undergraduate tutors, invites all SIU students to take advantage of the Center's free services. The Center offers students single-visit or regular-weekly assistance on their writing, with both in-person, on-campus sessions and chat-based, online sessions available. Tutors can help students develop strategies for any stage of the writing process, including getting started on essays, organizing and focusing ideas, developing and connecting points clearly, and correcting grammar and punctuation errors. At every stage, the emphasis is on helping students to solve their writing problems and become better writers.

If students want to see a tutor or have questions about the Center's services, they may visit the Morris Writing Center, Morris Library Room 236 or they may visit the Center online at www.write.siu.edu/ or call 453-1231. More information about the Center's services is available at our website (write.siu.edu) or at the Morris Library location during the Center's open hours (Monday - Thursday, 9 am to 4 pm; Sunday - Thursday, 6 p.m. to 8 p.m.; and Friday, 9 a.m. to 2 p.m.).



5/ Undergraduate Curricula and Faculty





Undergraduate Curricula and Faculty

This chapter contains information about the undergraduate curricula and courses offered by Southern Illinois University Carbondale. The course descriptions for only undergraduate students are included. Courses offered for graduate students are included in the Graduate Catalog. Chapter 1 of this bulletin includes a listing of the undergraduate majors and minors offered. Those majors and minors are included in this chapter with a description of the requirements for their completion. This chapter is arranged in alphabetical order.

Explanation of the Curricular Requirements

In the areas of this chapter, which describe course requirements for programs, numerals in parentheses in columns of figures pertain to semester hours, which satisfy more than one requirement. They are in parentheses to avoid their being added to the total of the column, which would be a duplication of hours required. For example, under the Bachelor of Science major in Animal Science, Agribusiness Economics 204 satisfies part of the University Core Curriculum requirements and contributes three hours toward the 41 hours required. The three hours are also required for the major in Animal Science, but do not contribute to the printed total of 79 hours.

How to Read Course Numbers

The first entry for each course is a three-digit numeral, plus in some cases, a single letter that together with the subject area serves to identify the course. The first digit indicates that the course is for freshmen, sophomores, juniors, or seniors, depending on whether the digit is 1, 2, 3, or 4. If the digit is 0, the course is not properly in the above categories with the exception of Music courses. A letter following the three numerals may indicate a *part* of a course (where *A* means first part, *B* means second part, etc.) or may identify the topics or subject areas specified in courses such as readings or special problems. A numeral or numerals separated from the identification number by a dash indicates the number of hours of credit received in the course. For example, Physics 203-6 (3,3) indicates a sophomore-level, two-part course of 6 hours in the Department of Physics. The two parts of the course may be referred to as Physics 203A,B. The credit may also be variable, such as Accounting 491-1 to 6. Variable credit courses, which have a number of credit hours per semester or per topic that is limited, have those limits in parentheses following the total maximum hours of credit. An example of such a course is Criminology and Criminal Justice 490-1 to 6 (3 credit hours per term). Next is the title, followed by a description of the course. If certain requirements must be satisfied before enrollment in a course, they are listed as prerequisites. If a course is a part of the pass/fail system, it is so indicated.

Some courses are cross-listed with other courses. These courses will have the other course name and number in parenthesis after the course title. Some courses will have an Illinois Articulation Initiative number listed which will appear in brackets; for example, English 121-3 The Western Literary Tradition [IAI course: H3900]. For more information on the IAI see Chapter Three.

Not all courses described here are offered every semester or even every year. To determine when and where a course is to be offered, consult the *Schedule of Classes* available on the Registrar's Office website, <http://registrar.siu.edu/schedclass/>.

Course Fees

Some courses have fees attached to their registration. These fees cover such items as laboratory fees, field trips, printing of materials, and supplies. These fees are published in the class schedule but are subject to change. For the correct fee, contact the department that offers the class or the Registrar's Office.

University Honors Program

The University Honors Program (UHP) is a university-wide undergraduate program intended to reward SIU's best students for their high academic achievement. It provides students a taste of the private-college experience at a state-university price. The heart of the UHP is its curriculum of small classes, unique in character and specially designed for UHP students by outstanding SIU faculty, to satisfy requirements in the University Core Curriculum as well as in the student's major.

UHP students in good-standing also qualify for early registration for classes each semester, and official transcripts reflect their participation in the program throughout their undergraduate career. At commencement, UHP students who complete the Honors requirements are recognized in the graduation program and on their transcripts.

Other benefits include special consideration for certain scholarships, enrollment in graduate-level courses in certain departments, extended borrowing privileges at Morris Library, an Honors Living-Learning Community in Thompson Point, invitations to attend breakfast seminars with UHP-sponsored lecturers, and access to the Office of Major Scholarship Advisement for assistance in applying for nationally competitive awards and scholarships.

Admission to the program is by special application only after the student has been admitted to the university. Requirements vary depending upon the applicant's status as an entering, continuing, or transfer student.

Entering freshmen qualify for admission to the UHP on the basis of an ACT composite score in the 90th percentile (or higher) or a high school rank in the top 10 percent (or higher) or a high school grade point average of 3.3 (or higher) on a four-point scale. Continuing SIU students qualify for admission to the UHP on the basis of a cumulative SIU grade point average of 3.3 or higher, with at least 12 semester hours completed. Transfer students with at least 12 semester hours of transfer credit qualify for admission to the UHP on the basis of a cumulative grade point average of 3.3 or higher on all non-SIU college-level work.

Students who do not qualify for admission by these criteria are still encouraged to apply. Applications are carefully reviewed to ensure that all exceptional students are considered for admission to the program.

Staying in the UHP requires continuous enrollment in UHP courses, subject to exceptions as determined by the program director. Students must also maintain a cumulative 3.3 grade point average on all SIU course work and have no failing grades in UHP courses.

If the SIU cumulative average drops below 3.3, students will be placed on probation for one semester; if it remains below 3.3 for two consecutive semesters, students will be suspended from

the program for at least one semester. Thereafter, students may reapply to the program when their cumulative average rises to 3.3 or higher. Students who receive a failing grade in a UHP course will be suspended, without a term of probation, for at least one semester. Thereafter, students may reapply to the program if their cumulative average is 3.3 or higher.

The UHP offers the Honors certificate. (The *baccalaureate degree* is awarded through the regular degree-granting units). For honors distinction to appear on official transcripts, all entering, transfer students without an Associates degree, and continuing students must:

1. Complete 18 hours of UHP-approved course work. This work may include up to 6 hours of AP certified by appropriate examinations for college credit, or up to 6 hours of honors courses taken at other post-secondary institutions. The total number of hours may also include ENGL 120H, UHON seminars, and a senior UHP project or thesis under the direction of a faculty member. All UHP projects and theses must be approved in advance by a faculty member, with notification to the program director, one full year in advance of graduation; and
2. Have a cumulative 3.3 grade point average or higher on all SIU course work at graduation.

For the *Honors certificate*, transfer students who enter SIU with an Associate of Arts or an Associate of Science degree, Capstone students, and two-year students in the College of Applied Sciences and Arts all must:

1. Complete a minimum of 12 hours of UHP-approved course work, which may include a senior UHP project or thesis under the direction of a faculty member. All UHP projects and theses must be approved by a faculty member, with notification to the program director, one full year in advance of graduation.
2. Have a cumulative 3.3 grade point average or higher in all SIU course work at graduation.

The UHP curriculum includes UHON seminars, specially designed and taught for UHP students only, which satisfy University Core Curriculum requirements; and specially designated Honors courses in the major. UHP courses may also include independent study, Service Learning, and internships and travel/study programs, all of which are subject to advance approval by the program director.

The University allows UHP students to substitute UHON seminars for any or all of their 29 semester hours of University Core Curriculum requirements in Disciplinary and Integrative Studies. UHP students may be exempted from all University Core Curriculum requirements if they (1) pass all five CLEP General Examinations before completing 12 semester hours of college credit with these minimum scores: natural sciences, social sciences, and humanities, 52; English composition with essay, 61; and mathematics, 58; and (2) complete the UHP Graduation Option. No retroactive extension of the CLEP privilege will be allowed.

For more information, including applications, please consult the UHP website: www.honors.siu.edu.

Accountancy (School)

The School of Accountancy is dedicated to the discovery, the interpretation and the dissemination of knowledge to students, the profession and colleagues.

Accounting is the process of identifying, measuring, and communicating economic information to permit informed judgments and decisions by users of the information. Such information is required and used by parties, both internal and external to a business, a not-for-profit organization, and other entities.

The curriculum is designed with sufficient flexibility to prepare students for the many career options available to accounting graduates. Among the principal career options are public accounting (Certified Public Accountants), corporate accounting, not for profit accounting and other business consulting or finance flavored careers. Illinois and most other states require 150 hours of college credit to sit for the CPA exam.

The curriculum consists of four segments, each designed for a specific purpose. The first segment, the University Core Curriculum, is designed to provide a solid grounding in the liberal arts and sciences, and promote analytic and imaginative abilities that are essential for a life of inquiry, creativity and informed civic participation. The second segment, the Professional Business Core, is required of all business majors. It provides a broad base of knowledge in accounting, finance, management, marketing, business law, technology, economics, communications and math required for the professional study of accounting. The third segment, the Accounting Core consists of essential accounting material all accounting professionals should master. The fourth segment is flexible and allows students to acquire knowledge and skills necessary for success in the pursuit of their individual career goals. Students preparing for a career in accounting will have access to separate courses in advanced accounting, accounting for public organizations, auditing, advanced cost, advanced taxation, and enterprise networks and communications. Those students preparing for a career in public accounting should also pursue a fifth year of study and the Master of Accountancy degree. Specialized courses of study in taxation and audit/systems are available.

A major in Accounting requires students to earn a minimum grade of C in each of the courses taken to satisfy the requirements for the Accounting major*(as described below), and students must earn a minimum 2.0 grade point average for those major courses. The School of Accountancy enforces all prerequisites for accounting prefix courses which in some cases include a grade higher than C. All 300 and 400 level accounting courses may be repeated for a grade only once.

THE CAPSTONE OPTION FOR TRANSFER STUDENTS

The Capstone Option is available to students who have earned an Associate in Applied Science (AAS) degree or have the equivalent and who have a cumulative 2.0/4.0 GPA on all accredited coursework prior to the completion of the AAS, as calculated by SIU. The Capstone Option reduces the University Core Curriculum requirements from 41 to 30 hours, therefore reducing the time to degree completion. See Chapter 3 for more information on this option. Students who apply for the Capstone Option will work with the College of Business Advisement Office for approval of the Capstone Option and will complete a personal contract for a degree completion plan.

TECHNOLOGY FEE AND DIFFERENTIAL TUITION

The College of Business assesses College of Business majors a technology fee of \$6.00 per credit hour for Fall and Spring semesters up to twelve semester hours and Summer up to six semester hours. The technology fee is being phased out and will be subsumed under the differential tuition surcharge (see item below). Consequently, students will be charged either the technology fee or the differential tuition surcharge but not both.

Starting Fall 2008, the College of Business has implemented a differential tuition surcharge of 15% of applicable tuition for declared College of Business majors that are new students. The differential tuition surcharge will be assessed at the in-state tuition rate. If students are charged the differential tuition surcharge, the technology fee (in above item) will not be assessed. Starting Fall 2008, the College of Business has implemented a "minor program fee" for other than College of Business majors that is equal to 15% of 15 credit hours of applicable tuition for declared College of Business minors. This fee is applicable for new students.

PROGRAM OBJECTIVES FOR STUDENTS

Students graduating with an undergraduate degree in accounting should possess a basic understanding of accounting concepts (financial, taxation, auditing, managerial and accounting information systems) such that they would be able to prepare, analyze and communicate accounting information. Students graduating with an undergraduate degree should also be able to communicate effectively in a business setting both orally and in the written form. Graduates should be able to apply their accounting knowledge to unstructured problems, to work effectively in a team environment and to work effectively in a computer-based environment.

Accounting (Major, Courses, Faculty)

Bachelor of Science Degree in Accounting, College of Business

University Core Curriculum Requirements.....	41
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*Minimum grade of C required for all classes in major area.	
Accounting Core.....	27
Accounting 321, 322, 421.....	9
Accounting 331, 431	6
Accounting 341, 441	6
Accounting 360, 460	6
Accounting Electives	3
Choose one of the following three-hour courses:	
Accounting 411, 465, 468, 471 or 495	
Approved Electives ¹	4
Total	120

Accounting Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101, UCC Human Health	3	2
ENGL 101, 102.....	3	3
UCC Science	3	3
CMST 101.....	3	-

PSYC 102 or SOC 108	-	3
MATH 139, 140	3	4
Total	15	15

SECOND YEAR	FALL	SPRING
ACCT 220, 230	3	3
ECON 241, 240.....	3	3
ACCT 208, UCC Integrative Studies.....	3	3
UCC Humanities	3	3
UCC Fine Arts, ENGL 291.....	3	3
Total	15	15

THIRD YEAR	FALL	SPRING
ACCT 321, 322	3	3
ACCT 331, 341	3	3
FIN 330, MGMT 304	3	3
ACCT 360, FIN280 ²	3	3
MGMT 345, Approved Elective ¹	3	1
BUS 302.....	-	2
Total	15	15

FOURTH YEAR	FALL	SPRING
ACCT 421, 460	3	3
ACCT 431, 441	3	3
ACCT 411, 465, 468, 471, or 495.....	-	3
MGMT 318, 481.....	3	3
MTKG 304, 300-400 CoB Elective ¹	3	3
FIN 380 ²	3	-
Total	15	15

¹120 semester hours are required for graduation. Approved electives should be selected in consultation with the academic advisor to meet this requirement.

²The combination of Finance 280 (Business Law I) and Finance 380 (Business Law II) is highly recommended for accounting majors.

³Also listed as FIN 208 or MGMT 208.

Accounting Minor

A minor in Accounting consists of a minimum of 15 semester hours, including Accounting 220, 230 and nine credit hours in Accounting at the 300 level or above. All prerequisites for these classes must also be satisfied. At least nine of the fifteen semester hours must be taken at Southern Illinois University Carbondale. An advisor within the College of Business must be consulted before selecting this field as a minor.

A minor from the College of Business requires students to earn a minimum grade of C in each of the courses taken to satisfy the requirements for their minor, and students must earn a minimum 2.0 grade point average for those minor courses.

Courses (ACCT)

208-3 Business Data Analysis. (Same as FIN 208 and MGMT 208) [IAI Course: BUS 901] Uses of data in policy formulation are discussed. Emphasis is placed on the conversion of raw information into statistics, which are useful to the decision-maker. Problems stress solution to questions typically raised in businesses. Prerequisite: MATH 139.

210-3 Accounting Principles and Control. Prevalent ac-

counting principles and practices employed in business organizations. Accumulation of data and usefulness of reports are considered. Tax implications of business studied. Not open to students with a major in the College of Business. No credit given for ACCT 210 if credit is claimed for ACCT 220. Course material fee: \$95.

220-3 Accounting I-Financial. [IAI course: BUS 903] This course covers the basic concepts, principles and techniques used to generate accounting data and financial statements and to interpret and use the financial data to enhance decision making. Restricted to sophomore standing. Course material fee: \$100.

230-3 Accounting II-Managerial. [IAI Course: BUS 904] The use of accounting information for managerial planning, control and decision making through budgeting, cost and variance analyses, and responsibility accounting. Prerequisite: ACCT 220. Restricted to sophomore standing. Accounting majors and minors must pass ACCT 220 with a grade of C or better. Course material fee: \$100.

240-3 Accounting Principles and Control II. Prevalent accounting principles and practices used in planning, control and decision making in business organizations. How to use data to best use organizational data to understand the cost and managerial aspects of an organization. Tax implications of managerial decisions will be studied. Not open to students with a major in the College of Business. No credit is given for ACCT 240 if credit is claimed for ACCT 230.

321-3 Intermediate Accounting I. Current accounting principles and procedures relating to elements of financial reporting. Particular emphasis on current and fixed asset valuation. Prerequisite: MATH 140; ACCT 220 and ACCT 230 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing or higher. eText and Connect Plus with Learnsmart 2 Semester course material fee: \$150.

322-3 Intermediate Accounting II. Continuation of the study of accounting principles and procedures with emphasis on liabilities, corporate capital, and income determination. Preparation and use of special statements; analysis and interpretation of statements. Prerequisite: ACCT 321 with grade of C or better and MATH 140. Restrictions: College of Business majors or minors, junior standing or higher.

331-3 Cost Accounting. Interpretation and managerial implications of material, labor, and overhead for job order, process and standard cost systems, cost-volume-profit relationships, direct costing, and budgeting. Accounting for complex process production flows, joint and by-products, spoilage, and scrap. Responsibility accounting and reporting. Prerequisite: ACCT 220 & ACCT 230 with C or better; ACCT/FIN/MGMT 208; MATH 139 and MATH 140. Restrictions: College of Business majors or minors, junior standing or higher.

341-3 Introduction to Taxation. Background, principles, and procedures for the determination of taxable income as a basis for federal income tax. Particular attention is given to those aspects, which are at variance with usual accounting treatment in the determination of net income. Includes practice in the methodology of tax solutions. Prerequisite: accounting majors and minors must earn a grade of C or better in both ACCT 220 and ACCT 230. Restrictions: Accounting majors or minors, junior standing or higher.

360-3 Accounting Systems Operations. Accounting information systems analysis and design. Focusing on internal controls, data modeling, databases, documentation tools and information retrieval to improve business decisions. Prerequisite: C or better in MGMT 345. Restrictions: Accounting majors or minors, junior standing or higher, or consent of the school. Course material fee: \$184.

411-3 Enterprise Networks and Communication. (Same as Management 411) Application of data communications and network technologies for improving business. Coverage includes, but is not limited to: introduction to the principles of data transmission technology, various communication architectures and protocols, basic network design principles, internet and intranet technologies, data security issues and elements of network management. Prerequisite: C or better in MGMT 345.

421-3 Advanced Accounting. Accounting principles and procedures relating to specialized topics, including partnership equity, installment and consignment sales, fiduciaries, international operations, branches, and business combinations. Prerequisite: A grade of C or better in ACCT 322. Restrictions: Accounting majors or minors, junior standing or higher. Course material fee: \$100.

431-3 Advanced Cost Accounting. Managerial decision making; profit planning and control through relevant costing, return on investment and transfer pricing, determination of cost behavior patterns, analysis of variances, capital budgeting, inventory models, probabilities, statistical methods, and operations research. Prerequisite: ACCT 331 with grade of C or better. Restrictions: Accounting majors or minors, junior standing or higher.

441-3 Advanced Tax. Study of income tax problems which arise from sole proprietorship, partnership, limited liability company, corporation, estate, and trust. Student does research in source materials in arriving at solutions of complicated problems. Prerequisite: ACCT 341 with grade of C or better. Restrictions: Accounting majors or minors; junior standing or higher.

460-3 Auditing. Provides an overview of processes for planning and executing a risk-based audit; explains the procedures auditors use to evaluate internal controls; describes the tests auditors conduct to substantiate financial statement accounts. Prerequisite: a grade of C or better in ACCT 322. Restrictions: Accounting majors, minors, junior standing. Course material fee: \$133.

465-3 Internal Auditing. The course covers internal audit from a broad perspective to include information technology, business processes, and accounting systems. Topics include internal auditing standards, risk assessment, governance, ethics, audit technique, and emerging issues. It covers the design of business processes and the implementation of key control concepts and will use a case study approach that addresses tactical, strategic, systems, and operational areas. Restrictions: Accounting majors or minors.

468-3 Forensic Accounting. Coverage of forensic accounting processes and tools used in the detection and prevention of fraud against the company. Topics include skimming, cash larceny, check tampering, billing schemes and others. An emphasis of the course will be upon the use of computer aids. Restrictions: Accounting majors or minors.

471-3 Governmental and Not for Profit Accounting. Financial and managerial accounting concepts peculiar to the planning and administration of public and quasi-public organizations, such as governmental units, institutions, and charitable organizations. Also includes the study of governmental auditing standards. Not for graduate credit. Prerequisite: ACCT 321 with a grade of C or better. Restrictions: Accounting majors or minors.

491-1 to 6 Independent Study in Accountancy. Independent study of specialized aspects of accountancy not available through regularly scheduled courses. Not for graduate credit. Prerequisite: a grade of C or better in each of ACCT 322, ACCT 331, and ACCT 341. Restrictions: Accounting majors or minors.

495-3 Internship. Supervised work experience in professional accounting. Mandatory Pass/Fail only. Not for graduate credit. Restrictions: Accounting majors or minors, outstanding record in accounting. Special approval needed from the department.

Accounting Faculty

Basi, Bartholomew A., Professor, *Emeritus*, C.P.A., J.D., D.B.A., Indiana University, 1971.

Burger, Clifford R., Professor, *Emeritus*, C.P.A., M.S., Indiana State University, 1947.

Burnett, Royce D., Associate Professor and *Director*, C.P.A., C.M.A., C.G.M.A., Ph.D., Oklahoma State University, 2003.

Hahn, Randall, Associate Professor, *Emeritus*, C.P.A., D.B.A., University of Kentucky, 1984.

Karnes, Allan, Professor, C.P.A., M.A., J.D., Southern Illinois University, 1986.

Karnes, Darla, Lecturer, C.P.A., M.A.S., Southern Illinois University Carbondale, 2000.

Margolis, Donna, Lecturer, C.P.A., M.A.S., Southern Illinois University, 2012.

Masoner, Michael, Associate Professor, *Emeritus*, C.P.A., Ph.D., University of Minnesota, 1975.

Morris, Marc E., Assistant Professor, J.D., Ph.D., Southern Illinois University, 2009.

Odom, Marcus, Professor, C.P.A., C.F.E., Ph.D., Oklahoma State University, 1991.

O'Donnell, Ed, Professor, C.P.A., Ph.D., University of North Texas, 1995.

Ortegren, Marc A., Assistant Professor, Ph.D., Texas Tech University, 2010.

Rivers, Richard A., Professor, *Emeritus*, C.P.A., D.B.A., Kent State University, 1976.

Sobery, Julie S., Associate Professor, *Emerita*, C.P.A., Ph.D., St. Louis University, 1982.

Tucker, Marvin W., Professor, *Emeritus*, Ph.D., University of Alabama, 1966.

Wacker, Raymond F., Associate Professor, C.P.A., Ph.D., University of Houston, 1989.

Welker, Robert B., Professor, *Emeritus*, Ph.D., Arizona State University, 1976.

Wright, Roland M., Professor, *Emeritus*, C.P.A., Ph.D., University of Iowa, 1962.

Wu, Frederick H., Professor, *Emeritus*, Ph.D., Texas Tech University, 1975.

Advanced Technical Studies

(SEE TECHNICAL RESOURCE MANAGEMENT)

Adventure Recreation

(SEE RECREATION)

Aerospace Studies

(Air Force Reserve Officer Training Corps ROTC)

(Department, Minor, Courses)

Aerospace Studies is a voluntary course sequence delivered in conjunction with the AFROTC program on the SIUC campus. Successful completion of the AFROTC program leads to a commission as an officer in the United States Air Force. Students who do not intend to obtain a commission may enroll in the academic portion of the Aerospace Studies curriculum. Enrollment in the academic portions of the Aerospace Studies curriculum is unrestricted, and students incur no military obligation. Only those students who apply for and meet the eligibility criteria for the AFROTC program are permitted to enroll in the laboratory portions of the Aerospace Studies curriculum.

The Aerospace Studies/AFROTC program is divided into the General Military Course (GMC), designed for students with three to five years remaining until graduation, and the two-year Professional Officer Course (POC), for which AFROTC cadets are competitively selected.

The AFROTC GMC prepares students for the POC and provides them with an education focusing on the Air Force Core Values. The GMC courses are designed to provide the basic knowledge, understanding, and experiences, required to compete for selection into the POC. The student learns about followership, leadership, character development, and the values necessary to lead Airmen. Students interested in participating in the AFROTC GMC may enroll, but are subject to certain physical, medical, and other eligibility criteria as specified by the Department of Defense.

Acceptance into the AFROTC Professional Officer Course is highly competitive and requires the applicant to meet all Air Force officer accession standards. Students selected for the POC incur a military obligation. They are paid a monthly tax-free subsistence allowance.

Students selected for continuation into the POC attend a four-week field-training course during the summer prior to entering the POC.

Students interested in an Air Force flying career (Pilot, Remotely Piloted Aircraft, Combat Systems Officer, or Air Battle Manager) are not required to pursue any specific degree. Students interested in an Air Force flying career should select an academic major in a career field which interests them in the event they are not selected for an Air Force flying career.

Leadership Laboratory is a supervised laboratory taken concurrently with the Aerospace Studies courses. Only cadets enrolled in the AFROTC program may participate in the Leadership Laboratory. Non-AFROTC students taking Aerospace Studies courses are not required to enroll in the Leadership Laboratory. While enrolled in the GMC, cadets develop leadership potential by participating in practical leadership situations, participating in and leading drill and ceremonies, learn-

ing military customs and courtesies, and engaging in regular physical training. POC cadets develop leadership skills by assuming command and staff responsibilities, supervising GMC cadets and implementing the goals and training objectives of the AFROTC Leadership Laboratory.

Well-qualified cadets enrolled in the AFROTC program are eligible to compete for scholarships for their remaining years at the University. In addition to tuition, books and fees, the scholarship provides a monthly tax-free subsistence allowance. Tuition waivers are also available on a competitive basis through the Illinois State ROTC Scholarship program. Scholarships do not include costs associated with room and boarding. In addition to the AFROTC commissioning program and courses offered for academic credit, The Department of Aerospace Studies sponsors many extracurricular activities. The Aerospace Club is open to all members of the student body. The Arnold Air Society, a national honorary service organization, is open to selected AFROTC cadets. The AFROTC Honor Guard is open to AFROTC cadets on a competitive basis. Honor Guard members participate in local community events and in drill competitions throughout the region.

Further information may be obtained from the Department of Aerospace Studies (Air Force ROTC), Mailcode 6718, Carbondale, Illinois 62901, by phone at (618) 453-2481, or on the web at <http://afrotc.siu.edu/>.

Aerospace Studies Minor

A minor in Aerospace Studies is structured to broaden the background of students so they may learn more about the Air Force, its role in society, its history, and its officers. With a minor in Aerospace Studies, the civilian leaders of tomorrow will have a better understanding and appreciation of the vital role the Air Force performs in today's world. AFROTC cadets are also welcome to declare Aerospace Studies as a minor.

For non-AFROTC student, a minor in Aerospace Studies consists of a minimum of 16 semester hours, including AS 101, 102, 201, 202 (one semester hour each), 301, 302, 401 and 402 (three semester hours each).

For AFROTC cadets, an Aerospace Studies minor also consists of a least 16 semester hours. However, cadets pursuing an Aerospace Studies Minor must also complete an additional 16 hours in the Aerospace Studies Leadership Laboratories (LLAB): AS 101A, 102A, 201A, 202A, 301A, 302A, 401A and 402A.

Declaration and/or acceptance of Aerospace Studies as a minor does not constitute acceptance into the General Military Course, the Professional Officer Course, or any other association with the Air Force or AFROTC. A student who is not an AFROTC cadet who wishes to work toward a minor by attending the Aerospace Studies academic courses will be listed within the Department of Aerospace Studies as a special student. He or she may not attend any other AFROTC functions or classes, nor will the student be considered for any AFROTC scholarships, stipends, or privileges.

Courses (AS)

101-1 The Air Force Today I. Designed for college freshmen; survey course briefly treating chief topics relating to the Air Force and defense. It focuses on the organizational structure

and missions of Air Force organizations, officership and professionalism and includes an introduction to communicative skills. Concurrent enrollment in AS 101A, Leadership Laboratory.

101A-2 Leadership Laboratory. Weekly laboratory consisting of Air Force customs and courtesies, health and physical fitness, and drill and ceremonies. A mandatory fitness program is included; a pre-participatory sports physical must be completed prior to entering the fitness program.

102-1 The Air Force Today II. Designed for college freshmen; survey course briefly treating chief topics relating to the Air Force and defense. It focuses on the organizational structure and missions of Air Force organizations, officership and professionalism and includes an introduction to communicative skills. Concurrent enrollment in AS 102A, Leadership Laboratory.

102A-2 Leadership Laboratory. Weekly laboratory consisting of Air Force customs and courtesies, health and physical fitness, and drill and ceremonies. A mandatory fitness program is included; a pre-participatory sports physical must be completed prior to entering the fitness program.

201-1 The Evolution of United States Air Force and Space Power I. Features topics on Air Force heritage and leaders; introduction to air and space power through examination of competencies and functions; and continued application of communication skills. Its purpose is to instill an appreciation of the development and employment of air power and to motivate sophomore students to transition from Air Force ROTC cadet to Air Force ROTC officer candidate. In addition, aspects of the 200 course begin to prepare cadets for their experiences at field training. Concurrent enrollment in AS 201A.

201A-2 Leadership Laboratory. Weekly laboratory consisting of Air Force customs and courtesies, health and physical fitness, drill and ceremonies, and field training orientation. A mandatory fitness program is included; a pre-participatory sports physical must be completed prior to entering the fitness program.

202-1 The Evolution of United States Air Force and Space Power II. Features topics on Air Force heritage and leaders; introduction to air and space power through examination of competencies and functions; and continued application of communication skills. Its purpose is to install an appreciation of the development and employment of air power and to motivate sophomore students to transition from Air Force ROTC cadet to Air Force ROTC officer candidate. In addition, aspects of the 200 course begin to prepare cadets for their experiences at field training. Concurrent enrollment in AS 202A.

202A-2 Leadership Laboratory. Weekly laboratory consisting of Air Force customs and courtesies, health and physical fitness, drill and ceremonies, and field training orientation. A mandatory fitness program is included; a pre-participatory sports physical must be completed prior to entering the fitness program.

258-1 to 12 Aerospace Studies Work Experience. Credit granted for military service. The department director may accredit up to the entire General Military Course (GMC) (4 hours for non-AFROTC students and 12 hours for AFROTC cadets). Students seeking accreditation must have received an honorable or general discharge. Credit to be determined by departmental evaluation. Students seeking accreditation for any period of military service must provide their DD Form 214. Re-

stricted to students with 6 semester hours of AS courses with a C or better and permission of the instructor.

301-3 Air Force Leadership Studies I. Designed for college juniors; teaches advanced skills and knowledge in management and leadership. Special emphasis is placed on enhancing leadership skills. Students have an opportunity to try out these leadership and management techniques in a supervised environment. Concurrent enrollment in AS 301A, Leadership Laboratory.

301A-2 Leadership Laboratory. Weekly laboratory consisting of advanced leadership experiences in officer-type activities, giving students the opportunity to apply the principles learned. A mandatory fitness program is included; a pre-participatory sports physical must be completed prior to entering the fitness program.

302-3 Air Force Leadership Studies II. Designed for college juniors; teaches advanced skills and knowledge in management and leadership. Special emphasis is placed on enhancing leadership skills. Students have an opportunity to try out these leadership and management techniques in a supervised environment. Concurrent enrollment in AS 302A, Leadership Laboratory.

302A-2 Leadership Laboratory. Weekly laboratory consisting of advanced leadership experiences in officer-type activities; giving students the opportunity to apply the principles learned. A mandatory fitness program is included; a pre-participatory sports physical must be completed prior to entering the fitness program.

351-2 Field Work Experience. Approved field work experiences with an Air Force or Department of Defense-related installation gives students opportunities to apply classroom theory to an active duty environment. Prerequisite: AS 302 or consent of department chair.

401-3 National Security Affairs/Preparation for Active Duty I. For college seniors; teaches the foundation to comprehend the basic elements of national security policy & process. Teaches comprehension of the air & space power functions & competencies. Overview of the complex social & political issues facing the military profession & requires a measure of sophistication commensurate with the senior college level. Not for graduate credit. Concurrent enrollment in AS 401A, Leadership Laboratory.

401A-2 Leadership Laboratory. Weekly laboratory consisting of advanced leadership experiences in officer-type activities. A mandatory fitness program is included; a pre-participatory sports physical must be completed prior to entering the fitness program. Not for graduate credit.

402-3 National Security Affairs/Preparation for Active Duty II. For college seniors; teaches the foundation to comprehend the basic elements of national security policy & process. Teaches comprehension of the air & space power functions & competencies. Overview of the complex social & political issues facing the military profession & requires a measure of sophistication commensurate with the senior college level. Not for graduate credit. Concurrent enrollment in AS 402A, Leadership Laboratory.

402A-2 Leadership Laboratory. Weekly laboratory consisting of advanced leadership experiences in officer-type activities. A mandatory fitness program is included; a pre-participatory

sports physical must be completed prior to entering the fitness program. Not for graduate credit.

471-1 to 3 Independent Study. Supervised study or project to improve skills or to explore interests related to professional development of an Air Force officer. Not for graduate credit. Pass/Fail only. Prerequisite: AS 301 or concurrent enrollment or consent of department chair.

491-1 to 8 Advanced Leadership Skills. Student applies special skills or interests to the professional environment of an Air Force officer. Original research or project to deal with current aspect of Air Force duty required. Amount of credit dependent on work involved. Not for graduate credit. Pass/Fail only. Aerospace Studies elective only. Prerequisite: AS 301 or concurrent enrollment and consent of department chair.

Aerospace Studies Faculty

Hansen, Craig A., Lieutenant Colonel, USAF. Adjunct Professor of Aerospace Studies, MAS (Operations Management), Embry Riddle Aeronautical University, 2005.

Marsh, Patrick R., Major, USAF. Adjunct Assistant Professor of Aerospace Studies, MPA (Public Administration), University of Wyoming, 2002.

Holt, Michael J., Captain, USAF. Adjunct Assistant Professor of Aerospace Studies, MPA (Public Administration), American Military University, 2013.

Landon, Nicklaus J., Captain, USAF. Adjunct Assistant Professor of Aerospace Studies, BS (Aviation Science), Saint Louis University, 2010.

Africana Studies

(Major, Minor, Courses, Faculty)

Students who wish to enroll in Africana Studies as their sole or primary Major will be expected to fulfill the *general requirements of the College of Liberal Arts*. Students who wish to enroll in Africana Studies as an added Major and who are primarily enrolled in a college at SIU Carbondale other than the College of Liberal Arts must fulfill their college's general requirements. Only Africana Studies courses completed with a least a C will fulfill the major requirement.

A minor in Africana Studies consists of a minimum of 20 hours, which are to be selected from Africana Studies course offerings and organized according to each individual student's field of interest. Africana Studies 311A,B is required for the minor.

Bachelor of Arts Degree in Africana Studies, College of Liberal Arts

AFRICANA STUDIES MAJOR	
<i>University Core Curriculum Requirements</i>	41
To include AFR 215 and AD 227	
<i>College of Liberal Arts Academic Requirements</i>	14
<i>Africana Studies Requirements</i>	39
AFR 109 Into to Africana Studies	
AFR 209 Critical Issues in Black America	
AFR 311A Black American History, Before 1865	
AFR 311B Black American History, After 1865	
AFR 334 Psychology of Black American Experience	
AFR 375 Africana Aesthetics	
AFR 475 Education and Black America	

- AFR 494 Methodology Seminar in Africana Studies*
- AFR 496 The Slave Narratives (Senior Seminar)*
- AFR 499 Special Topics

Electives for Specialization

Three 3-hour courses from any of the following:
 AFR Courses (300 or 400 level; including “African Cultural Continuities”)

Approved Courses in Fine Arts/Humanities (Music, Theater, Communication Studies, Art and Design, Cinema and Photography, Radio, Television&Digital Media, Philosophy, English) Approved Courses in Social Sciences (History, Sociology, Psychology, Anthropology, Social Work, Political Science) (9)
 All Africana Studies majors will be advised to take at least one section of AFR 399 (“Independent Study”) which will be a focused opportunity for assessment of student learning

<i>Electives</i>	26
<i>Total</i>	120

Africana Studies Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102	3	3
Social Science	3	3
UCOL 101, Humanities	3	3
Foreign Language	3	3
AFR 215, CMST 101*	3	3
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
Science, GEOG 300I	3	3
MATH, Human Health	3	2
AFR 311A, 311B	3	3
Humanities, Integrative Studies.....	3	3
WGSS 201*, MUS 103*	3	3
<i>Total</i>	15	14
THIRD YEAR	FALL	SPRING
AFR 209, 375.....	3	3
AFR 334, 227	3	3
AFR 475, 499.....	3	3
AFR 494/491, AFR Electives	3	3
AFR Electives	3	3
<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
AFR 399 (Independent Study).....	3	4
AFR 496, 491.....	3	3
AFR 499, AFR Elective.....	3	3
AFR Electives	3	3
AFR Elective, General Elective.....	3	3
<i>Total</i>	15	16

Courses (AFR)

109-3 Introduction to Black America. A survey course designed to expose the student to various aspects of the black experience. Aspects included are history, literature, theology, the arts, etc. The textbook is a collection of essays designed to use

especially in this course and is supplemented by guest lecturers and audiovisual materials.

135-3 The Third World: The African Model. Study of Third World through a focus on Africa as a model; emphasis on the cultural traditions, impact of the West, and the problems facing Third World nations today.

209-3 Critical Issues in the Black American Experience. Insights into the black American experience. Concepts including race, ethnicity, class, caste, minorities, prejudice, discrimination will be analyzed. Main focus is on exploration of critical socio-economic, political, and cultural themes such as demographic trends; migration and urbanization, political participation and strategies, income and employment, housing, health, education, black family, black religion, law, and justice. Prerequisite: AFR 109 recommended but not required.

215-3 Black American Experience in a Pluralistic Society. (University Core Curriculum) A study and understanding of the evolution of issues of pluralism in contemporary African American society. This course provides an interdisciplinary analysis of ideological and practical problems of racism, integration, class, equity, social institutions as they relate to the Black American experience.

225-3 Social Change in Africa. Examination of the interplay between tradition and modernity in an effort to understand the new Africa. Some of the forces of social change are analyzed. Other topics include African women and the family structure in change and the problems of African development.

227-3 History of African American Art. (Same as AD 227) (University Core Curriculum Course) A history of African American visual arts, with a brief examination of the arts of various nations of Africa and how they affected art in America. Craft arts, architecture, painting and sculpture will be considered from the slave trade era to the Civil War era; the Harlem Renaissance and other 20th Century movements to the present day.

230-3 Introduction to Black Sociology. An introductory course that focuses on the concepts of black sociology in order to fill the gaps of traditional sociology pertaining to the black experience. Designed to heighten the student’s awareness of the black identity and the sociological phenomena, which affect it and acquaints the student with specific sociological problems in the study of Afro-Americans.

257-1 Black American Studies Choir. Special approval needed from the instructor.

271-3 Africa in African Cinema. (Same as ANTH 271) This course is a general introduction to African culture and history through the medium of movies by African filmmakers. Students will watch over a dozen important movies from Africa. These screenings are supplemented with appropriate readings, online resources, lecture and discussion. Students will learn aspects of African history and ethnology while also gaining the aesthetic and intellectual tools to appreciate African cinema.

303I-3 Women, Blues & Literature. (Same as MUS 303I) (University Core Curriculum) Explores traditional aesthetic processes of the blues as a mode of self expression. Examines the images/voices projected by vaudeville blues women (1920s/30s), along with various manifestations/extensions-instrumental and vocal, musical and literary-from fiction and poetry to jazz, R&B, and rap. In depth analysis of blues music and literature.

310A-3 Peoples and Cultures of Africa. (Same as ANTH 310A) Introduction to the prehistory, cultural history, and modern cultures of people of Africa.

311A-3 Black American History. (Same as HIST 362A) Black American History to 1865. The role of blacks and contribution in the building of America and the ongoing fight for equality. Required for the minor.

311B-3 Black American History Since 1865. (Same as HIST 362B) The role of blacks and contribution in the building of America and the ongoing fight for equality. Required for the minor.

314A-3 History of Africa to 1800. (Same as HIST 387A) A chronological study of African peoples from earliest times to the present, including ancient Egypt, Ethiopia, the Era of the African Kingdoms, the role of Islam, the slave trade, African-European relations, colonialism, African nationalism and independence.

314B-History of Africa Since 1800. (Same as HIST 387B) A chronological study of African peoples from earliest times to the present, including ancient Egypt, Ethiopia, the Era of the African Kingdoms, the role of Islam, the slave trade, African-European relations, colonialism, African nationalism and independence.

320-3 Leaders of the Black World. A study of black rulers; governmental representatives; activists; and thinkers; both past and present; in Africa; the West Indies; and the United States, with emphasis on the effects of their philosophies on the black world.

325-3 Black American Writers. (Advanced University Core Curriculum course) (Same as ENGL 325) (IAI Course: H3 910D) Poetry, drama, and fiction by Black American writers. Satisfies the University Core Curriculum Multicultural requirements in lieu of English 205. Prerequisite: ENGL 102 or 120 or equivalent.

326-3 African American Politics. (Same as POLS 326) Designed to familiarize students with the role of African-Americans in American politics. An emphasis is placed on describing and analyzing how the structure of the American political system affects efforts by African-Americans in gaining the full benefits of the American political system. It will also address contentious sociopolitical issues that affect how African-Americans are treated in the context of the larger society.

330-3 Black American Social Problems. Comparative study of the social problems which afflict black Americans and other minorities and their consequences; including crime and delinquency, mental and emotional disorders, drug addiction, housing conditions, poverty and unemployment, and labor conditions. Special approval needed from the instructor.

332-3 Black Americans and Law. (formerly BAS 332) Investigates the long and complex relationship of U.S. Law and African Americans, from the Colonial Period through the Civil Rights era and more recently as issues such as mandatory sentencing and the expansion of offenses punishable by law have become widespread in U.S. society.

333-4 The Black Family. Exploring the myths and realities of the black family from sociological and psychological perspectives through a critical examination of scholarly controversies and research. Restricted to junior standing.

334-4 Psychology of African/African American Experi-

ence. (Same as PSYC 334) Examines psychological characteristics of African descent, using an Africentric conceptual model. Theoretical models will be critiqued and empirical data will be examined. Selected issues include: critiques of research methodologies involving African descended populations; African American identities and personality development, psychopathology and cognitive development issues (i.e., language). Prerequisite: Psychology 102 or consent.

339-3 Black Americans and the Correctional Process. Analysis of selected topics: the prison community and the black inmate; correction education and the black inmate; and the black professional. Prerequisite: AFR 332.

340-3 Introduction to the Archaeology of Africa. (Same as ANTH 340C) An introduction to the prehistoric and historic cultures of sub-Saharan Africa. The course examines subsistence practices, migrations, trade, technologies, cities, and states. Topics include social, political, and economic organization from hunter-gatherers to ancient kingdoms to early 20th century.

351-3 African-Atlantic Spirituality. (Same as HIST 351) This course explores the ways that African-Atlantic societies have expressed the interaction of people in the visible world with the spiritual powers of the invisible world. The course begins with the ancient foundations of these spiritual systems and then examines the historical transformation of these systems in West Africa, Central Africa, and the Americas into the twentieth century.

355-3 The Black American Novel Since Native Son. The black American novel and its major themes since Richard Wright's *Native Son*. Includes such authors as Baldwin, Petry, Williams, etc.

355A-3 Survey of African American Literature, Part 1. (Same as ENGL 355A) Course traces evolution African American Literature from roots in such Afri-based secular and sacred oral texts as folk tales, work songs, the Spirituals, Blues and other verbal forms, through the emergence of written texts, the eighteenth century up to the end of the Harlem Renaissance in 1940. Among these concerns are the continuing quest for freedom, identity, protest against oppression, and writers' interpretation of enduring African American spiritual and cultural values.

355B-3 Survey of African American Literature, Part 2. (Same as ENGL 355B) Examination of literary texts, voices and movements in the USA from 1940 to present. Among these concerns are the continuing quest for freedom, identity, protest against oppression, and writers' interpretation of the enduring African American spiritual and cultural values. Focus on the major developments in African American literature after the Harlem Renaissance and its impact on the contemporary literature of African Americans.

357-3 Blacks in the Performing Arts. History of the role of blacks in the performing arts covering dance companies, ballet, folk dance and black dramatists; cinema, in all its forms; radio and television; and music (spirituals, jazz, opera, classics, etc.)

360-3 Race and History in the United States. (See HIST 361)

375-3 to 6 Topics in Africana Aesthetics. Course will investigate theories of African art, especially music, dance, sculpture, textile design and adornment styles of cultural groups in West Africa. Cultural transferences and continuities of African

art as found in the African diaspora (with special attention to African American art production) will also be studied. Students will be expected to develop a philosophy of art.

399-1 to 6 Independent Study in Black American Studies. Independent study, which examines problems and issues not covered in a specific course. Hours and subject matter decided during consultation with a faculty member. Special approval needed from the instructor and director of program.

410H-3 African Expressive Culture. (Same as ANTH 410H) This course examines aspects of African expressive culture including the visual arts, music, dance, orature, cinema, drama, and ceremony from an anthropological perspective. Particular attention is given to analysis of African expressive culture in social context and the role of the arts in the practice of politics, religion, medicine, and other aspects of African life. Many of the expressive genres examined deal with historical representation and political resistance. Therefore, this course provides insights into African history and politics through the creation of African artists.

416-3 Black Feminist Thought as Theory and Praxis. (Same as CMST 416 and WGSS 416) Explore the roots, contemporary manifestations, and current embodiments of Black feminist thought. Explore the works of Black women to engage in critical thinking and thoughtful dialogue that positions the valuable knowledge, experiences and perspectives of women of color at the center of inquiry while simultaneously discovering spaces for multicultural alliances. Prerequisite: CMST 301I or CMST 341 or consent of instructor.

420-3 Themes in Africana Drama. (Same as THEA 460) Explores significant themes in African and African American drama, with special attention to performance styles and cultural issues.

430-3 Black Political Socialization. Definitive approach to how people learn about politics focusing on blacks because of their unique experience; i.e., prolonged minority group status. Research oriented, in that, it takes an explanative and predictive approach to produce models of political learning. Not for graduate credit. Prerequisite: AFR 230. Restricted to junior or senior standing, or consent of department.

447-3 Communicating Race and Ethnicity. (Same as CMST 447) Via intercultural theories and methods, this course explores histories, relationships, interactions and recent events by positioning racial and ethnic perspectives at the center of inquiry. The course critically examines the complexities of race, racism and ethnicity by focusing on how people communicate across racial and ethnic differences in different contexts. Prerequisite: CMST 301I or CMST 341, or consent of instructor.

452A-3 Traditions of Uppity Women's Blues. (Same as MUS 452A, WGSS 452A) Examines the tradition of "uppity" women's blues from the so-called "classic" blues singers of the 19th century (Gertrude "Ma" Rainey, Bessie Smith, Ida Cox, etc.) to the contemporary blues of Saffire, Denise LaSalle and others. Explores ways blues women challenge conventions of gender and sexuality, racism, sexism, classism, and homophobia. Restricted to junior/senior/graduate music major or consent of instructor.

452B-3 Blues and Boogie Woogie Piano Styles. (Same as MUS 452B) Traces the history, culture, and stylistic developments of blues and boogie woogie piano. Explores socio-cultural contexts

and examines key players, pieces, and musical styles. Restricted to junior/senior/graduate music major or consent of instructor.

458-3 Bantu Diasporas in Africa & the Atlantic World. (Same as HIST 458) This course examines the origins and development of Bantu language and culture groups in Africa and the Atlantic World from the first dispersal of Bantu-speaking people thousands of years ago through the end of slavery in the Americas. Additionally, the course explores the multiple methods and disciplines used to construct histories of Bantu language and culture groups.

460-3 Slavery and The Old South. (Same as HIST 460) This course examines slavery and southern distinctiveness from the colonial period to 1861. Discussion topics include the plantation system, race relations, women and slavery, and southern nationalism.

461-3 Black Americans on the Western Frontier. (Same as HIST 461) This course examines the history of African Americans in the American West. Taking both a chronological and thematic approach, it begins with a discussion of early black explores in the age of encounter, and ends with a focus on black western towns established in the United States by the 1880's.

465-3 Governments and Politics of Sub-Saharan Africa. An examination of the impact of western colonial rule on the societies and politics of Africa, the method by which these colonial areas became sovereign states in the post-World War II era, the role of domestic political institutions, African political thought and behavior, and the development of foreign policies regarding relations with other African states, continental and international organizations, and international organizations, and non-African states.

472-3 Psychology of Race and Racism. (Same as PSYC 470) A review of the history and evolution of the construct of race as a psychological phenomenon. The persuasiveness of race in every sphere of life will be studied, from a multidisciplinary perspective.

473-3 Comparative Slavery. (Same as HIST 473) A comparative study of slavery from antiquity to its abolition in the 19th century with the differing socio-cultural, political and economic contexts; organized chronologically, regionally, and thematically.

475-3 Education and Black America. This course uses the best scholarship of cultural anthropology and social studies to look at the history of education in the African American community; how public education affects African American families; how school shape cultural change and how racial, ethnic peer group, and gender issues help determine curriculum issues. For graduate credit.

478-3 Southern Africa, 1650-1994. (Same as HIST 478) An examination of Southern African history with emphasis on South Africa from 1652 to 1994. Topics to be covered include conflicts and wars, migrations and state formations, the economics of minerals, industrialization and the Anglo-Boer War, intertwined histories of race relations, the politics of exclusion and apartheid, and the making of modern South Africa.

491-3 to 6 Independent Readings in Africana Studies. Special topics, focused on research needs of students who are regularly enrolled in upper-division courses, especially graduate students doing research in Africana related topics in other departments and programs. May be repeated for up to six credit

hours. Special approval needed from the director of the AFR program.

494-3 Methodology Seminar in Africana Studies. This course provides the theoretical framework for research in the field of Africana Studies. Students will investigate the foundations of the field of Black Studies, from the arguments of Maulana Karenga and Molefi Asante, to the challenges of scholars such as Manning Marable, James Turner and other recent scholars. Students will pursue individual research projects appropriate to various academic disciplines which constitute the field of Africana Studies. Maybe taken for graduate credit.

495-3 to 9 African Cultural Continuities: Study Abroad. Study abroad 4-6 week program is designed to introduce similarities in culture (food, dance, music, family traditions, religion) of people in Ghana and in the cultures of people in the African diaspora. Class begins on the SIUC campus and will relocate to Elmina and Cape Coast, Ghana, during the first year of a three-year sequence. Other years will locate in areas of the West Indies, Caribbean & Central America. May be taken for graduate credit. Special approval needed from the instructor.

496-3 Slave Narratives. Using compilations of the 19th and early 20th century body of work known as "Slave Narratives", students will organize research projects that discover selected major themes of Africana Studies. The course will be useful to students from various academic disciplines (such as Psychology; Music; Sociology; History; Philosophy; Education; Literature; and Theology, among others) as they place Slave Narratives in the center of Africana and American Studies scholarship. May be taken for graduate credit.

497-3 The US. Civil Rights Movement. (Same as HIST 487) This course provides an overview of the history of the Civil Rights Movement while engaging major debates in the field of Black Freedom Studies. Central themes will include the impact of the Cold War, the roles of women, and the relationship of civil rights to black power. We will also discuss the difference between popular memory and historical scholarship as well as the meaning of such discussions for contemporary issues of racial and economic justice.

499-3 to 9 (3 per topic) Special Topics in Africana Studies. Topics vary and are announced in advance. May be repeated as the topic varies. No prerequisites.

499A-3 History of African American Philosophy. (Same as PHIL 451) A survey of major thinkers and themes in the history of African American Philosophy from colonial times to the 20th century. Prerequisite: at least one previous course in Philosophy or Africana Studies with a minimum grade of C.

499B-3 Philosophy of Race. (Same as PHIL 455) A survey of critical examination of a range of theories on the nature and meaning of "race", the intersection of race with class and gender, and the promotion of racial progress. Such theories include racial realism and idealism, racial biologism, cultural race theory, social constructivist theory, integrationism, separatism, racial eliminativism, cosmopolitanism, and especially critical race theory. Prerequisite: at least one previous course in Philosophy or Africana Studies with a minimum grade of C.

499C-1 to 6 Topics in Africana Philosophy. (Same as PHIL 459) A seminar on varying topics, themes, and figures in African, African American, and/or Caribbean Philosophy, e.g., "W.E.B. Du Bois and His Contemporaries," "Pan Africanism," "Philosophies of Liberation," "Black Feminism," "Contemporary African Philosophy," "Philosophies of the Caribbean." Prerequisite: at least one previous course in Philosophy or Africana Studies with a minimum grade of C.

philosophies of Liberation," "Black Feminism," "Contemporary African Philosophy," "Philosophies of the Caribbean." Prerequisite: at least one previous course in Philosophy or Africana Studies with a minimum grade of C.

Africana Studies Faculty

Brown, Joseph A., Professor, Ph.D., American Studies, Yale University, 1984.

Caffey, Ronald A., Assistant Professor, M.B.A., Southern Illinois University Carbondale, 1996; Ph.D., Higher Education and Administration, Southern Illinois University Carbondale, 2007.

Chipasula, Frank, Associate Professor, Ph.D., Black American Studies, English, Brown University, 1987.

Gadzekpo, Leo K., Associate Professor, Ph.D., American Cultural Studies, Bowling Green University, 1997.

Howze, Philip C. Professor of Library Affairs and *Interim Chair*, M.P.A., University of Nebraska, 1989; M.A., University of Iowa, 1990.

Smoot, Pamela A., Clinical Assistant Professor, Ph.D., American History, Michigan State University, 1998.

Agribusiness Economics

(Department, Major, Courses, Faculty)

The need to better utilize our natural resources and protect our environment, improve our rural infrastructure, and manage the activities of food/fiber production, processing, and distribution firms in an international setting is creating career opportunities at a quickening pace.

Agribusiness Economics offers a flexible program, which, under the supervision of a faculty advisor, allows the student to pursue either a comprehensive or more specialized course of study in preparation to assume an effective professional role in our dynamic, global, economic, and social environment.

Courses in Agribusiness Economics in the traditional areas of farm management and marketing emphasize accepted techniques to improve efficiency and farm profitability. Course offerings in agribusiness management, finance, sales, marketing, and commodity futures prepare students to assume positions with a broad range of businesses that comprise the agribusiness sector; from input suppliers to farmers through merchandising and processing agricultural commodities to retail sales to consumers. Course offerings in environmental, energy, and natural resource economics, agribusiness management, rural development, food policy and agricultural law introduce the needed applied economic skills for effective decision making, complement a more specialized course of study, and provide the basis for dealing with contemporary societal problems.

The Agribusiness Economics major involves a set 22 hours of agribusiness economics core requirements as well as 15 elective hours in agribusiness economics including at least six hours at the 400-level. Students also have 15 hours of business, economics and methodology requirements, six hours of communication courses over and above the nine hours required by the University Core Curriculum, and 24 hours of electives. Students working with their faculty advisors will be able to plan an academic program tailored to their particular interests and/or career paths, e.g., Agribusiness Management and Finance; Energy and Environmental Policy; Farm Business Management; Sales and Mar-

keting; Energy; and Pre-Law. Sample programs of study based on these and other areas of interest are available from the department. A few examples are provided in what follows; however, these are only a few of the possibilities open to students.

Technology Fee

The College of Agricultural Sciences assesses College of Agricultural Sciences undergraduate majors a technology fee of \$4.58 per credit hour up to twelve credit hours. The fee is charged Fall and Spring semesters.

Bachelor of Science Degree in Agribusiness Economics, College of Agricultural Sciences

AGRIBUSINESS ECONOMICS MAJOR

<i>University Core Curriculum Requirements</i>	41
ABE 204	
<i>Requirements for Major in Agribusiness Economics</i>	55
Agribusiness Economics Core	19
Agribusiness Economics (204); 318; 330; 340, 350 or 360;	
351; 361 or 362; 381-1 to 4; 440, 442, 444, 450, 461 or 463	
Agribusiness Economics Electives (six at 400-level).....	15
Communication Requirements	6
Communication Studies 221, English 291, Agricultural	
Systems 314, English 290, Management 202, Speech	
Communication 280 or equivalent	
Business, Economics, and Methodology Requirements	15
Accounting 220, Agricultural Systems 118, Economics 240,	
241, Agribusiness Economics 419 or equivalent	
<i>Other Electives</i>	
(at least nine at 300-level, six at 400-level)	24
<i>Total</i>	120

In addition to the traditional major, the department participates in the University's Capstone Degree Option. Through this program, students who graduate with an Associate in Applied Science (AAS) from a community college can earn a Bachelor of Science degree by taking 60 hours of course work at SIU. Through this program, an individualized study plan is written for each student. While our capstone-degree program is based on 70 hours, the vast majority of students transfer in 10 or more credit hours that apply to their capstone program, and their individualized program reflects only the 60 hours they must complete under the rules of the university's capstone option.

**DEPARTMENT OF AGRIBUSINESS ECONOMICS:
CAPSTONE-DEGREE REQUIREMENTS**

<i>University Core Curriculum Requirements</i>	30 ¹
<i>Requirements for Major in Agribusiness Economics</i>	40 ¹
Agribusiness Economics Core	22
Agribusiness Economics 204; 318; 330; 340, 350 or 360; 351;	
361 or 362; 381-1 to 4; 440, 442, 444, 450, 461 or 463	
Communication Requirements	6
Communication Studies 221, English 291, Agricultural	
Systems 314, English 290, Management 202, Speech	
Communication 280 or equivalent	
Business, Economics and Methodology Requirements	12
Accounting 220, Agricultural Systems 118, Economics 240	
or 241, Agribusiness Economics 419, or equivalent	
<i>Total</i>	120

Agribusiness Economics Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
Core Science	3 or 4	3 or 4
Core Fine Arts	-	3
UCOL 101, ECON 240.....	3	3
ENGL 101, 102	3	3
ABE 204, CMST 101	3	3
MATH 108 or higher ⁴	3	-
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
Core Social Science	3	-
Core Humanities	3	3
ENGL 291, CMST 221	3	3
MGMT 345	-	3
ECON 241, ABE 330	3	3
Core Multicultural, Human Health.....	3	2
<i>Total</i>	15	14

THIRD YEAR	FALL	SPRING
ABE 340 ³ , 350 ³ or 360 ³	3	3
ABE 318	3	-
ACCT 220	3	-
ABE 351	3	-
ABE 361 ² or 362 ²	3	3
ABE Electives	3	6-15
Other Electives	3	6-15
<i>Total</i>	21	18

FOURTH YEAR	FALL	SPRING
ABE 440 ³ , 444 ³ , 450 ³ , 461 ³ or 463 ³	3	3
ABE 381 ⁵	1	1
ABE 419.....	-	3
Electives	9-15	9-12
<i>Total</i>	13	16

¹Students required to take one of ABE 340, 350 (Fall) or ABE 360 (Spring)
²Students take either ABE 361 (Fall) or ABE 362 (Spring)
³Students take one of ABE 440, 444, 450 (Fall), 461 or 463 (Spring)
⁴Mathematics 101, 139, 140
⁵Students may take ABE 381 in either (Fall or Spring)

Capstone Option Suggested Curricular Guide

THIRD YEAR	FALL	SPRING
ABE 340 ¹ , 350 ¹ or 360 ¹	3	3
ABE 318	3	-
ACCT 220, AGSE 318	3	3
ABE 351	3	-
ABE 361 ² or 362 ²	3	3
ENGL 291 or CMST 221	3	3
Elective or Core	0-6	3-9
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
ABE 440 ³ , 444 ³ , 450 ³ or 461 ³ or 463 ³	3	3
ABE 381 ³	1	1

ABE 419	-	3
ECON 240 or 241	3	-
Elective or Core	9-12	9-12
Total	15-16	15-16

¹ Students are required to take one of ABE 340, 350 (fall) or ABE 360 (spring)

² Students take either ABE 361 (fall) or ABE 362 (spring)

³ Students take either ABE 440 (spring) 444 (fall), 461 or 463 (spring)

⁴ Mathematics 108, 139 or 140 recommended for students with appropriate preparation

⁵ Students may take ABE 381 in either (fall or spring)

Examples of Agribusiness Economics Programs of Study for Different Career Tracks

Sales and Marketing Career

Suggested Agribusiness Economics electives:

Agribusiness Economics 333, 360, 363, 453, 462, 401, 460

Suggested College of Agricultural Sciences electives:

Plant and Soil Sciences 200, 300

Suggested other electives (24 hours – minor in Economics)

Marketing 304, 336, 390, 435

Energy and Environmental Policy

Agribusiness Economics courses:

Agribusiness Economics 204, 318, 330, 340, 351, 381, 440 and 444

Other Agribusiness courses:

Agribusiness Economics 401, 453, 463

Other suggested courses:

Accounting 230, Economics 240 and 241, 340 or 341, 408

Geography and Environmental Resources 401, 420

Political Science 325, 444, 445

Farm Business Management

Agribusiness Economics core courses:

Agribusiness Economics 204, 318, 330, 350, 351, 361 or 362, 381, 450

Other Agribusiness Economics courses:

Agribusiness Economics 333, 340, 361 or 362, 363, 401, 460, 453

Other Agriculture courses students may wish to develop their technical skill in a particular production area by selecting other agricultural courses.

Animal Science 121, 122, 315, 430, 465, 485, Agricultural Systems 472, Crop, Soil & Environmental Management 200, 300, 419, 468, Horticulture 220, 333, 423, 432

Other Suggested Courses:

Accounting 230

Agribusiness Management & Finance

Agribusiness Economics core courses:

Agribusiness Economics 204, 318, 330, 351, 360, 361 or 362, 461, 381

Other Agribusiness Economics courses:

Agribusiness Economics 333, 340, 363, 401, 453, 460, 463

Other Suggested Courses:

Accounting 230, Economics 240 & 241, Marketing 304, 336

Agricultural and Rural Real Estate Appraisal

Agribusiness Economics core courses:

Agribusiness Economics 204, 318, 330, 350, 351, 361 or 362, 381, 450

Other Agribusiness Economics courses:

Agribusiness Economics 333, 340, 361 or 362, 401, 451, 453

Other Suggested Courses:

Finance 320, 321, 322, 323, 330, Crop, Soil & Environmental Management 240

Agribusiness Economics Minor

A minor in agribusiness economics is offered. A minor consists of 15 semester hours of credit of which 3 credit hours must be at the 400-level. Twelve (12) hours must be taken at Southern Illinois University Carbondale. An advisor within the department must be consulted before selecting this field as a minor.

Courses (ABE)

204-3 Introductory Economics of Food, Fiber, and Natural Resources. [IAI course: AG 901] (Advanced University Core Curriculum Course) An introduction to the economics and policies underlying food and fiber production, distribution, and consumption as well as the use of environmental and natural resources.

257-1 to 10 Work Experience. Credit for on-campus work experience through a cooperative program developed between the department and the Office of Student Work and Financial Assistance. Special approval needed from the chair. Mandatory Pass/Fail.

258-1 to 30 Past Work Experience. Credit for career related employment based on the evaluation of the documentation of this experience by the Department of Agribusiness Economics. No grade for past work experience. Special approval needed from the chair.

300I-3 Social Perspectives on Environmental Issues. (Same as AGR/LAC 300I) (University Core Curriculum) Case studies (e.g., rural village in developing nation; small town in the U.S.; city in developing nation) are used to learn how different societies and groups deal with their specific environmental issues, and how culture and economic factors affect their perspectives and actions.

302-2 Country Living Management and Information. Managing a small acreage as an avocation. Types of decision problems and sources of information.

318-3 Agribusiness Statistical Methods. Statistical methods applied to agribusiness economics, including survey design, sampling, graphic presentation of data, index numbers, statistical inference, basic linear regression and correlation.

330-3 Principles of Agribusiness Economics: Theory and Applications. The student will enhance their understanding of and ability to apply the principles of economics to the unique problems of the agricultural sector. The course covers the theory of resource allocation with a rural emphasis. The following topics are taken up in a case study framework: production of food and fiber, the agribusiness sector and markets, rural community development, and environmental and natural resource use and conservation. The roles of governmental policy, international trade organizations, and treaties are included throughout the course. Prerequisite: ABE 204.

333-3 Professional Agri-selling. Focuses on professional Agri-selling and the sales process. Topics include different methods of selling, steps and techniques in the selling process, customer service, sales ethics, consumer behavior concepts and sales management. Critical skills of self-management, commu-

nication, and interpersonal values are examined. Opportunities of a career in Agri-selling are surveyed.

340-3 Domestic and International Food Policies. Examination of domestic and international policies that affect the production of food products. Topics will include a review of existing and former policies designed for American producers (e.g., commodity programs to support farm income, risk management and conservation of resources). Food safety policies will be examined. In addition, aspects of international trade including policies (NAFTA), practices, and institutions (WTO, World Bank, etc.) as they relate to access to foreign markets will be reviewed. Prerequisite: ABE 204 or consent of instructor.

350-3 Farm Management. Efficient organization and management of a farming operation. Emphasis on crop and livestock selection, management of farm resources, farm budgets and records analysis, and farm leases. Prerequisite: ABE 204 or one course in economics. Student will incur field trip expenses not to exceed \$5.

351-3 Financial Management in Agriculture. Analysis of the capital structure of agriculture and sources of capital. Credit analysis of agribusiness firms using financial statements, firm growth, capital budgeting, and tax considerations. Prerequisite: ABE 204 or equivalent.

359-1 to 6 Intern Program Supervised work experience program in either an agricultural agency of the government or agribusiness. Restricted to junior standing or consent. Mandatory Pass/Fail.

360-3 Agribusiness Management and Organization. Problems and practices in agribusiness operations including management practices, decision-making tools, financial analysis, economic considerations in managing land, labor and capital, and the impact of alternative organizational forms are emphasized. The focus is on applications to real world problems. Students are provided an opportunity to interact with business managers through a series of guest speakers. Prerequisite: ABE 204 or equivalent.

361-3 Agribusiness Marketing Management. An overview of marketing practices and strategies employed by agribusiness product and service firms. Market research, market segmentation and product mix development are among the topics reviewed. Students participate in case analysis and marketing plan development projects. Prerequisite: ABE 204 or equivalent.

362-3 Marketing and Pricing Agricultural Products. Institutional arrangements in marketing agricultural products. Market structure, marketing costs, and alternative methods of pricing agricultural products are also examined. Prerequisite: ABE 204 or equivalent.

363-3 Commodity Price Risk Management. The focus is on the use of financial instruments, including futures and options, to manage price risk in modern agribusiness. Topics covered include: commodity futures and options, cash forward and other over-the-counter contracts, hedging, spreading, basis risk and basis trading. Applications and examples are provided for commodity producers, end-users, and the processors. The mechanics of futures trading and speculation are considered. Students are given the opportunity to observe and participate in futures market transactions.

381-1 to 4 (1,1,1,1) Agricultural Seminar. Discussion of spe-

cial topics and/or problems in the field of agribusiness economics. Restricted to junior standing. Special approval needed from the department.

388-1 to 16 (1 to 8 per semester) International Studies. Course work undertaken as a part of an approved University residential study program abroad. May be taken for a maximum of eight semester hours per semester and may be repeated for a maximum of 16 semester hours. Special approval needed from the major department or program.

390-1 to 6 Special Studies in Agribusiness Economics. Assignments involving research and individual problems. Field trips. Special approval needed from the chair.

391-1 to 4 Honors in Agribusiness Economics. Completion of honors paper or comparable project under the supervision of one or more faculty members. Subject matter depends upon the needs and interests of the student. Restricted to junior standing, GPA 3.0 with a 3.25 in major. Special approval needed from a staff member, department chair.

401-3 Agricultural Law. Relations of common-law principles and statutory law to land tenure, farm tenancy, farm labor, farm management, taxation, and other problems involving agriculture. Restricted to junior standing or consent of instructor.

402-1 to 6 Problems in Agribusiness Economics. Designed to improve the techniques of agribusiness economics workers through discussion, assignment, and special workshops on problems related to their field. Emphasis will be placed on new innovative and currently developed techniques for the field. Special approval needed from the chair.

405-3 Management of Ethanol Production Facilities. This course is offered in cooperation with the National Corn-to-Ethanol Laboratory and provides a comprehensive introduction to the management and operation of an ethanol facility as well as overview of today's biofuels industry. Topics include: ethanol industry trends and bio-fuels future, corn-to-ethanol production processes, operations control and management, products and co-products, and environmental topics.

419-3 Entrepreneurship in Agribusiness. Students will understand the importance of entrepreneurs to the food, agriculture, and rural economies; learn characteristics common to successful entrepreneurs; prepare a business plan; use information resources to support a business plan; and become proficient in developing professional reports using information technology software. Prerequisite: ABE 350 or 351 or 360.

440-3 Natural and Environmental Resource Economics and Policy. Students will study the application of socioeconomic principles to problems related to natural and environmental resources. The course covers the policy context within which policies related to natural and environmental resources are developed and implemented as well as the range of policy tools available for addressing environmental/natural resource problems. The institutional setting for dealing with natural and environmental resources is presented along with the role of property rights and entitlements. Contemporary resource problems are used as examples. Prerequisite: six hours of agribusiness economics, economics, or geography; graduate status; or consent of instructor.

442-3 Energy Economics and Policy. Economics principles and methods are used to examine economic and policy issues relevant to energy production and use. Topics include:

key aspects of energy supply, demand, markets, and regulation; environmental externalities of fuel production and use; the relationships among energy use, economic growth and the environment; alternative energy sources. Prerequisite: 6 hours of agribusiness or general economics, geography, or consent of instructor.

444-3 Agricultural Development. (Same as ABE 544) Students are introduced to economic growth and development theory at an intermediate level. Topics include trends in development in North America and study of theories. The economic theories covered address how growth occurs in developed economies including classical and neoclassical, central place and endogenous growth theories among others. Prerequisite: 6 hours of agribusiness or general economics, geography, or consent of instructor.

445-3 Methods of Regional Economic Analysis. (Same as Agribusiness Economics 545) Students are introduced to regional economic methods at an intermediate level. Students will learn concepts and tools commonly used in regional and community economic analysis. Students will learn to use regional input-output analysis and more technical regional economic models designed to capture spatial economic variables. Prerequisites: ABE 444 or consent of instructor.

450-3 Advanced Farm Management. Application of production economic principles and modern decision-making techniques to farm management problems. The importance of information, sources of agricultural risk and management of risk in farm planning will be integrated. Prerequisite: ABE 350 or equivalent and University Core Curriculum mathematics required.

451-3 Appraisal of Rural Property. Principles and practices of rural and farm appraisal. Applications of sales comparison, income capitalization and cost approaches for estimating market value. Consequences of environmental liabilities and regulations on appraisal practices. Understanding of special valuation methods for buildings, insurance, assessments, loans and condemnations. Prerequisite: ABE 350 or consent of instructor. Field trips not to exceed \$10.

452-Advanced Agricultural Financial Management. Focus is on using the financial accounting system recommended by the Farm Financial Standards Council as a base for evaluating the financial performance of farms and agribusinesses. Ratio analysis and DuPont modeling emphasized. Additional focus on credit markets serving farms and agribusinesses with an emphasis on the Farm Credit System and its affiliated Agricultural Credit Associations. Prerequisite: ABE 351.

453-3 Agribusiness Planning Techniques. Application of mathematical programming to agribusiness and farm planning, including enterprise selection, resource allocation, least cost ration formulation, decision making under risk and uncertainty, transportation and location problems. Emphasis placed on modeling problems and interpretation of results. Restricted to junior standing or consent of instructor.

460-3 Agricultural Price Analysis and Forecasting. The focus is on the measurement and interpretation of factors affecting agricultural prices. Methods to analyze the seasonal, cyclical, and trend components of commodity prices are presented. Formal forecasting techniques, including an introduction to statistical and regression methods, are used and explained.

Emphasis is placed on the presentation, communication, and evaluation of forecasts in a business environment. Students are given an opportunity to perform applied price analysis and present the results. Prerequisite: ABE 318, 362 or equivalent.

461-3 Agriculture Business Management Examination of agribusiness firm management with emphasis on the management and control of financial resources and the interrelationship between the agribusiness firm and human resource management. Other topics in agribusiness will include effective communication in the management process, business ethics, and workable credit programs for customers. Prerequisite: ABE 351 and 360 or equivalent.

462-3 Advanced Agricultural Marketing. Advanced treatment of marketing issues from both theoretical and practical decision-making perspectives. Marketing margins, intertemporal, and spatial price relationships are reviewed in detail. Historical and current grain and livestock price series are utilized in decision-making exercises. Prerequisite: ABE 362 or equivalent.

463-3 Managerial Strategies for Agribusiness. Application of Industrial Organization and Strategic Management (Competitive Strategy) principles to address economic and managerial issues related to agriculture and food industries. Particular emphasis on applying those principles to explain structural changes taking place in the agriculture and food supply chain in the United States. Prerequisite: ABE 204, 350 or 360, ECON 240.

470-3 Interdisciplinary Approaches to Environmental Issues. Application of concepts from the biological, physical and social sciences, economics, humanities and law, used to understand the interdisciplinary complexities of environmental issues. Students will develop and demonstrate problem-solving skills as part of a team analyzing a regional environmental issue. Team-taught seminar style discussions. Prerequisite: PLB 301I and admission to Environmental Studies minor program.

471-3 Resource Allocation in the Agribusiness Firm. An examination of resource allocation in the agribusiness firm. Production decisions, agricultural product price analysis and decision making models are considered. Student cannot receive credit for ABE 471 if credit has been received for ABE 571. Prerequisite: six hours of agricultural economics or economics. Special approval needed from the instructor.

472-3 Problems and Policies of the Agricultural Sector. An analytical survey of agricultural policy issues including agricultural price and income stabilization; international trade, capital and credit, the structure of agriculture and the quality of life in rural areas. Student cannot receive credit for ABE 472 if credit has been received for ABE 572. Prerequisite: six hours of agricultural economics or economics or instructor approval.

Agribusiness Economics Faculty

Altman, Ira, Associate Professor and *Chair*, Ph.D., University of Missouri-Columbia, 2005.

Beaulieu, Jeffrey, Associate Professor, *Emeritus*, Ph.D., Iowa State University, 1984.

Beck, Roger, Professor, *Emeritus*, Ph.D., Pennsylvania State University, 1977.

Eberle, Phillip, Associate Professor, *Emeritus*, Ph.D., Iowa State University, 1983.

Harris, Kim, Associate Professor, *Emeritus*, Ph.D., University of Illinois, 1985.

Herr, William McD., Professor, *Emeritus*, Ph.D., Cornell University, 1954.

Kraft, Steven E., Professor, *Emeritus*, Ph.D., Cornell University, 1980.

Moon, Wanki, Professor, Ph.D., University of Florida, 1995.

Rendleman, C. Matthew, Associate Professor, Ph.D., Purdue University, 1989.

Sanders, Dwight, Professor, Ph.D., University of Illinois, 1995.

Agricultural Sales

(SEE AGRIBUSINESS ECONOMICS)

Agricultural Sciences (College, Courses)

Courses (AGRI)

101-1 Introduction to Agriculture, Food, and Forestry. Course provides first-year students with information and skills necessary for successful transition into University life. Academic expectations, time management skills, advisement, campus facilities and services, professional and student organizations, college and campus activities are topics. Professional development and industry contacts will be provided through guest lecturers from the College, University and agriculture industry.

110-3 Agriculture and Society. An introductory and general inquiry about the role and characteristics of farm and off-farm agriculture in our non-agrarian society. To acquaint students with important aspects of the various fields of agriculture and agrarian relationships to our society.

259-2 to 40 Technology in Agriculture. For credit earned in technical or occupational proficiency above the high school level (by departmental evaluation).

300I-3 Social Perspectives on Environmental Issues. (Same as ABE/LAC 300I)(University Core Curriculum) Case studies (e.g., rural village in developing nation; small town in the U.S.; city in developing nation) are used to learn how different societies and groups deal with their specific environmental issues, and how culture and economic factors affect their perspectives and actions.

323-2 Career Development in Agriculture. Explores the information necessary for a participant to enter into an agricultural career with government, business or industry. Participants will complete a personal skills assessment, a resume, research a prospective employer, complete a mock interview and negotiate employment.

333-2 Agriculture and Forestry Environmental Problems. An overview course directed at the environmental problems of food, fiber, and forest products, production and processing and their potential solutions. A team taught course within the College of Agricultural Sciences.

351-1 Ideas 2 Investigation (i2i) Project Development. Students will work with faculty member(s) to develop a project of research to be completed in a subsequent semester through AGRI 451. Course will help students identify and propose a topic/area of research relevant to their academic interests and focused on a problem or challenge within the industries and

stakeholders relevant to the majors within the College of Agricultural Sciences. The process to enroll in this class is highly competitive and enrollment is restricted to consent of faculty and i2i Review Committee. May be repeated for a total of two hours.

388-1 to 16 (1 to 8 per semester) International Studies in Agriculture. Course work undertaken as a part of an approved University residential study program abroad. May be taken for a maximum of eight semester hours per semester and may be repeated for a maximum of 16 semester hours. Special approval needed from the College of Agricultural Sciences or department within the college.

390-1 to 9 Special Studies in Agriculture, Food & Forestry. Assignments involving research and individual problems. Field trips.

401-3 Fundamentals of Environmental Education. (Same as FOR 401 and REC 401) A survey course designed to help education majors develop an understanding of environmental education principles and teaching both inside and outside the classroom. Requires field trip transportation fee not to exceed \$25 per course registration. Prerequisite: Ten hours of biological science or ten hours of recreation and/or education, or consent of instructor.

423-3 Environmental Interpretation. (Same as FOR 423 and REC 423) Principles and techniques of natural and cultural interpretation. Two hours lecture, three hours laboratory. Prerequisite: ten hours biological science or ten hours of recreation. Requires field trip transportation fee not to exceed \$40 per course registration.

450-2 Farming Systems Research and Development. An introduction to farming systems, which is an interdisciplinary approach to agricultural research and development emphasizing small farms. The whole farm is viewed as a system of interdependent components controlled by the farm household. Focuses on analyzing interactions of these components as well as the physical, biological, and socioeconomic factors not controlled by the household. Techniques of analysis are applicable domestically and internationally.

451-1 to 12 Ideas 2 Investigation (i2i) Research Project. Students will complete the project proposed in AGRI 351, working through partnership with industries and stakeholders. Students may register for 1 to 12 hours depending on the depth and breadth of the project, working with a faculty member and i2i Review Committee to determine credit hours. Course will culminate with a presentation about their project at the end of the semester. The process to enroll in this class is highly competitive and enrollment is restricted to consent of faculty and i2i Review Committee. Prerequisite: AGRI 351. May be repeated for a maximum total of twenty-four hours.

481-1 International Agricultural Seminar. Discussion of special topics relating to worldwide agricultural development. Special approval needed from the instructor.

495-1 to 6 Instruction in Agricultural Sciences. Acquaints the student with different teaching environments and styles. Students will be expected to participate in instructing agricultural sciences courses. Restricted to junior or senior standing. Special approval needed by the instructor.

Agricultural Systems and Education

(Major, Courses, Faculty)

The Agricultural Systems and Education major is administered through the Department of Plant, Soil and Agricultural Systems. The Agricultural Systems and Education program includes six specialized areas of study.

The primary objectives of this major are: to provide specialized academic preparation in agriculture appropriate for the specializations of the major, to provide a program for the student desiring a broad based agriculture major, optionally combined with another discipline and to provide the quality academic and professional preparation necessary for success in the various career fields of the specializations. The following statements identify typical career opportunities for persons completing the respective specialization.

Agricultural Systems Technology Management Specialization. This specialization is intended for students interested in technical management of an agricultural related business involved in production, processing or manufacturing. This specialization combines an understanding of the agricultural, biological and physical sciences with managerial and technical skills. This understanding of science, systems management and applications engineering can be used in a career in the production and processing of food, fiber, feed and fuel. Students focus on the application of engineering principles, the study of agricultural technology and integration of business management concepts in the food and agricultural industry.

Agricultural Education Specialization.

This specialization is intended for those students who plan to be involved in agricultural programs as a teacher in secondary and post-secondary education, as well as in the fields of communication, extension, and industry. Students will complete course requirements for teacher licensure in secondary Agricultural Education, and can optionally complete training for teacher licensure in other majors, including biology, math, physical sciences, and social sciences.

Agricultural Production Management Specialization. This specialization provides the student with the background and preparation for careers in production based areas of agriculture including sales and service positions in the supply and marketing chain, support industries, and agribusiness as well as production management positions and farming.

General Agriculture Specialization. This program is designed to provide the student with a broad-based background in agriculture and the flexibility so that the student, in conjunction with their advisor, can design a program of study that prepares them to meet their career goals. These customized programs often include emphasis in other disciplines.

Agricultural Communications Specialization. This specialization is designed to provide the student competencies in both agriculture (animal science, horticulture, crop/soil sciences, agricultural business/economics, and agricultural engineering/technology) and communications (print/broadcast journalism, marketing/advertising, publications, journalism law and ethics) for careers within the agricultural industry, agricultural extension service, or agricultural news agencies.

Food and Process Engineering Technology Specialization. This specialization is designed for students to be able to manage and supervise operations in food processing industry as food processing technologists or managers. The students will gain a fundamental understanding of the science of food processing and preservation operations. The students will gain applied knowledge of food handling, food safety, food packaging, process automation, and operations management. Courses are designed to provide hands on experience on modern food processing industrial practices through interactive classes including labs, projects, field trips, and internships in food industry.

Qualified candidates for the Capstone Option are accepted in the major.

For a number of courses taught in the major, there will be additional charges for field trips, lab manuals, or supplies.

Technology Fee

The College of Agricultural Sciences assesses College of Agricultural Sciences undergraduate majors a technology fee of \$4.58 per credit hour up to twelve credit hours. The fee is charged Fall and Spring semesters.

Bachelor of Science Degree in Agricultural Systems and Education, College of Agricultural Sciences

AGRICULTURAL SYSTEMS AND EDUCATION MAJOR—
AGRICULTURAL SYSTEMS TECHNOLOGY MANAGEMENT
SPECIALIZATION

<i>University Core Curriculum Requirements</i>	41
To include Chemistry 106, Plant Biology 115 and Mathematics 108 or 125 or higher, and UCOL 101 ¹ .	
<i>Requirements for Agricultural Systems Technology Management Specialization</i>	40-41
Agricultural Core Classes	22-23
Agribusiness Economics 204	3
Agricultural Systems and Education 318, 371, 361, 375, 497	16
Crop, Soil & Environmental Management 200 or Animal Science 121, 122	3-4
Select 18 hours from the following courses:	
Agricultural Systems and Education 363, 372, 374, 402B, 461, 472, 473, 476, 483, 488, 489, 495	18 ²
<i>Electives</i>	39-40
<i>Total</i>	120 ³

¹Required for first semester students.

²Must include at least nine semester hours of 400 level courses.

³Must include at least 42 semester hours of 300 and 400 level courses.

Agricultural Systems Technology Management Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101I, Health/HND 101	3	2
ENGL 101, 102	3	3
ANS 121	3	-
ANS 122, AGSE 371	1	4
MATH 125, CHEM 106	4	3
AGSE 318	-	3
<i>Total</i>	14	15

SECOND YEAR	FALL	SPRING
CMST 101, Fine Arts	3	3
PSYC 102, Multicultural	3	3
ABE 204, CSEM 200	3	3
PLB 115, ME 102	3	2
Humanities, Elective	3	5
<i>Total</i>	15	16

THIRD YEAR	FALL	SPRING
AGSE 384, 325	3	3
AGSE 372, 374	3	3
AGSE 363, 361	3	3
Approved Electives-upper level	6	6
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
AGSE 483, 473	3	3
AGSE 461, 497	3	3
Select (Ag or Other)	9	9
<i>Total</i>	15	15

AGRICULTURAL EDUCATION SPECIALIZATION

University Core Curriculum Requirements41
 To include CHEM 106, PLB 115 and PSYC 102, MATH 108, HED/KIN/HND 101, and UCOL 101I¹, EDUC 311, 314.

Agricultural Science Requirements 31
 ABE 204 .
 AGSE 110, 318, 170, 314
 ANS 121, 122
 CSEM 200 or HORT 220
 AGSE 311A,B and AGRI 323

Agriculture and regular electives 21
 Professional Education Requirements..... 27
Total 120

¹Required for first semester students.

Agriculture Education Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101I, CHEM 106.....	3	3
ENGL 101, 102.....	3	3
MATH 108, AGSE 170.....	3	4
ANS 121/122, CMST 101	4	3
HED/KIN/HND 101, PSYC 102	2	3
<i>Total</i>	15	16

SECOND YEAR	FALL	SPRING
AGSE 110, Humanities	3	3
EDUC 314, Elective	3	3
Ag. Elective, ABE 204	3	3
AGSE 314, CSEM 200	3	3
EDUC 311, Fine Arts.....	3	3
<i>Total</i>	15	15

THIRD YEAR	FALL	SPRING
PLB 115, EDUC 319	3	3
EDUC 313, AGSE 318	3	3
Humanities, Ag Elective	3	3
EDUC 301, 302	1	1
Ag. Electives	3	3
AGSE 311A, CI 360	3	3
<i>Total</i>	16	16

FOURTH YEAR	FALL	SPRING
Elective	3	-
EDUC 308	3	-
EDUC 303	1	-
AGSE 311B	3	-
AGRI 323	2	-
Ag Elective, EDUC 401A	3	12
<i>Total</i>	15	12

**AGRICULTURAL SYSTEMS AND EDUCATION MAJOR—
 AGRICULTURAL PRODUCTION MANAGEMENT
 SPECIALIZATION**

University Core Curriculum Requirements 41
 To include Zoology 118, Mathematics 108 or 125 or higher a substitute of three hours of Chemistry 140A, and UCOL 101I¹.

Agricultural Production Specialization Requirements 51

Agricultural Core Classes30
 Agribusiness Economics 2043
 Agricultural Systems and Education 318, 190, 37510
 Animal Science 121, 1224
 Crop Soil & Environmental Management 200.....3
 Plant Biology 200.....4
 Chemistry 140A,B(3) + 5²
 Zoology 118(3) + 1²
 Select 18 hours with 6 semester hours in at least three of the following four areas18³
 Agribusiness Economics including either 350 or 3516
 Agricultural Systems and Education6
 Animal Science 315 or 331 plus one production course... 6
 Crop, Soil & Environmental Management 240 plus one production course.....7
Electives 31
Total 120

¹Required for first semester students.

²Hours in parenthesis substitute into the University Core Curriculum.

³Must include at least 9 semester hours of 400 level courses.

⁴Must include at least 42 semester hours of 300 and 400 level courses.

Agricultural Production Management Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ZOOL 118, Core	4	6
UCOL 101I, ENGL 101.....	3	3
ANS 121.....	3	-
ANS 122, AGSE 371	1	4
MATH 108, CHEM 140A	3	4
<i>Total</i>	14	17

SECOND YEAR	FALL	SPRING
ENGL 102, Health Core	5	6
CHEM 140B, CMST 101	4	3
CSEM 200, ABE 204	3	3
PLB 200, AGSE 318	4	3
<i>Total</i>	16	15

THIRD YEAR	FALL	SPRING
Select Core, AG Elective	3	6
AGSE 375, AGSE Elective-upper level .	3	6
ABE 350 or 351	3	-
ANS 331, ANS 315/CSEM 240	4	3-4
Elective (ABE/ANS/CSEM)-upper level	3	-
<i>Total</i>	16	15-16

FOURTH YEAR	FALL	SPRING
AGSE Select- upper level	6	3
ABE Elective- upper level.....	3	3
ANS Elective- upper level,		
CSEM Elective- upper level	3	3
Select (Ag or Other)- upper level.....	1-2	4
<i>Total</i>	13-14	13

AGRICULTURAL SYSTEMS AND EDUCATION MAJOR—
AGRICULTURAL COMMUNICATIONS SPECIALIZATION

University Core Curriculum Requirements 41
To include Plant Biology 200, Mathematics 108 or higher,
Chemistry 140A, and UCOL 101I¹.

Agricultural Communications Specialization Requirements 49

Agriculture Core Classes25

- Agricultural Sciences 323.....2
- Agricultural Systems and Education 170, 180, 318,
359, 41116
- Animal Science 121, 1224
- Crop, Soil & Environmental Management 200 or
Horticulture 220 3/4

Approved Electives24

Select 24 hours from the following areas:

- Agricultural Business-Economics courses
- Animal Science courses
- Communication Studies
- Forestry courses
- Geography 330
- Marketing courses
- Crop, Soil and Environmental Management courses
- Journalism
- Radio, Television & Digital Media

Communications Core Classes 30

Select 30 hours from the following areas:

- Communication Studies
- Journalism
- Radio, Television & Digital Media

Total 120

¹Required for first semester students.

Agricultural Communications Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
AGSE 180, AGSE 170	3	4
ENGL 101, 102.....	3	3
MATH 108, HED101/KIN 101	3	2
ANS 121/122, CHEM 140A.....	3	4
UCOL 101I, PLB 115	3	3
<i>Total</i>	15	16

SECOND YEAR	FALL	SPRING
PSYC 102, RTD 200.....	3	3
AGRI 323, CMST 101	2	3
ABE 204, Approved Elective	3	3
JRNL 310, CSEM 200	3	3
HIST 101A, 101B	3	3
<i>Total</i>	14	15

THIRD YEAR	FALL	SPRING
JRNL 312, 332	3	3
JRNL 313, ANTH 202	3	3
RTD 311, Ag Elective	3	3
AGSE 318, 359	3	3
AD 101, Ag Elective	3	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
Approved Elective, RT 370	3	3
JRNL 335, 419	3	3
CMST 281, AGSE 411	3	3
CMST 381, 390 (A-H).....	3	3
Approved Electives.....	3	3
<i>Total</i>	15	15

AGRICULTURAL SYSTEMS AND EDUCATION MAJOR—
GENERAL AGRICULTURAL SPECIALIZATION

University Core Curriculum Requirements 41
To include Chemistry 106, Plant Biology 115,
Sociology 108 or Psychology 102, and UCOL 101I¹.

General Agriculture Specialization Requirements 46

- Agriculture Core Classes 23
- Agribusiness Economics 204 3
- Agricultural Systems and Education 318, 170, 314, 375.. 13
- Animal Science 121, 122 4
- Crop, Soil & Environmental Management 200 3
- Agribusiness Economics elective 3
- Agricultural Systems and Education 311A,
Agriculture 323 5
- Animal Science elective 3
- Plant and Soil Science elective 3
- One additional course in speech or writing, beyond
University Core Curriculum requirements 3
- Agriculture or Forestry elective 6
- Electives 33

Total 120

¹Required for first semester students.

²Must include at least 42 semester hours of 300 and 400 level courses.

General Agriculture Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101I, Select Core	3	6
ENGL 101, 102.....	3	3
MATH 108.....	3	-
ANS 121, 122; AGSE 170	4	4
PLB 115, CHEM 106	3	3
<i>Total</i>	16	16
SECOND YEAR	FALL	SPRING
Select Core.....	3	3
SOC 108 or PSYC 102	3	-
CMST 101, CSEM 200	3	3
ABE 204, AGSE 311A	3	3
AGSE 318, Select Core	3	6
<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING
AGSE 314, 375	3	3
2nd Speech, PHSL 201	3	3
AG Elective, ABE Elective	3	3
Elective	5	7
<i>Total</i>	14	16
FOURTH YEAR	FALL	SPRING
ANS Elective-upper level, AGRI 323	3	2
Writing, CSEM Elective-upper level	3	3
AGSE Elective-upper level	3	-
Elective-upper level	6	8
<i>Total</i>	15	13
AGRICULTURAL SYSTEMS AND EDUCATION MAJOR—		
FOOD AND PROCESS ENGINEERING TECHNOLOGY		
SPECIALIZATION		
<i>University Core Curriculum Requirements</i>	41	
To include Math 108 or 125; Chemistry 140A, Biology 200A, and UCOL 101I ¹ .		
<i>Food and Process Engineering Technology Specialization Requirements</i>		
65		
<i>Agricultural Systems Core Classes</i>		
27		
Agricultural Systems and Education 361, 374, 375, 473, 483, 488, 489, 495, 497		
<i>Required Science Courses</i>		
20		
Biology 200A, 200B	(3)+5 ²	
Chemistry 140A, 140B	(3)+5 ²	
Microbiology 201	4	
Physics 203A, 203B.....	6	
<i>Other Required Courses</i>		
20		
Agricultural Systems and Education 318 or Computer Science 105		
3		
Agricultural Systems and Education 431		
3		
Agribusiness Economics 318		
3		
Accounting 210		
3		
Industrial Technology 475.....		
3		
Math 109.....		
3		

Approved Business/Agribusiness and Industrial Management Electives

14

Total

120

¹Required for first semester students

² Hours in parenthesis substitute into the University Core Curriculum.

Food and Process Engineering Technology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
Human Health, Fine Arts	2	3
AGSE 318, CMST 101.....	3	3
UCOL 101I, ENGL 101.....	3	3
MATH 108, 109	3	3
BIOL 200A, 200B.....	4	4
<i>Total</i>	15	16
SECOND YEAR	FALL	SPRING
ENGL 102, Humanities	3	3
CHEM 140A, 140B	4	4
MICR 201, Multicultural	4	3
ABE 204, PSYC 102	3	3
PHYS 203A, 203B	3	3
<i>Total</i>	17	16
THIRD YEAR	FALL	SPRING
ACCT 210, Humanities	3	3
AGSE 361, 375	3	3
AGSE 374, 473	3	3
AGSE 318, 431	3	3
Approved Electives.....	3	3
<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
AGSE 483, 495	3	3
AGSE 488, 489	3	3
IT 475, AGSE 497	3	3
Approved Electives.....	5	3
<i>Total</i>	14	12

Minor in Agricultural Systems

A minor in Agricultural Systems is offered. A minor consists of 15 semester hours of credit. Normally 12 hours must be taken at Southern Illinois University Carbondale. An advisor within the department must be consulted before selecting this field as a minor.

Courses (AGSE)

110-3 Introduction to Agricultural Education. [IAI Course: AG 911] An entry level course introducing the philosophies of education and career and technical education, including: the history of and current issues in agricultural education; the nature of the educational process; the characteristics, duties and responsibilities of successful teachers; the components of an agricultural education program; the role of professional organizations in agricultural education; and state teacher certification requirements.

170-4 Introduction to Agricultural Technologies. [IAI Course: AG 906] An introduction to agricultural technologies related to soil and water systems, power and machinery, electricity and electronics, structures, environment and handling of agricultural materials.

180-3 Introduction to Agricultural Communications. Introduction to the uses of mass communications media and theories in agricultural communications, and to professional opportunities in applied communications in agricultural organizations.

257-1 to 10 Work Experience. Credit for on-campus work experience through a cooperative program developed between the department and the Financial Aid Office. Special approval needed from the chair. Mandatory Pass/Fail.

258-1 to 30 Past Work Experience. Credit for career related employment based on the evaluation of the documentation of this experience by the Department of Agricultural Systems and Education. No grade for past work experience. Special approval needed from the department.

311A-3 Agricultural Education Programs. Designed to improve the techniques related to award programs and application processes of agricultural education specialists through discussion, application, organization, and assignment to problems in the field of agricultural education Career Development Event programs in the Illinois and National FFA programs. Emphasis will be placed on conceptual understanding, planning, instruction, and application of FFA and Agriculture Education Career Development Events. Prerequisite: AGSE 110 Introduction to Agricultural Education with a grade of C or consent of instructor.

311B-3 Agricultural Education Classroom Methodology. Nature and scope of the different teaching methodologies involved in classroom and laboratory instruction in the high school agricultural education classroom. Emphasis focuses on the development, implementation, application, and reflective practices for lesson development and improvement related to classroom and laboratory teaching methods. Prerequisite: AGSE 110 Introduction to Agricultural Education with a grade of C or consent of instructor.

314-3 Agricultural Information Programs. Preparation for an agricultural information internship; an in-depth study into the nature, scope, integral parts, and methods of a total agricultural information program.

318-3 Computers in Agriculture. Course about the use and role of computers in agriculture. The major thrust includes an understanding and application of micro-computers in agriculture with special emphasis on how to save time, money, and increase efficiency in agriculture. This course includes advanced problem-solving and data management content.

359-1 to 6 Intern Program. Supervised work experience in either an agricultural agency of the government or agribusiness. Restricted to junior standing or consent of instructor. Mandatory Pass/Fail.

361-3 Introduction to Control Programming. Entry-level course in the logic and procedures of computer programming for control and monitoring of electronically controlled equipment and systems in agriculture. Topics include problem solving strategies, software design concepts, control logic, and algorithm development and troubleshooting. The laboratory setting provides hands-on experience in programming electronic devices

with immediate visual feedback. Laboratory fee: \$10.

363-3 Agricultural Electrical and Electronics Systems. Electrical and electronic knowledge and basics skills are developed and implemented with practical exercises and projects. Electrical and electronics circuits and control systems will be planned and constructed, with emphasis on automation, convenience, codes and safety. Prerequisite: AGSE 371. Laboratory fee: \$40.

364-1 to 6 Agricultural Leadership Development. Credit is given for one year of service as a sectional or state FFA officer. Special approval is needed from the department and is dependent on successful completion and evaluation provided by the Illinois State FFA Office.

370-2 Consumer and Commercial Power Equipment. The primary focus of this course is to achieve an understanding of small engines. ATV's and power equipment (including chain saws, generators, mowers and turf equipment) and focus on their features, benefits, maintenance and repair.

371-4 Physics in Agriculture. An introduction to physical principles as they apply to agriculture. These principle topical areas include mechanics, measurement, electricity, thermodynamics, hydraulics, material properties, and fluids. Prerequisite: MATH 108 or MATH 125, or concurrent enrollment.

372-3 Agricultural Machinery Systems Management. A machinery management course focusing on the principles and measurement of engine power and the selection, operation, maintenance and analysis of power and machinery systems for optimum performance and efficiency. The problem solving process is emphasized. Prerequisite: AGSE 371. Fee: \$20.

374-3 Applied Graphics. Fundamentals of interpreting graphic illustrations, sketching, drawing, and lettering in agriculture, forestry and landscape design. Application of computers in the creation and interpretation of graphics will be emphasized.

375-3 Introduction to Agricultural Systems. Operational functions and processes that are integrated to accomplish a designated, well-defined purpose in production and processing. Topics include planning and evaluating reliability, manpower, scheduling, economy, packaging, human and animal factors. Prerequisites: AGSE 318, 371. Lab fee: \$10.

380-1 to 2 (1,1) Agricultural Communications Seminar. Readings, discussions, and activities related to (a) current problems, issues, and practices in agricultural communication, (b) career opportunities, professional development, and ethical standards in agricultural communication. Special approval needed from the department.

381-1 Agricultural Systems Professional Placement. Professional ethics, protocols, and certifications within agricultural systems. Resume development, employment searches, and technical interviewing. Opportunities within ASABE (American Society of Agricultural and Biological Engineers). Restricted to junior standing or consent of instructor.

384-3 Agricultural Construction Processes. Students will apply computer and hands-on techniques to different agricultural construction processes. The computer techniques will address construction challenges such as budget, deadlines, and limited resources. Safety, tool and equipment principles will be applied while completing specific agricultural construction projects. Lab fee: \$25.

388-1 to 16 (1 to 8 per semester) International Studies.

Course work undertaken as part of an approved University residential study program abroad. May be taken for a maximum of eight semester hours per semester and may be repeated for a maximum of 16 semester hours. Special approval needed from the major department or program.

390-1 to 4 Special Studies in Agricultural Systems. Assignments involving research and individual problems. Field trips. Special approval needed from the department.

391-1 to 4 Honors in Agricultural Systems. Completion of honors paper and comparable project within one of the specializations, under the supervision of one or more faculty members. Subject matter depends upon the needs and interests of the student. Special approval needed from the department.

402A-1 to 6 Problems in Agricultural Education. (Same as PSAS 402A) Designed to improve the techniques related to award programs and application processes of agricultural education specialists through discussion, application, organization, and assignment to problems in the field of agricultural education. Emphasis will be placed on conceptual understanding of FFA and Agriculture Education award programs, applications, Supervised Agricultural Experience Program, and National Chapter Award Program, affiliated professional partnerships, and external sources for developing the entire Agricultural Education program. Prerequisite: AGSE 110 Introduction to Agricultural Education with a grade of B or better.

402B-1 to 6 Problems in Agricultural Technologies. (Same as PSAS 402B) Designed to improve the techniques of agricultural mechanization workers through discussion, assignment, and special workshops on problems related to their field. Emphasis will be placed on new innovative and currently developed techniques for the field. A limit of six hours will be counted toward graduation in master's degree program. Not for graduate credit. Special approval needed from the department.

411-3 SIUC Ag Journal. (Same as PSAS 411) Coordinated approach to the planning, writing, layout and publishing of a journal on agriculture and education in the SIUC College of Agricultural Sciences. Special approval needed from the department.

412-3 Methods of Agriculture Mechanization. (Same as PSAS 412) Theory and use of educational materials and devices adaptable to the needs and interests of educators involved in agricultural mechanization laboratories. There is a \$15 laboratory fee for this course.

414-3 Adult Education Procedures, Methods, and Techniques. (Same as PSAS 414) Determining adult education needs and interests of the community. Securing and organizing the information needed for adult education programs and planning teaching activities.

415-3 Beginning Teacher Seminar. (Same as PSAS 415) The application in the professional field setting, of principles and philosophies of the education system. Includes application of principles of curricula construction, programming student and community needs. Special approval needed from the department.

418-3 Applications of Integrated Software in Agriculture. (Same as PSAS 418) Design of agricultural or educational applications of integrated software. Spreadsheet, database, word processing, graphic and communications software will be ap-

plied to the solution of agricultural problems. Individual student projects will be the focus of the applied nature of the class. Prerequisite: AGSE 318. Restricted to junior standing or consent of instructor.

431-3 International Agricultural Systems. Introduction to world agriculture, farming systems, world crops, agricultural trade, and food production and processing. Influence of population and climate. Ethical issues surrounding rain forest, global agriculture, finance, world trade, crops and livestock, and the environment. Appropriate technologies and their social and economic impact on developing countries. Not for graduate credit. Restricted to junior standing or instructor consent.

438-3 Plant and Animal Molecular Genetics Laboratory. (Same as PLB 438, CSEM 438, PSAS 438, ZOOL 438) Arabidopsis and Drosophila model organisms, lab-based training in laboratory safety, reagent preparation, phenotype analysis, genetics, DNA and RNA analysis, PCR, cDNA construction, cloning and sequencing of genes. Includes plant and bacterial transformation, and a population level analysis of genetic variation using RAPD markers in grasses and Alu insertion in humans. Two 2-hr labs and one 1-hr lecture per week. Prerequisite: BIOL 305 or equivalent or consent of instructor. Lab fee: \$30.

461-3 Programming for Agricultural Systems. (Same as PSAS 461) Computer programming concepts and strategies are applied to agricultural problems and systems. Students will analyze problems, design solutions, develop software and test solutions. Students will be expected to develop software project related to their academic interests. Not for graduate credit. Special approval needed from the department. Laboratory fee: \$10.

472-3 Precision Agriculture. (Same as PSAS 472) A study of the basic principles of the Global Positioning System and how that system, along with currently available and emerging technologies is applied to the intensive management of production agriculture resources. Not for graduate credit. Restricted to junior standing. Lab fee: \$5.

473-3 Agricultural Automation. (Same as PSAS 473) This course introduces students to topics such as power distribution, programmable controllers, sensors and components, ladder control circuits and diagrams, and motor controls. The lab will address automation issues for different industrial processes such as pasteurization. Prerequisite: AGSE 371, 363 or consent of instructor. Lab fee: \$20.

476-3 Agricultural Safety and Health. (Same as PSAS 476) Analysis of safety and health issues important to managers and supervisors in agricultural operations. Topics include agricultural accident data, causes and effects of accidents, hazard identification, strategies for accident prevention, response to accidents, and health risks and safeguards. Developments and documentation of accident and illness prevention activities in the workplace. Special approval needed from the department.

483-3 Agricultural Processing Systems. (Same as PSAS 483) This course provides students with an understanding of the design principles, equipment, procedures and processes utilized in handling, processing and storing agricultural products. Prerequisite: AGSE 371.

488-3 Food Engineering Technology. (Same as PSAS 488) This course introduces the basic principles of facilities planning for larger operations and complexes of the food processing indus-

try, and gain management/technology insight in food engineering technology. Special approval needed from the instructor.

489-3 Brewing & Distilling Technology. (Same as PSAS 489) The primary focus on this course is to introduce the basic facilities planning for the operation of the brewing and distilling industry, and to gain management and technology insight in brewing/distilling production. Restricted to Junior/Senior standing in Ag Systems Technology or AGSE 375, basic email computer skills. Special approval needed from the instructor.

495-3 Food and Pharmaceutical Packaging. (Same as PSAS 495) Applied packaging and food engineering principles used in packaging, storing, preserving, and transporting food and drug products. Topics include packaging functions, graphic design, printing, sterilization, and food safety. Utilization of paper, glass, plastics, laminates, and metals. Applications of machinery and equipment. Not for graduate credit. Prerequisite: AGSE 371.

497-3 Agricultural Operations Management. (Same as PSAS 497) A capstone course in product support, interpretation of financial reports, preparing and monitoring budgets, time and process management, critical thinking, advanced problem solving. Prerequisites: AGSE 318, 371, 375. Restricted to senior standing.

499-3 Agriculture Information for K-12th Grade Teachers. (Same as PSAS 499) A general inquiry into the agriculture literacy appropriate for K-12th grade students. A framework for evaluating content appropriate for K-12th grade students in the pursuit of agriculture literacy will be developed. Special approval needed from the department.

Agricultural Systems and Education Faculty

Albers, Myron C., Instructor, M.S., Southern Illinois University, 1998.

Choudhary, Ruplal, Associate Professor, Ph.D., Oklahoma State University, 2004.

Jones, K. L., Professor and Chair, Ph.D., Texas A&M University, 1999.

Legacy, James, Professor, *Emeritus*, Ph.D., Cornell University, 1976.

Pense, Seburn L., Associate Professor, Ph.D., Oklahoma State University, 2002.

Shoup, W. David, Professor, *Emeritus*, Ph.D., Purdue University, 1980.

Stitt, Thomas R., Professor, *Emeritus*, Ph.D., Ohio State University, 1967.

Watson, Dennis G., Associate Professor, Ph.D., Michigan State University, 1987.

Wolff, Robert L., Professor, *Emeritus*, Ph.D., Louisiana State University, 1971.

Allied Health (School, Courses, Faculty)

Courses (AH)

105-2 Medical Terminology. This course is an introduction to the study of medical language with a working knowledge of the most common word roots, prefixes and suffixes in medical terminology. Emphasis is placed on spelling, pronunciation, use of the medical dictionary and the Physician's Desk Reference (PDR),

vocabulary building, common abbreviations and charting terms.

241-4 Introduction to Physiology and Human Anatomy. (Advanced University Core Curriculum course) A survey of the functions and structures of the ten basic systems of the human body: integumentary, skeletal, muscular, nervous, endocrine, hematocardiovascular, lymphoimmune, respiratory, genitourinary and reproductive. Satisfies the University Core Curriculum Human Health requirement in lieu of Physiology 201.

258-1 to 30 Work Experience Credit. Credit granted for job skills, management-worker relations and supervisory experience for past work experience while employed in industry, business, the professions, or service occupations. Credit will be established by school evaluation.

259-1 to 60 Occupational Education Credit. A designation for credit granted for past occupational educational experiences related to the student's educational objectives. Credit will be established by school evaluation.

300-1 to 3 Seminar in Allied Health. A topical seminar conducted by staff members or distinguished guest lectures on pertinent areas of allied health. Mandatory Pass/Fail. Special approval needed from the school.

305-3 Allied Health Course Development. This course will lead the student through the appropriate systems for course development and implementation. Topics will include: analyzing the components and requirements of the Allied Health Professions, assessment, task analysis, course objectives, lecture and laboratory methods and utilization, and evaluation. Special approval needed from the school.

313-3 Forensic Science for Allied Health Professions. This class is designed to provide basic knowledge for individuals interested in pursuing a career in the area of forensic science. Students will gain an understanding of and an appreciation for the various tasks and skills associated with forensic investigation. The student will gain an understanding of post-mortem examinations, post-mortem changes, crime scene identification, basic odontology and radiology as each relates to forensic science. Special approval needed from the school.

319-1 to 15 Occupational Internship. Each student will be assigned to a University approved organizational, facility, and/or institution engaged in activities related to the student's academic program and career objectives. The student will perform duties and services as assigned by the preceptor and coordinator. Reports and assignments are required to be completed by the student. Hours and credits to be individually arranged. Mandatory Pass/Fail. Special approval needed from the school.

Allied Health Faculty

Anderson, Shannon D., Clinical Instructor, M.S.Ed., Southern Illinois University Carbondale, 2005.

Beebe, Sandra N., Clinical Instructor, RDH, Ph.D., Southern Illinois University Carbondale, 2003.

Cassidy, Karry M., Clinical Instructor, MPH, California College of Health Sciences, 2011.

Collins, K. Scott, Professor and *Director*, Ph.D., Southern Illinois University Carbondale, 2011.

Collins, Sandra K., Associate Professor, Ph.D., Southern Illinois University Carbondale, 2010.

Dailey, Tenley K., Clinical Instructor, M.B.A., Missouri Baptist University, 2014.

Davis, Joan Mary, Professor, Ph.D., Southern Illinois University Carbondale, 2010.

Davis, Julie K., Associate Professor, M.S.P.T., Barry University, 1996.

Davis, Timothy S., Clinical Instructor, M.S., Indiana State University, 1996.

DeMattei, Ronda, Associate Professor, *Emerita*, RDH, Ph.D., Southern Illinois University Carbondale, 2006.

File, Shelly A., Assistant Instructor, B.S.DH., Southern Illinois University Carbondale, 2007.

Fleege, Anthony T., Associate Professor, M.B.A., Southern Illinois University Carbondale, 1999.

Grey, Michael, Associate Professor, Ph.D., Southern Illinois University Carbondale, 2009.

Griffith, Cydney A., Associate Professor, M.S., Southern Illinois University Carbondale, 1991.

Having, Karen M., Associate Professor, *Emerita*, RT(R), RDMS, M.S., Southern Illinois University Carbondale, 1996.

Hirsch, Brandon T., Clinical Instructor, M.S., Southern Illinois University Carbondale, 2014.

Jensen, Steven, Professor, *Emeritus*, RT(R), Ph.D., Southern Illinois University Carbondale, 1987.

Lautar, Charla, Professor, RDH, Ph.D., University of Calgary, 1993.

Lloyd, Leslie Freels, Associate Professor, Rh.D., CRC, Southern Illinois University Carbondale, 1993.

Lukes, Sherri M., Associate Professor, *Emerita*, RDH, M.S. Ed., Southern Illinois University Carbondale, 1991.

McKinnies, Richard C., Associate Professor, M.S.Ed., Southern Illinois University Carbondale, 2006.

McSherry, Teri S., Senior Lecturer, RDH, M.S.W., Southern Illinois University Carbondale, 2008.

Meyer, Jennifer M., Assistant Instructor, RDH, B.S., Southern Illinois University Carbondale, 1999.

Miller, Faith, Associate Professor, M.S., Southern Illinois University Carbondale, 1999.

Pfister, Regina L., Assistant Professor, *Emerita*, RDH, M.S.Ed., Southern Illinois University Carbondale, 2002.

Rivers, Patrick A., Professor, M.S., Ph.D., The University of Alabama, 1997.

Rogers, Janet L., Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1995

Shaw, Thomas, Associate Professor and *Associate Dean*, Ph.D., Southern Illinois University Carbondale, 2005.

Sherry, Jennifer S., Associate Professor, RDH, M.S.Ed., Southern Illinois University Carbondale, 2004.

Szekely, Rosanne, Assistant Professor, RT(R), M.S., Southern Illinois University Carbondale, 1995.

Tiebout, Leigh, Assistant Professor, *Emerita*, CDT, M.S., Southern Illinois University, 1989.

Torphy, Colleen, Senior Lecturer, RDH, B.S., Southern Illinois University Carbondale, 1999.

Walker, Jennifer N., Clinical Instructor, M.S.Ed., Southern Illinois University Carbondale, 2008.

Walter, Marcea L., Clinical Instructor, MHSA, Xavier University, 2011.

Watts, Sandra J., Assistant Professor, MHA, University of St. Francis, 2013.

Whittaker, Jessica D., Assistant Instructor, B.S., Southern Illinois University Carbondale, 2002.

Winings, John R., Associate Professor, *Emeritus*, CDT, M.A., Governors State University, 1972.

American Sign Language

(See Languages, Cultures, and International Studies)

American Studies

(Minor)

The American Studies minor provides undergraduates with the opportunity to study American culture with faculty from a variety of disciplines. The goal is for students to gain an enhanced understanding of the complexity and richness of the social, political, aesthetic and economic structures that inform American life. Simultaneously, the minor exposes students to interdisciplinary approaches to the study of American society. The minor consists of a minimum of 15 hours: 3 hours (1 class) in an introductory course in American Studies; 6 hours (2 classes) in breadth courses from the University Core Curriculum; and 6 hours (2 classes) in one of the four primary American Studies focus areas. Through coursework in American Studies, students prepare themselves for careers in a variety of fields requiring critical thinking and writing, from teaching to law, health, business and government. The requirements for the American Studies minor are listed below.

AMERICAN STUDIES MINOR

Course requirements: 15 credit hours.

I. Core course for the minor: All students taking the American Studies minor must complete History 212 or English 212, "Introduction to American Studies", which is cross listed in History and English.

II. Breadth Courses: Students must take two of the following courses (6 hours): AFR 209, AFR 215, ANTH 202, ENGL 205, PHIL 211 or PHIL 210.

III. Specialization Courses: Students must take two courses (6 hours) from one of the below "focus areas":

1. American Cultural Studies
2. Political Philosophy
3. Art, Literature and Identity in the United States
4. Local History

Focus Areas for American Studies Minor:

1. American Cultural Studies: AFR 311A, 311B, ANTH 204, 302, 416, 424, CCJ 203, HIST 354, 355, 357, 362A, 362B, 364, 365, LING 416, MCMA 449, POLS 215, 314I, 332I, 370.

2. Political Philosophy: HIST 355, 455, PHIL 486, 487, POLS 332I.

3. Art and Literature in the U.S.: AD 227, 267, 307I, 317I, 428, AFR 355A, 355B, 357, 375, ENGL 205, 206A, 225, 307I, 325, 355A, 355B, MCMA 204, MUS 303I, THEA 454, 460.

4. Local History/Public History: ANTH 201, 310K, 450A, 450B, GEOG 303I, HIST 367, 496B, 497, 498, POLS 213, 214.

Animal Science (Major, Courses, Faculty)

The Animal Science program is a part of the Department of Animal Science, Food and Nutrition. SIU Carbondale's nationally known animal science faculty is dedicated to teaching and to student development. Animal Science teachers at SIU represent the range of topics in animal agriculture. There are specialists in animal genetics, reproductive physiology, nutrition and management for each of the species, international food programs, and veterinary medicine. The animal science teachers bring their exciting experience with them into every class they teach. The combination of the visionary and the practical makes a strong and vital faculty for students who want the best professional education they can get.

The department offers three specializations leading to a B.S. degree: production, equine science, and pre-veterinary medicine. The latter allows qualified students to transfer to accredited colleges of veterinary medicine prior to receiving the Bachelor of Science degree in Animal Science.

Most of the students' agriculture courses for the major will be in animal science, but students can also select courses from agronomy, horticulture, human nutrition and dietetics, forestry, agricultural education, agricultural mechanization, agribusiness and economics, and farm management. Other classes help the student meet basic University requirements in a way that will strengthen their abilities to think, understand, and communicate about the social, physical and natural sciences important to animal scientists. Other departments offer supplemental coursework in physiology, genetics, nutrition, animal behavior, and other topics that many animal science students find valuable.

The animal science major is backed up with extensive facilities for several species of livestock, and every student has the opportunity to get involved in work, research, or observation at the University Farm. The core of our animal science program is the 2,000-acre farm system, which includes centers for beef, dairy, horses, and swine.

Hundreds of distinct occupations exist within the animal agriculture field. There are opportunities in animal production work at farm operations, ranches, feedlots, stables and zoos. There are opportunities in feed and meatpacking industries, equipment suppliers, government and international agencies, veterinary medicine, and numerous other supporting industries that serve producers. Within each of these areas, animal science graduates are employed in such jobs as sales, service, education, communication, finance and business management. There may be extra expenses for field trips, manuals or supplies in some courses.

Technology Fee

The College of Agricultural Sciences assesses College of Agricultural Sciences undergraduate majors a technology fee of \$4.58 per credit hour up to twelve credit hours. The fee is charged Fall and Spring semesters.

Bachelor of Science Degree in Animal Science, College of Agricultural Sciences

University Core Curriculum Requirements 43
 To include MATH 108, CHEM 140A, ZOOL 118, ABE 204.

Requirements for Major in Animal Science

Core Requirements	34
Animal Science 121, 122, 215, 315, 331, 332, 337, 381, 431, plus one course from 409, 430, 465, or 485	28
Agriculture electives, excluding Animal Science	6
Specialization Requirements	43
Fulfill the requirements of one of the following specializations:	
<i>Total</i>	120

PRODUCTION SPECIALIZATION

Chemistry 140B	4
Animal Science 415 one additional course from Animal Science 409, 430, 465 or 485.....	8
Animal Science 300 or 400 level courses.....	9
Agribusiness Economics 350 or 351	3
AG electives	9
<i>Electives</i>	10
<i>Total</i>	43

Production Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
MATH 108	3	-
UCOL 101, CMST 101	3	3
ANS 121, 122; Humanities	4	3
HND 101	-	2
ABE 204.....	-	3
<i>Total</i>	13	14

SECOND YEAR	FALL	SPRING
ANS 215, 315	2	3
CHEM 140A, 140B	4	4
ZOOL 118, Fine Arts Elective	4	3
AG Elective, Elective	3	3
ANS Elective	-	3
<i>Total</i>	13	16

THIRD YEAR	FALL	SPRING
ANS 331	4	-
ANS 332	3	-
ANS 337	3	-
ABE 350, ANS Elective	3	3
AG Elective	-	3
Humanities Elective	-	3
Social Science Elective	-	3
Multicultural Elective	-	3
Elective	3	3
<i>Total</i>	16	18

FOURTH YEAR	FALL	SPRING
ANS 409/430/465/485	4	4
ANS 381, 415	1	4
ANS 431	-	4
ANS Elective	3	-
AG Elective.....	3	2
Electives	3	2
<i>Total</i>	14	16

EQUINE SCIENCE SPECIALIZATION

Chemistry 140B	4
Agribusiness Economics 350 or 351	3
Animal Science 219, 309, 314, 409, 419, 429, 490	27
4 credit hours from 112, 212, 312 or 412	4
<i>Electives</i>	5
<i>Total</i>	43

Equine Science Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101, ENGL 101	3	3
ANS 121/122, CMST 101	4	3
ANS 215	2	-
ANS 219; ZOOL 118	4	4
MATH 108	3	-
AG Elective	-	3
ANS 112/212	-	2
<i>Total</i>	16	15
SECOND YEAR	FALL	SPRING
ABE 204, ANS 314	3	3
ANS 309, Elective	3	3
ANS 331, Fine Arts	4	3
CHEM 140A, 140B	4	4
ENGL 102	3	-
ANS 112/212/312	-	2
<i>Total</i>	17	15
THIRD YEAR	FALL	SPRING
ANS 332, 409	3	4
ABE 350, ANS 315	3	3
Humanities Electives	3	3
Human Health, ANS 431	2	4
ANS 337	3	-
<i>Total</i>	14	14
FOURTH YEAR	FALL	SPRING
ANS 381, 419	1	3
ANS 429	2	-
Social Science Electives	3	3
Multicultural Elective	-	3
ANS Electives	6	-
ANS 490	-	8
<i>Total</i>	12	17

SCIENCE AND PRE-VETERINARY SPECIALIZATION

Substitute Chemistry 200/201/202 for Chemistry 140A	1
Mathematics 109	3
Chemistry 210, 211, 212, 339 or 340, 341, 350	13
Physics 203A,B and 253A,B	8
Biology 200A	4
Microbiology 301	4
Animal Science electives including one additional 300 or 400-level course	8
<i>Electives</i>	2
<i>Total</i>	43

Pre-Veterinary Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102	3	3
MATH 108, 109	3	3
UCOL 101	3	-
ANS 121, 122	4	-
ZOOL 118	4	-
CMST 101, HND 101	-	5
CHEM 200, 201, 202	-	5
<i>Total</i>	17	16
SECOND YEAR	FALL	SPRING
ANS 215, 200	2	2
CHEM 210, 211	5	-
BIOL 200A	4	-
CHEM 339 or 340, 341	-	5
Fine Arts elective, ABE 204	3	3
Social Science	-	3
ANS elective	-	2
<i>Total</i>	14	15
THIRD YEAR	FALL	SPRING
PHYS 203A, 253A; 203B, 253B	4	4
MICR 301, CHEM 350	4	3
ANS 331, 337, 315	7	3
AG elective	-	2
Humanities elective	-	3
<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
ANS 485 or 465 or 430 or 409	4	-
ANS 381, 332, 431	4	4
ANS 415 or elective	-	4
Multicultural, AG Elective	3	3
Humanities, Elective	3	3
<i>Total</i>	14	14

Minor in Animal Science

The minor in Animal Science requires 16 semester hours, of which at least 12 must be earned at Southern Illinois University Carbondale. An advisor within the department must be consulted before selecting this field as a minor.

Minor in Equine Studies

Any student not enrolled in the Animal Science major may earn the minor in equine studies. It requires a minimum of 17 semester hours, of which at least 12 must be earned at Southern Illinois University Carbondale. Courses required are Animal Science 309, 219, 215 or 315, 331 and 409. The minor in Equine Studies is not awarded to students who have a major in Animal Science.

Non-Degree diploma in Companion Animal Nutrition

The non-degree diploma program is intended to enhance the marketability and training of students who wish to pursue careers in Animal and Veterinary management and sciences. En-

rollment in the Animal Science major is not required to complete the program. While the diploma itself does not lead to a degree, courses can be counted in the Animal Science specializations as electives. Student not wishing to pursue a baccalaureate must complete the unclassified undergraduate application.

Requirements for non-degree diploma in Companion Animal Nutrition 18

Courses: Animal Science (ANS) 115, 215, 316, 365, 445, 481

Certificate Program in Histotechnology See Histotechnology in this chapter.

Courses (ANS)

112-2 to 8 (2 per semester) Introduction to Horsemanship. Designed for students with little or no horse riding experience. A holistic approach to handling and riding horses using natural laws governing horses and balance. Class time is primarily hands-on work with some classroom time. Students must be able to lead, groom, tack, mount and ride a horse. Horses are restricted to carrying 250 pounds. Facilities/Riding Fee: \$300.

115-3 Introduction to Companion Animal Nutrition. Focus on the basic science of companion animal nutrition and the nutrient needs of dogs and cats, rabbits, birds, aquarium fish, rodents and reptiles. Students will also learn the different types and forms of pets food, how to evaluate pets food, and regulations of pets food and labeling.

121-3 Introduction to Animal Science. [IAI Course: AG 902] A general overview of dairy, meat animals (swine, beef, sheep), poultry, and horse industries with emphasis on how meat, milk, and poultry products are produced and distributed. The general application of genetic, physiologic, and nutrition principles for the improvement of animal production to further serve people.

122-1 Livestock Production Laboratory. [IAI Course: AG 902] Livestock facilities, demonstration of management practices of animals for human use and the processing of animal products. Laboratory Fee: \$40.

123A-1 to 2 Livestock Practicum-Beef Provides students with limited previous livestock experience an opportunity to participate in the routine care and management procedures at one of the University's livestock centers.

123B-1 to 2 Livestock Practicum-Dairy. Provides students with limited previous livestock experience an opportunity to participate in the routine care and management procedures at one of the University's livestock centers.

123C-1 to 2 Livestock Practicum-Horse. Provides students with limited previous livestock experience an opportunity to participate in the routine care and management procedures at one of the University's livestock centers.

123D-1 to 2 Livestock Practicum-Swine Provides students with limited previous livestock experience an opportunity to participate in the routine care and management procedures at one of the University's livestock centers.

200-2 Companion Animal Care and Management. Principles and practice of proper feeding and care of companion animals, with emphasis on dogs and cats. Nutrition, digestive systems, reproduction, and health care will be discussed.

210-3 Livestock Products & Processing. Processing and

distribution of meat and dairy products. Consumption, nutritional value, cooking and serving of these products. Nomenclature and identification of meat cuts. Breeds, classes, and evaluation of meat and dairy animals. Fee: \$10.

211-1 to 4 (1 to 2, 1 to 2) Animal Selection and Evaluation. Livestock, Horses, Dairy. Selection and evaluation of breeding and/or market animals including livestock (beef, sheep, swine and goats); horses; or dairy cattle. Includes competitive judging, but participation on SIUC Intercollegiate Livestock, Horse, or Dairy Judging Teams is not a required part of this course. Special approval needed from the instructor.

212-2 Intermediate Horsemanship. Designed for intermediate riders to improve their horse riding skills using primarily mounted exercises following the natural laws governing horses and balance, emphasizing independent use of the rider's natural aids. Students must be able to lead, groom, tack, mount and ride a horse. Horses are restricted to carrying 250 pounds. Course is repeatable up to 4 times during the student's academic career. Prerequisite: ANS 112 or consent of instructor (tryouts required). Facilities/Riding Fee: \$300.

215-2 Introduction to Nutrition. (Same as HND 215) An up-to-date study of the principles of nutrition including classification of nutrients (physical and chemical properties) and their uses in order to provide the student a working knowledge of nutrition in today's environment.

219-4 Introductory Horse Management. Designed for the beginning animal science student or non-science majors with an interest in horses. Information on topics related to horse selection and care coupled with laboratory experience provide essential information for the care of horses owned for pleasure. Fee: \$35.

250-3 Human Values in Livestock Production. Improvements in livestock production technology have resulted from research. These technologies contribute to the welfare of a growing population of humans. However, the application of new technologies often interact with a public perception of animals as exploited species in a manner conflicting with human values. These conflicts are discussed from a scientific and philosophic viewpoint.

309-3 Equine Evaluation and Perform. This course explores the conformation and functional anatomy of the athletic horse, particularly as it relates to locomotion. Gaits and movement will be studied. Methods to influence movement will be considered and how these impact athletic ability or potential. Fee: \$25.

312-2 Advanced Horsemanship. Classroom, ground and mounted work explore communication and balance of the horse and rider combination. Feel, timing and balance are emphasized while working with horses needing further education. Time outside class required. Students must be able to lead, groom, tack, mount and ride a horse. Horses are restricted to carrying 250 pounds. Course is repeatable up to 4 times during the student's academic career. Prerequisite: ANS 212 or consent of instructor (tryouts required). Facilities/Riding Fee: \$300.

314-3 Forages, An Introduction to Grassland Agriculture. An introduction to grassland agriculture encompassing characteristics of forage species, forage/grazing management, and forage utilization with an emphasis in livestock systems. Labo-

ratory/Field trip fee: \$15.

315-3 Feeds and Feeding. Principles of applied animal nutrition. Ration formulation to meet specific nutrient needs of livestock. Feedstuff evaluation, including cost will be discussed. Prerequisite: MATH 107 or above.

316-3 Rations for Feeding Companion Animals. This course will describe the basic characteristics of common feeds used in companion animal diets and the principles of utilizing these to meet animal requirements for maintenance and throughout the life-cycle. Prerequisite: ANS 215 or concurrent enrollment.

319-2,2 (2 to 4) Horse Handling and Horsemanship. Students will learn principles of communicating tasks to horses using aids natural to horse behavior. Many different groundwork exercises are practiced. Prerequisite: ANS 112, 212, 312 or consent of instructor.

331-4 Growth and Developmental Physiology of Animals. A comparative study of domestic animal function is presented using an organ system approach. How cell, tissue and organ structure is related to physiological function is emphasized. The mechanism of animal growth and development will be discussed. Prerequisite: PHSL 201 & 208 or concurrent enrollment.

332-3 Animal Genetics. Principles of molecular genetics, Mendelian genetics, population genetics and quantitative genetics and their application to animal improvement. Prerequisite: ANS 121, MATH 108 or above.

333-1 Animal Genetics Laboratory. One three-hour lab per week. Laboratory course provides experiences with genetic laboratory experimentation and interpretation of data. Prerequisite: Completion of, or concurrent enrollment in ANS 332. Lab fee: \$35.

337-3 Animal Health. Principles of prevention and control of infectious, nutritional and parasitic disease of farm animals. Prerequisite: PHSL 201 & 208 or concurrent enrollment.

359-2 to 6 (2 to 3, 2 to 3) Intern Program. Work experience program in animal production units and agricultural agencies of the government or agribusiness. Restricted to junior standing. Special approval needed from the chair. Mandatory Pass/Fail.

365-3 Canine and Feline Nutrition. Focus on nutrients requirement and the feeding during the life cycle (maintenance, growth, gestation, lactation, seniors and performance) of cats and dogs. Nutrients digestion and metabolism, energy balance, and food processing, evaluation and labeling will be explored. Maximum enrollment is 15. Prerequisite: ANS 215 or concurrent enrollment.

380-1 to 6 Field Studies in Foreign and Domestic Animal Agriculture. A travel course to observe and study the operation and management of farms, ranches, and feedlots as well as agribusiness firms supporting animal production such as food processors, feed manufacturers, and housing or equipment companies in either the United States or foreign countries. A written report is required. The travel fee charged to the student will depend on the nature and the length of the course.

381-1 Animal Science Seminar Discussion of problems and recent development in animal science. Prerequisite: ANS 121. Restricted to junior standing.

390-1 to 4 Special Studies Animal Science. Assignment involving research and individual problems. Restricted to juniors

and seniors only. Special approval needed from the chair.

409-4 Equine Science. Designed for students interested in the more scientific aspects of equine physiology and management. The class will take a more advanced look at anatomy and physiology of the systems of the equine and consider how they relate to selection, use and management. Lecture and laboratory. Prerequisite: ANS 219 and 331. Fee: \$50.

412-2 Horsemastership. This course involves the advanced equestrian in the evaluation and resolution of special problems in horse training. Students will work with a single horse during the semester to master an individual training goal set in consulting with the instructor. Emphasis will be placed on the use of non-violent training techniques. Course is repeatable up to 4 times during the student's academic career. Not for graduate credit. Prerequisite: ANS 312 or consent of instructor. Facilities/riding expenses are \$300 per class minimum.

415-4 Advanced Animal Nutrition. Advanced principles and practices associated with digestion, absorption, and metabolism of nutrients as related to domestic monogastrics, ruminants and horses. Prerequisite: ANS 215 and 315.

419-3 Stable Management. Designed for the advanced equine student planning a career in the horse field. Mastery of in-depth management techniques on an applied basis is emphasized. Farm, animal and personnel management are practiced. Extensive out-of-class practice time is expected. Prerequisites: ANS 409 with a grade of C or better. Lab fee: \$90.

420-3 Companion Animal Behavior - Animals at Work. This course focuses on the behavior of dogs and horses and will incorporate hands-on training techniques as well as pack/herd observation. Students will understand the difference between classical and operant conditioning, negative and positive reinforcement and will have the opportunity to observe social behavior, reproductive behavior, eating behaviors as well as dominant and submissive behaviors. Key features of the course include a study of the work that dogs and horses perform for man as well as a history of how those working relationships developed. All students with a passion for animals are encouraged to enroll. Lab fee: \$50.

421-2 International Animal Production. A study of world animal production practices with emphasis on the developing countries. Adaptability of animals to environmental extremes and management practices employed to improve productivity. Prerequisite: ANS 121. Restricted to junior standing.

425-3 Biochemical Aspects in Nutrition. (Same as HND 425) The interrelationship of cell physiology, metabolism and nutrition as related to energy and nutrient utilization, including host needs and biochemical disorders and diseases requiring specific nutritional considerations. Prerequisite: ANS 215 or HND 320, CHEM 140B, PHSL 201 and 208.

426-3 Comparative Endocrinology. (Same as PHSL 426, ZOOL 426) Comparison of mechanisms influencing hormone release, hormone biosynthesis, and the effects of hormones on target tissues, including mechanisms of transport, receptor kinetics, and signal transduction. Prerequisites: ANS 331 or ZOOL 220 or PHSL 310 with a minimum grade of C.

429-2 Equine Enterprise Management. Study of the diverse horse industry and business management practices involved with the operation of a successful horse enterprise. Analysis of a commercial horse operation will be explored through an in-

depth, self-directed farm project. Field trips and guest speakers will inform students for the farm project. An on-campus horse event will be planned and executed as a class project. Prerequisites: ANS 409, ABE 350 or 351. Field trip fee: \$40.

430-4 Dairy Cattle Management. Application of the principles of breeding, physiology, and economics to management of a profitable dairy herd. Breeds of dairy cattle, housing, milking practices, and quality milk production. Prerequisite: ANS 315. Lab/Field trip fee: \$35.

431-4 Reproductive Physiology. Comparative anatomy and physiology of the male and female reproductive system of domestic animals; hormones; reproductive cycles; mating behavior; gestation and parturition; sperm physiology; collection and processing of semen; artificial insemination, pregnancy tests; diseases. Prerequisite: ANS 121, ANS 331. Laboratory fee: \$10.

433-4 Introduction to Agricultural Biotechnology. (Same as PSAS 433, CSEM 433, PLB 433) This course will cover the basic principles of plant and animal biotechnology using current examples; gene mapping in breeding, transgenic approaches to improve crop plants and transgenic approaches to improve animals will be considered. Technology transfer from laboratory to marketplace will be considered. An understanding of gene mapping, cloning, transfer and expression will be derived. Restricted to senior standing.

434-2 Physiology of Lactation. Anatomy and physiology of milk secretion; endocrine control; milk precursors and synthesis; milk composition; physiology and mechanics of milking; lactation-related disorders and diseases; transgenic milk. Prerequisite: ANS 331.

435-1 to 4 Agricultural Molecular Biotechnology Seminar. (Same as CSEM 435) Molecular biology is rapidly making important contributions to agricultural science through biotechnology. An appreciation of the techniques of molecular biology and their application to plant improvement is important to all in agriculture and biology. The relationships between plant molecular biology and the biotechnology industry will be discussed. Presentations on particular research problems will be made. Graded P/F only.

445-4 Companion Animal Clinical Nutrition. Nutrition and feeding management of canine and feline during obesity, cancer, diabetes, urolithiasis, dental disease, dermatological disease, hepatic and gastrointestinal disorders, mobility and muscular disorders, heart diseases, and critical care. Prerequisite: ANS 215 with a grade of C or better.

455-2 Animal Nutrient Management. Scope and problems associated with animal nutrient management; current regulations and laws on environmental protection. Principles covering waste management technology and current livestock nutrient management systems are presented. Field trips will be scheduled. Restricted to junior standing.

465-4 Swine Management Swine production systems and management techniques including breeding and selection, reproduction, nutrition, herd health and disease prevention, housing and waste management, marketing, production costs, and enterprise analysis. Field trip. Prerequisite: ANS 315 or consent of instructor. Lab fee: \$35.

477-3 Aquaculture. (Same as ZOOL 477) Production of food, game and bait fishes. Design of facilities, chemical and biological variables, spawning techniques, diseases and nutrition. Two

lectures per week and one four-hour laboratory on alternate weeks. Prerequisites: BIOL 200A or ZOOL 118 or ANS 121 with grade of C or better.

481-3 Current Topics in Companion Animal Nutrition. This course is designed to develop written communication skills while learning to critique literature concerning current topics in the field of companion animal nutrition. Not for graduate credit. Prerequisite: ANS 115 and ANS 365.

485-4 Beef Cattle Management. Beef cattle production systems and management, breeding and selection, reproduction, nutrition, and herd health with emphasis on the most economical and efficient systems. Prerequisite: ANS 315, ANS 332 or concurrent enrollment. Lab/Field Trip fee: \$35.

490-4 to 8 Horse Industry Internship. Provides the Equine Science students with the opportunity for diversified, practical experience in their area of career-goal interest. One semester will be spent working in a commercial horse-related industry. Not for graduate credit. Prerequisite: ANS 409, 419. Restricted to senior standing. Special approval needed from the instructor.

495-1 to 6 Instruction in the Animal Sciences. Acquaints the students with different teaching environments and styles. Students will be expected to participate in instructing animal science courses. Restricted to junior standing. Special approval needed from the instructor. Not for graduate thesis option credit.

Animal Science Faculty

AbuGhazaleh, Amer A., Associate Professor, Ph.D., South Dakota State University, 2002.

Appgar, Gary A., Associate Professor, Ph.D., Virginia Polytechnic Institute, 1994.

Arthur, Robert D., Professor, *Emeritus*, Ph.D., University of Missouri, 1970.

Atkinson, Rebecca L., Associate Professor, Ph.D., University of Wyoming, 2006.

Gastal, Eduardo L., Associate Professor, Ph.D., University of Wisconsin-Madison, 2009.

Goodman, Bill L., Professor, *Emeritus*, Ph.D., Ohio State University, 1959.

Hausler, Carl L., Associate Professor, *Emeritus*, Ph.D., Purdue University, 1970.

Jones, Karen L., Professor, Ph.D., Texas A&M University, 1999.

King, Sheryl S., Professor, *Emerita*, Ph.D., University of California at Davis, 1983.

Kroening, Gilbert H., Professor, *Emeritus*, Ph.D., Cornell University, 1965.

Minish, Gary L., Professor, *Emeritus*, Ph.D., Michigan State University, 2004.

Small, Brian C., Associate Professor, Ph.D., University of Maryland, 2009.

Speiser, Stephanie A., Senior Lecturer, M.S., Southern Illinois University Carbondale, 2000.

Strack, Louis E., Associate Professor, *Emeritus*, D.V.M., University of Illinois, 1961.

Venable, Erin B., Assistant Professor, Ph.D., University of Missouri-Columbia, 2010.

Young, Anthony W., Professor, *Emeritus*, Ph.D., University of Kentucky, 1969.

Anthropology (Department, Major, Courses, Faculty)

Anthropology is the study of humans and their cultures in terms of universal features, variability, and development through time. The major subdivisions are socio-cultural anthropology, linguistics, archaeology, and (biological) physical anthropology. Anthropology provides capable students with an intensive program emphasizing early integration into upper division coursework. This major is appropriate for the outstanding liberal arts student seeking a distinctive program. Grades below C in Anthropology courses will not be accepted as fulfilling major requirements.

Students are expected to gain a broad background in all subfields, after which the options of further general study or specialization are available. Students are encouraged to supplement their anthropological studies with work in other social sciences, and where appropriate in biology, earth sciences, humanities, mathematics, or other areas.

Most professional anthropologists find employment as teachers and researchers in colleges and universities. However, a major in anthropology provides the student with a unique liberal arts background bridging the humanities, social, earth, biological, and chemical sciences, which leads to many other professional opportunities outside of teaching and research.

An anthropology major is required to take ANTH 240A,B,C, D, 300, and one each of the 310/328 and 410 course series. Students are encouraged to take ANTH 300 early in their studies. No more than six hours of ANTH 460 (independent study) and no more than six hours of additional 200-level course work (i.e., in addition to the 240 series) may be applied to the major. Anthropology seniors are required to participate in the Senior Seminar (ANTH 480). It should be noted that graduate departments often require foreign language and mathematical background beyond that required by the undergraduate program. Students not interested in advanced study will be advised on an individual basis reflecting their own particular interests and aspirations.

Students with scholarly promise are encouraged to write an honors thesis under the direction of a departmental faculty member in the spring of their senior year. This thesis can be part of an Anthropology Honors Major (see below), although students who are not enrolled in University Honors may also write an honors thesis.

Bachelor of Arts Degree in Anthropology, College of Liberal Arts

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements</i>	
(See Chapter 4)	12
<i>Requirements for Major in Anthropology</i>	36
ANTH 240A, 240B, 240C, 240D, 300 and 480 required, and an additional nine hours: three of 310 or 328 series, three of 410 series, and three more of 400-level course work in anthropology, plus 9 credit hours of electives in anthropology.	
<i>Electives</i>	31
<i>Total</i>	120

Anthropology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101.....	3	-
Select ¹ (Science).....	3	3
Select ¹ (Social Science).....	3	3
Select ¹ (Humanities).....	-	3
ENGL 101, 102 ¹	3	3
Select ¹ (Fine Art).....	-	3
Select ¹ (Human Health).....	2	-
<i>Total</i>	14	15
SECOND YEAR	FALL	SPRING
ANTH 300.....	3	-
Select ¹ (Math, Multicultural)	-	3
CMST 101 ¹	3	-
Select ¹ (Humanities).....	-	3
Foreign Language ²	3	3
ANTH 240A,D ^{3,4}	3	3
ANTH 240B,C ⁴	3	3
<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING
Select ¹ (Math, Multicultural)	3	-
ANTH 310, 410.....	3	3
ANTH 3XX or 4XX	-	6
ENGL	3	-
Elective	6	7
<i>Total</i>	15	16
FOURTH YEAR	FALL	SPRING
ANTH 480	3	-
Anthropology Elective	3	3
Elective 300 or 400 level	9	12
<i>Total</i>	15	15

¹See University Core Curriculum

²Two semesters (generally 8 hours) of a foreign language are required for all liberal arts students. Students intending to pursue a graduate education should realize that a foreign language would probably be required for graduate school admission; for these students two years of foreign language is recommended.

³Sociocultural anthropology is central to major requirements and should be taken as soon as possible. Any two of 240A, B and C may be taken the second year. All four must be taken as a requirement for the major.

⁴Grade below C in anthropology courses will not be accepted as fulfilling major requirements.

Anthropology Minor

A minor in anthropology consists of at least 15 hours including at least two of the four courses: 240A, 240B, 240C, 240D, and a minimum of three of the remaining nine hours of 310 series or 400-level courses.

Related interdisciplinary minors are also available in several areas, including Africana Studies, Forensic Science, Latino and Latin American Studies, Museum Studies, Native American Studies, and Women, Gender and Sexuality Studies. See separate listings under these minors for full descriptions.

Anthropology Honors Major

Outstanding students enrolled in the University Honors Program may pursue an Honors Major in Anthropology. Requirements are identical to those for a regular Bachelor of Arts Degree (including 32 hours in Anthropology) except that at least eight classes must be honors classes; usually, these are four UHON classes in years 1 & 2, and four Anthropology honors classes in years 3 & 4.

Anthropology Honors Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101.....	3	-
Select (Sci) or UHON 351S.....	3	3
Select (Soc Sci) or UHON 351O.....	3	3
Select (Hum) or UHON 351U.....	-	3
ENGL 120 (Honors) or ENGL 101, 102	3	3
Select (Fine Art).....	-	3
Select (HumHlth) or UHON 351F.....	2	-
<i>Total</i>	14	15

SECOND YEAR	FALL	SPRING
ANTH 300	3	-
Select (Math, Multicultural) or UHON 351M	-	3
CMST 101	3	-
Select(Humanities) or UHON 351U	-	3
Foreign Language	3	3
ANTH 240A,D	3	3
ANTH 240B,C	3	3
<i>Total</i>	15	15

THIRD YEAR	FALL	SPRING
Select (Math, Multicultural)	3	-
ANTH 4XX, 410.....	3	3
ANTH 405H or 310H (both honors)	3	3
ANTH 3XX or 4XX	-	3
Electives	6	6
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
ANTH 480.....	-	3
ANTH 499 (Honors).....	3	-
ANTH Honors Elective	3	-
Elective 300 or 400 level.....	9	11
<i>Total</i>	15	14

Honors classes in Anthropology include the following: ANTH 310H (*Peoples and Cultures of xxx/world area-these change, and honors students can use 310H to take an honors enhanced version of any one*); ANTH 405H (*How to do Anthropological Research-honors section*); and ANTH 499 (*Honors Thesis*). In addition, students may receive Honors credit for a non-Honors course through an Honors contract with the course instructor.

Anthropology Suggested Curricular Guide for Students Doing a Semester Abroad.

Anthropology students are encouraged to study abroad as an enrichment of their B.A. in anthropology.

Although programs will vary, this plan assumes that the student will be able to take at least one 300- or 400-level equivalent that can serve as an elective in Anthropology. Note that while it is also possible to fulfill the language requirement for the College of Liberal Arts in intensive language study during one semester of study abroad, this must be approved by the Dean's office.

Semester abroad in the junior year: First and second years same as above.

THIRD YEAR	ABROAD	SIUC
ANTH 310, 410.....	-	6
ANTH 4XX.....	-	3
ANTH 3XX or 4XX	3	-
ENGL.....	-	3
Electives	9	4
<i>Total</i>	12	16

FOURTH YEAR	FALL	SPRING
ANTH 480.....	-	3
Anthropology Elective.....	3	3
ANTH 3XX or 4XX	3	-
Elective 300 or 400 level.....	9	10
<i>Total</i>	15	16

Semester abroad in the senior year: First, second and third years same as above.

FOURTH YEAR	ABROAD	SIUC
ANTH 480.....	-	3
Anthropology Elective.....	3	3
Elective 300 or 400 level.....	9	10
<i>Total</i>	12	16

Courses (ANTH)

104-3 The Human Experience-Anthropology. (University Core Curriculum) [IAI Course: S1 900N] This course explores different human life ways around the world, past and present. It investigates the question of what is universal to all humans and the myriad ways they differ, through studying modern people, the re-mains of past cultures through archaeology, and human origins and physical variation.

200-3 Native North American Literatures. (Same as FL 201) An introduction to Native American authors from North America. Readings will vary across time period, historical context, and tribal communities. Topics may include effects of and Native American responses to colonization, cultural adaptation, Native American identity, reservation and urban life, cultural revitalization, and others that reflect the multiple experiences of Native American peoples as expressed in Euro-American literary genres.

201-3 Archaeology of Illinois. A survey of prehistoric cultural

development, its causes and consequences, as seen through the archaeology of Native American cultural development in the Illinois region, from the earliest foragers to European contact.

202-3 America's Diverse Cultures. (University Core Curriculum) The United States is a multicultural society in which differences of race, ethnicity, gender, class, region, and religion deeply shape individuals' life chances. This course studies America's diversity of family organization, livelihood and life chances, understanding of illness and health care, religious beliefs and practices, and other topics. It provides tools to understand different cultural codes and forms of power, and to understand key issues that students will face as individuals and citizens in a multicultural world.

204-3 Latino Cultures in America. (University Core Curriculum) The central concern of this course is the cultural aspect of the Latino experience in the United States. It focuses on the contemporary population, the political and economic issues that affect Latinos in this society, and the characteristics that Latinos share and yet that make Latinos the most diverse population in the United States. These characteristics include family, religion, socio-economic status, gender ideology, generational relations, and more. The course pivots around the construction of Latino identity: What helps shape it? How do Latinos perceive themselves? How do others perceive (us) them?

205-3 Latin American Civilizations. [IAI Course: S2 910N] Introduction to three civilizations of Latin America: Mexica Aztec; Inca; and Maya. Prehispanic culture history in the lower Amazon River basin and the impact of Spanish contact and conquest on these native Latin American populations will also be discussed.

206-3 Latin American Popular Culture. This course examines the most significant expressions of popular culture in Latin America. It focuses on how people with different class and ethnic backgrounds produce alternative readings of the national culture in their own country and outside it.

207-3 Sustainability. Over the course of its 150 year history, anthropology has documented the ways people engage with and adapt to the environments they live in. This anthropological record covers nearly 150,000 years of human existence and every environment on planet earth. Anthropological knowledge about human adaptation also gives us a glimpse into what arrangements between practice, values, policy, and technology have allowed people to live for prolonged periods of time in certain environments and which ones have not. This class introduces students to the way anthropologists approach the concept of sustainability, and the theories and methods they use to study it.

208-3 Lost Cities and Buried Treasures. This survey of our past examines the variety of human communities and societies. We focus on the "big developments" during the last three million years: the first use of tools and fire, the first appearance of religion and belief systems, the first art, the switch from foraging to farming (and its consequences), the growth of social inequality, and the first monuments, governments, states and empires.

210-3 Survey of the Primates. Our closest cousins, the primates, display a remarkable diversity of social behavior, reproductive behavior, positional behaviors and diets, and live in a wide variety of environments and ecosystems. This diversity will be reviewed, with an eye to understanding its origin in the past and its anatomical basis.

220-3 The Amazing Life of Apes: Our Closest Living Relatives in Film and Research. This half-semester course explores the lives of the five ape taxa, chimpanzees, bonobos, orangutans, gorillas and gibbons with the goal of providing clues to a better understanding of humans. Through videos and lectures students will learn what it means to be an ape, where and how apes live, what distinguishes apes from monkeys and why humans are also apes.

221-3 Gender Around the World. (Same as WGSS 220) This course is designed to introduce students to the variety of gender relations in different cultures around the world. Through reading about a number of different world areas, students will be introduced to questions of differing notions of what makes "men", "women" and other possible gender categories, to issues of different power relations, to cultural constructions of sexuality, and to the relationship of gender to everyday life.

231-3 Introduction to Forensic Anthropology. Forensic Anthropology is the application of the theoretical and practical techniques of physical anthropology to human remains of medico-legal significance. This course will focus on the teaching of theory and method appropriate to allow the creation of a biological profile for an unknown individual. Topics will include human osteology, techniques for estimating the age and sex of an individual from skeletal remains, analysis of trauma, skeletal recovery, and the evolving role of forensic anthropology in the medico-legal system. This course is required for the Interdisciplinary Forensic Sciences minor. No prerequisites.

240A-3 Human Biology: An Introduction to Biological Anthropology. (University Core Curriculum) An introduction to humans as a biological species. Applies scientific method to exploring data on humans and our closest relatives, to better understand our place in the web of life as a biological organism. Includes genetics (particularly human genetics), evolutionary theory, primate behavior and evolution, human fossil record, and similarities and differences in modern humans, including blood groups, skin color, and disease susceptibility. Course material fee: \$103.

240B-3 Introduction to Anthropological Linguistics. This course is intended as an introduction to the theories, methods and goals of anthropological linguistics, focusing on the structure and use of language in cultural context. Will address questions about what language is, how languages are similar and different, how and why speech patterns vary within a speech community, and how languages change.

240C-3 Introduction to Archaeology. Covers basic theories and methods used in archaeology to study lifestyles of past cultures through an examination of their tools, house and community remains, and art works. Includes methods of excavation, dating techniques, and other methods of analysis. Open to both majors and non-majors.

240D-3 Introduction to Social-Cultural Anthropology. An exploration of current anthropological theories and methods for understanding human cultures from a comparative perspective; also examines human institutions such as religion, politics, and family cross-culturally. Although non-Western societies are emphasized, comparisons with our own are treated as well.

251-3 Anthropology Through Science Fiction. Basic concepts of anthropology are used to interpret the imaginary worlds of science fiction. Fictional alien cultures are examined

to see how features of human biology, language, social organization, technology, etc. are patterned after or are different from known human cultures.

261-3 to 6 Issues in Popular Anthropology. Topics in popular anthropology as selected by the instructor. Topics vary and are announced in advance. May be repeated with different instructors.

271-3 Africa in African Cinema. (Same as AFR 271) This course is a general introduction to African culture and history through the medium of movies by African filmmakers. Students will watch over a dozen important movies from Africa. These screens are supplemented with appropriate readings, online resources, lectures and discussion. Students will learn aspects of African history and ethnology while also gaining the aesthetic and intellectual tools to appreciate African cinema.

298-1 Multicultural Applied Experience. An applied experience, service-oriented credit in American diversity involving a group different from the student's own. Difference can be manifested by age, gender, ethnicity, nationality, political affiliation, race, or class. Students can sign up for the one-credit experience in the same semester they fulfill the multicultural requirement for the University Core Curriculum or coordinate the credit with a particular core course on American diversity, although neither is required. Students should consult the department for course specifications regarding grading, work requirements and supervision.

300-3 Writing Anthropological Research. Writing skills, with reference to anthropological subjects and materials. Open to both majors and non-majors. Recommended for 300 and 400-level courses. Required for anthropology majors and a prerequisite for the senior seminar. Fulfills the CoLA Writing-Across-the-Curriculum requirement.

301-3 Language in Culture and Society. (Same as LING 301) The problem of the uniqueness of human language and how it fits into culture and society. The origin and development of language. Topics covered include animal and human communication, language and world view, and the meaning of meaning.

302-3 Indians of the Americas. A region by region survey of the native Americans of North, Middle, and South America. Emphasis is on lifeways: ecology and environment, subsistence, economy, social organization, religion, art, music, and other aspects of culture. A brief introduction to pre-history and language is included.

304-3 Origins of Civilization. This course is a survey of development of those ancient complex societies known as civilizations around the world. The emphasis is on the use of archaeological data to understand the interplay of environmental and cultural factors that led to the beginnings of agriculture, population growth, and the origins of cities. Among the early societies that may be analyzed are Mesopotamia, Egypt, China, Europe, Maya, Aztec, and Inca.

310A-3 Introduction to Peoples and Cultures-Africa. (Same as ANTH 470A, AFR 310A) An introduction to the prehistory, cultural history, and modern cultures of peoples-Africa.

310C-3 Introduction to Peoples and Cultures-Caribbean. (Same as ANTH 470C) An introduction to the prehistory, cultural history, and modern cultures of peoples in the Caribbean.

310D-3 Introduction to Peoples and Cultures-Europe.

(Same as ANTH 470D) An introduction to the prehistory, cultural history, and modern cultures of peoples in the geographic area in question. Area focus differs from course to course and semester to semester.

310E-3 Introduction to Peoples and Cultures-South America. (Same as ANTH 470E) An introduction to the prehistory, cultural history, and modern cultures of peoples in South America.

310F-3 Introduction to Peoples and Cultures. (Same as ANTH 470F) An introduction to the prehistory, cultural history, and modern cultures of peoples in the Middle East and North Africa.

310G-3 Introduction to Peoples and Cultures-North America. (Same as ANTH 470G) An introduction to the prehistory, cultural history, and modern cultures of peoples in North America.

310H-3-6 Honors Peoples and Cultures. This course is designed to provide students in the University Honors program a survey of the prehistory, cultural history, and contemporary cultures of the geographic area in question. Topical emphasis may vary from year to year, in conjunction with other 310 sections. Special approval needed from the department (Restricted to students in University Honors program).

310I-3 Introduction to Peoples and Cultures-Mesoamerica. (Same as ANTH 470I) An introduction to the prehistory, cultural history, and modern cultures of peoples in Mesoamerica.

310K-3 Introduction to Peoples and Cultures-Native Peoples-Southwest. (Same as ANTH 470K) An introduction to the prehistory, cultural history, and modern cultures of the Native Peoples of the American Southwest.

328A-3 Introduction to Languages and Cultures of the Americas-North America. (Same as ANTH 428A) This course introduces the myriad of indigenous languages of the Americas. Focus is both descriptive and anthropological. Languages are considered with respect to their grammatical and discursive structures, historical relations, and their place within the sociocultural milieu of speakers. Areal focus is North America.

328B-3 Introduction to Languages and Cultures of the Americas-Mesoamerica. (Same as ANTH 428B) This course introduces the myriad of indigenous languages of the Americas. Focus is both descriptive and anthropological. Languages are considered with respect to their grammatical and discursive structures, historical relations, and their place within the sociocultural milieu of speakers. Areal focus is Mesoamerica.

328C-3 Introduction to Languages and Cultures of the Americas-South America. (Same as ANTH 428C) This course introduces the myriad of indigenous languages of the Americas. Focus is both descriptive and anthropological. Languages are considered with respect to their grammatical and discursive structures, historical relations, and their place within the sociocultural milieu of speakers. Areal focus is South America.

330-3 Biological Foundations of Human Behavior. Discussion of human sexual behavior, the opposition of violence and aggression with cooperative behavior, and the anthropological background of facts concerning whether these behaviors are driven by biological (instinctual) or purely cultural factors.

340C-3 Introduction to the Archaeology of Africa. (Same as AFR 340) An introduction to the prehistoric and historic cul-

tures of sub-Saharan Africa. The course examines subsistence practices, migrations, trade, technologies, cities, and states. Topics include social, political, and economic organization from hunter-gatherers to ancient kingdoms to early 20th century. The class may be held concurrently with ANTH 430C, but with fewer readings and assignments.

340E-3 Introduction to the Archaeology of Ancient Egypt. Detailed study of the early culture of ancient Egypt with emphasis on the evolutionary cultural development of Egypt. No prerequisites.

370-3 Anthropology and Contemporary Human Problems. The contribution of anthropology to an understanding of contemporary human problems of environmental crisis, world hunger and overpopulation, social stratification and internal order, war and international order. The approach is cross-cultural drawing on knowledge of all societies and cultures in space and time. Anthropological fundamentals are introduced at the beginning.

376-2 to 8 Independent Study in Classics Program. Special approval needed from the instructor and class section head.

380-1 to 15 Study Abroad in Anthropology. Provides credit towards an undergraduate degree for study at a foreign institution, in an approved overseas program, or approved program offered by SIUC faculty. Determination of credit is made by the department based on the specific program and requirements. May be repeated. Prerequisites: one year of residence at this institution, good academic standing, completion of one of : ANTH 104, ANTH 202, ANTH 240A, 240B, 240C, or 240D. Special approval needed from the department.

404-3 Art and Technology in Anthropology. An introduction to the basic ways in which people utilize the natural resources of their habitat to meet various needs, such as food, shelter, transportation, and artistic expression. The nature of art, its locus in culture, and its integration into technical society will be considered.

405-3 How to Do Anthropological Research. This course is designed to teach students the skills needed to consume the professional literature of anthropology intelligently. The subjects covered include: the importance of research questions or hypotheses, the logic of deducing test implications, literature search, sampling, measurement issues, data reduction and graphing, and simple inferential statistics.

405H-3 How to Do Anthropological Research. This course is designed to teach students in the University Honors program the skills needed to consume the professional literature of anthropology intelligently. The subjects covered include: the importance of research questions or hypotheses, the logic of deducing test implications, literature search, sampling, measurement issues, data reduction and graphing, and simple inferential statistics. Not for graduate credit. This course is for students in the University Honors program.

406-3 Introduction to Historical Linguistics. (Same as LING 406) An introductory survey of historical and comparative linguistics, including terminology, assumptions and methods of investigation. Satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: one of ANTH 240B, LING 300, LING 405 or ANTH 500B.

410A-3 Practicing Anthropology. This course is designed to get students acquainted with the notion of development and

the challenges that the practice of anthropology faces when directed towards development and social change in both developing and developed countries. Prerequisite: ANTH 240D recommended for undergraduates.

410C-3 Economic Anthropology. The study of non-Western economic systems. Prerequisite: ANTH 240D recommended for undergraduates.

410D-3 Ethnomusicology: Theory and Method. This seminar examines the social, cultural, experiential, evolutionary, and historical dimensions of music. It is designed for students for whom music is a topical interest, who need to gain foundational knowledge about the theory and methods of ethnomusicology. We will review the history of ethnomusicology, major theoretical debates, and current issues.

410E-3 Anthropology of Law. Anthropological thought on imperative norms, morality, social control, conflict resolution and justice in the context of particular societies, preliterate and civilized. Law of selected societies is compared to illustrate important varieties. Prerequisite: ANTH 240D recommended for undergraduates.

410F-3 Anthropology of Religion. A comparative study of (religious) belief systems, with emphasis upon those of non-literate societies. Examination of basic premises and elements of these belief systems, normally excluded from discussions of Great Religions. Prerequisite: ANTH 240D recommended for undergraduates.

410G-3 Urban Anthropology. Contemporary cities are dynamic places where populations that differ in terms of class, race, and ethnicity establish particular relationships with geographic space and architectural structures. This class is designed to teach students how to experience and analyze urban spaces from an anthropological perspective, and how to apply anthropological theory and methods in urban planning.

410H-3 African Expressive Culture. (Same as AFR 410H) This course examines aspects of African expressive culture including the visual arts, music, dance, orature, cinema, drama and ceremony from an anthropological perspective. Particular attention is given to analysis of African expressive culture in social context and the role of the arts in the practice of politics, religion, medicine and other aspects of African life. Many of the expressive genres examined deal with historical representation and political resistance. Therefore, this course provides insights into African history and politics through the creative representations of African artists.

410I-3 Identities: Global Studies in Culture and Power. This course surveys recent studies of sociocultural identities based on ethnicity, class, race, gender, nationality, age, language, and other criteria, as aspects of broader struggles over power and meaning. Topics to be addressed are critical analyses of identity politics in the Americas, Europe, Middle East, Asia, and other regions; historical approaches to studying identities; and ethnographic studies of transnational and diasporic communities.

410J-3 Kinship and Social Organization. Universal features of non-Western systems of kinship terminology and social organization. Topics include the structure and functioning of kinship systems, lineages, clans, sibs, phratries, moieties, and tribal units. Prerequisite: ANTH 240D recommended for undergraduates.

410K-3 Ecological Anthropology. An examination of the relationship of past and present human populations in the context of their natural and social environments.

410L-3 Transcending Gender. (Same as WGSS 410) How do humans become male and female in different societies? Can men become women and women become men? What other gender possibilities exist? Is male dominance universal? What are the sources of male and female power and resistance? Do women have a separate culture? What are the relationships between gender, militarism and war? These and other questions will be examined in cross-cultural perspective.

410M-3 Healing and Culture. This course examines systems of healing and medicine from an anthropological perspective. The theory and practice of medicine in different cultures, including Western biomedicine, are considered. Particular attention is given to the ways in which medical knowledge gains legitimacy in different social contexts and the problems which arise in culturally heterogeneous arenas when different medical paradigms contend for legitimization.

410N-3 Anthropology of Popular Culture. An examination of recent approaches to popular culture, material culture and consumption in anthropology. Special topical focus will include sports, television and movies, food and shopping. The course will be organized around several fieldwork projects in the Carbondale community. Prerequisite: ANTH 240D recommended for undergraduates.

410O-3 Colonialism and Post-Colonialism. This course is designed to familiarize students with the experience of colonialism and the political, social, cultural implications of it. The analysis will not be limited to the study of the colonial period, but it will examine the complexities of contemporary post-colonial societies and cultures.

410P-3 Ethics and Research. This course examines the risks that any anthropological research poses, both in fieldwork and writing, as well as questions and dilemmas that any social scientist should be aware of before getting involved in any research practice. Prerequisite: ANTH 240D recommended for undergraduates.

410Q-3 Food, Symbol and Society. In this course we will explore all aspects of the social uses and symbolic meanings we attach to food and eating. How do we use food to make friends, to make enemies, and to make ourselves? What is changing in our food consumption patterns? What are some of the politics and the ethics involved in producing and marketing food? What is the significance of eating out? How do we analyze the smell and taste of food cross-culturally?

410R-3 Anthropology of Science and Technology. Technologies and scientific knowledge are commonly thought of as being universally applicable and as representations of truths about the operations of the world that are independent of culture. Anthropological studies, however, suggest that the efficacy of scientific knowledge and technologies is specific to the localities in which they are produced. This course introduces students to the primary concerns of the anthropology of science.

410T-3 Anarchy, Power and Egalitarianism: Anthropological Perspectives. This class considers anthropological evidence for and approaches to issues of power and rulership in relation to egalitarian or anarchist societies, that is, societies without arches (Greek for leaders/laws). We will look at how

such societies function, what kinds of history and mythology they produce, how their exchange systems are elaborated, and why they have remained "under the radar" of the modern system of state societies. What can egalitarian /anarchist societies tell us about dominant assumptions about the nature of power and governance? How have ideas about "direct democracy" shaped new social and cultural practices? What is the relationship between these projects and movements and the larger societies in which they exist?

412-3 Visual Anthropology as a Research Methodology. The new digital technologies provide exciting new ways to conduct anthropological research and present research findings. They also raise technical, methodological, and ethical questions for researchers. This course examines these issues through readings and analysis of examples of use of these media - digital video, still photography, and web authoring - in the field and in presentation to a scholarly and larger public.

415-3 Sociolinguistics. (Same as LING 415) History, methodology and future prospects in the study of social dialectology, linguistic geography, multilingualism, languages in contact, pidgin and creole languages, and language planning.

416-3 Spanish in the U.S.A. (Same as LING 416) This course offers a survey of the historical, social, political, linguistic and educational issues surrounding the Spanish language in the United States. Topics to be addressed include Spanish language use and bilingualism, language maintenance and shift, education of Latino populations, Hispanic diversity, and Latino literature.

417-3 Language Contact. This course will introduce students to the social conditions under which language contact occurs and the cultural and linguistic consequences of such contact. Primary topics will be language maintenance and shift, ideologies and attitudes regarding bilingualism, and language development and change, using data from a variety of languages and cultures. Designed to provide a comprehensive background for research on bi- or multilingual settings. Prerequisite: one of the following: ANTH 240B, LING 200, LING 300, ANTH 500B or LING 505.

420-3 Mayan Texts. Detailed examination of Mayan texts written in Mayan languages in their cultural contexts. Texts may range from pre-Columbian hieroglyphic texts, colonial Mayan texts, to modern texts.

421-3 Descriptive Phonetics and Phonology. The course introduces students to the study of phonetics and phonology from an anthropological and descriptive perspective. The course is interested in; how are sounds produced and how do they then become meaningful in languages? Special attention is paid to metrical phonology.

422-3 Grammatical Analysis. A basic introduction to the analysis of morphology and syntax in languages of the world from a functional perspective. A broad range of grammatical patterns will be introduced and examined, equipping the student to investigate the diversity of language structures.

424-3 Native American Verbal Art. (Same as ENGL 424) This class examines the oral traditions (story-telling, poetry, song, chant, etc.) of Native American Peoples. This class focuses on the way that Native American verbal art has been presented/represented by outsiders as well as on the formal features and forms of Native American verbal art. Attention is paid to the

place and structure of verbal art in Native societies. This class focuses on the broad spectrum of verbal art in North America.

425-3 Cognitive Anthropology. The theory of culture as cognitive organization is explored. Among the topics are: Formal analysis of lexical domains, folk classifications and strategies, the problem of psychological validity, linguistic determinism and relativity, biogenetic and psycholinguistic bases of cognition, and the new ethnography.

426-3 Gender, Culture and Language. (Same as WGSS 426 and LING 426) This course is designed for students who have had some exposure to gender studies. It will focus on readings in language and gender in the fields of anthropological- and socio-linguistics. Issues to be addressed are the differences between language use by men/boys and women/girls, how these differences are embedded in other cultural practices, and the various methodologies and theories that have been used to study gendered language use.

428A-3 Languages and Cultures of the Americas-North America. (Same as ANTH 328A) This course studies the myriad of indigenous languages of the Americas. Focus is both descriptive and anthropological. Languages are considered with respect to their grammatical and discursive structures, historical relations, and their place within the sociocultural milieu of speakers. Areal focus is North America.

428B-3 Languages and Cultures of the Americas-Mesoamerica. (Same as ANTH 328B) This course studies the myriad of indigenous languages of the Americas. Focus is both descriptive and anthropological. Languages are considered with respect to their grammatical and discursive structures, historical relations, and their place within the sociocultural milieu of speakers. Areal focus is Mesoamerica.

428C-3 Languages and Cultures of the Americas-South America. (Same as ANTH 328C) This course studies the myriad of indigenous languages of the Americas. Focus is both descriptive and anthropological. Languages are considered with respect to their grammatical and discursive structures, historical relations, and their place within the sociocultural milieu of speakers. Areal focus is South America.

430A-3 Archaeology of North America. Detailed study of the early cultures of North America. Emphasis on the evolutionary cultural development of North America.

430B-3 Archaeology of Meso-America. Detailed study of the early cultures of Meso-America with emphasis on the evolutionary cultural development of Meso-America.

430C-3 Archaeology of Africa. Detailed study of Sub-Saharan African prehistoric and historic cultures with emphasis on ecological, evolutionary and historical developments. The course examines human cultural origins, the rise of civilizations, and the diversity of human societies into early historic times.

430D-3-9 (3 per topic) Art and Archaeology of the Ancient Mediterranean. (Same as AD 407 and CLAS 310) An introduction to art historical, archaeological, and historical approaches to the physical remains of the ancient Mediterranean. Emphasis normally on Greece or Rome. Can be repeated if offered on different topics. Occasionally offered overseas. No prerequisites.

430E-3 Archaeology of Ancient Egypt. Detailed study of the early culture of ancient Egypt with emphasis on the evolution-

ary cultural development of Egypt. No prerequisites.

430F-3 Archaeology of South America. Survey of the prehistory and ethnohistory of South America, including the peopling of the South American continent, the development of early cultures, the rise and fall of Andean empires, and the impact of Spanish contact and conquest.

434-3 Advanced Origins of Civilization. A survey of the major developments of the human past, culminating in the rise of cities and states. Areal coverage varies, but generally includes the ancient Near East, Mesoamerica, Andean South America, South Asia (India and Pakistan), and China. Graduate standing required.

440A-3 The Fossil Evidence for Human Evolution. An advanced consideration of the fossil evidence for human evolution and evaluation of the various theories regarding the course of human evolution.

440B-3 Race and Human Variation. A consideration of the range, meaning and significance of contemporary human biological variation, including evolutionary and adaptive implications and the utility of the race concept.

440C-3 Context of Human Evolution. This course will provide an ecological, behavioral, geological, geographic, and theoretical context from which to understand the evolutionary history of modern humans. The course is designed to complement ANTH 440A.

441A-3 Laboratory Analysis in Archaeology: Ceramics. Being durable, abundant, and full of information about food, social customs, styles, and even ideology, pottery provides a wealth of information about past societies. This course covers the major aspects of pottery analysis, including studies of raw materials, production techniques, function, and exchange. The course is partly lecture, partly lab-based.

441B-3 Laboratory Analysis in Archaeology: Archaeometry. This course surveys technical methods of the physical and natural sciences in archaeological analysis. Rather than focusing on a specific set of materials (as is done in the other courses in the ANTH 441 series), this course covers a broad spectrum of technical studies, including chronometry as well as the analysis of ceramics, metals, textiles, and ecofacts.

441C-3 Laboratory Analysis in Archaeology: Lithics. This course provides an introduction to lithic analysis in archaeology. Students will be introduced to technological and functional analyses, typological studies, use-wear analysis, debitage analysis, and related subjects. The focus will be on chipped stone, but ground stone will also be considered. The overall goal is to show how lithic analysis can address broader anthropological questions.

441D-3 Laboratory Analysis in Archaeology: Zooarchaeology. This course introduces students to zooarchaeology, including the techniques of faunal analysis, current theories, and methods used to interpret faunal data. It familiarizes students with the major research questions that animal remains from archaeological sites can be used to investigate. Students will be given their own sample faunal assemblage which they will be expected to sort, analyze, and interpret during the course of the semester.

442-1 to 12 Working with Anthropological Collections. Management, curation, and analysis of anthropological collections as part of a research project created by the student. May

be taken independently or as a follow-up to ANTH 450, 495, 496, 497, 596, or 597.

444-3 Human Genetics and Demography. A course in human genetics with an emphasis on population genetics and demography of modern and ancient human populations.

450A-3 Museum Studies - Learning in Museums. A detailed study of museum in the context of their use of exhibitions as an educational medium. Covers the evolution of the museum as a learning environment and the application of learning theory and principles in modern museums. Emphasis is placed on practicum experiences involving the design of learning experiences and educational programs in the museum setting.

450B-3 Museum Studies - Methodology and Display. A detailed study of museums in the context of their use of exhibitions as an educational medium. Focus on the history of museum exhibitions and instruction in the fundamentals of educational exhibit design and curatorial research. Emphasis is placed on practicum experiences involving the design of educational exhibits and curatorial research. Laboratory/field trip fee: \$20.

450C-3 Museum Studies: Conservation of Anthropological Collections. A study of the principles and methods used in the conservation of ethnographic and archaeological materials. The course examines strategies employed in the preservation of research collections, including preventative care, treatment, research, and documentation. Emphasis is placed on material identification, object use-life, and the chemistry of organic and inorganic materials relative to conservation practices.

455A-3 Dental Anthropology. Developmental origins of vertebrate teeth, anatomy and occlusal function, taxonomic and dietary aspects of the Primate dentition, detecting hominid origins; modern human odontology: genetics, pathology, forensic analysis. Much laboratory activity with materials.

455B-3 Special Topics in Biological Anthropology. (May be repeated once for a total of 6 hours). This course will cover special topics in Biological (Physical) Anthropology. Topics will vary between offerings and may include special or current issues in forensic research, human variation, genetics and evolution, primate behavior, ecology, conservation, or human evolution.

455C-3 Primate Behavior and Ecology. Advanced study of the behavior and ecology of living nonhuman primates. The course will cover the geographic distribution and basic ecological features of nonhuman primates and the relationships between resource distribution, social organization, mating system and behavior which will help to reconstruct the evolution of nonhuman and human primate sociality.

455D-3 Quantitative Methods. Classic inferential statistics as well as resampling approaches and pattern recognition philosophy: chi square, t test, ANOVA, correlation and regression, nonparametric versus parametric methods, multiple regression, all involving diverse anthropological data examples. This course in combination with Ed Psych 506 or other approved substitute satisfies a doctoral tool requirement. Does not count as a bioanthropology elective toward the M.A. degree.

455E-3 Biomedical Anthropology. Biological disorders and maladaptation in the human species. Major themes include epidemiological methods, the modern Epidemiological Transition to "Western" disease patterns, other transitions resulting from "discordant adaptation," diet, the relation to sociomedical

anthropology, and the evolution of human disease (including osteological paleopathology) from Paleolithic to industrialized contexts.

455F-3 Nutritional Anthropology. The anthropological investigation of diet and nutrition in past and present human populations. This course investigates the diets of our human ancestors, human food revolutions, methods used to evaluate diet and nutrition in past human populations, and contemporary issues in food production and distribution.

455G-3 Primate Biology and Evolution. Advanced study of primate biology, evolution, and systematics, with special emphasis on primate functional anatomy and dentition. The course will cover the taxonomy of primates, the evolution of the primate radiation and primate origins, and biological features which elucidate primate relationships and help to reconstruct behavior and ecology of extinct primates.

455H-3 Osteology. This lab-based course is for the advanced student interested in the analysis of the human skeleton. An intensive study of human skeletal anatomy, the methods used in the identification and analysis of skeletal remains in archaeological contexts, and osteological evidence for disease, diet, and trauma in past populations.

455I-3 Comparative and Functional Primate Anatomy. Advanced study of the functional anatomy of primates with a strong emphasis on primate osteology. The course will compare biology of living primates, including humans, to elucidate adaptations in anatomy of nonhuman primates and to better understand the origins and specific anatomical adaptations in the human lineage.

456-3 Forensic Taphonomy. Critical to the successful forensic anthropological analysis of human remains is an understanding of the events and processes that affect decomposition of biological tissues. This course is designed to teach students about a variety of process affecting decomposition of human tissues, including (but, not limited to) animal scavenging, insect activity, environmental conditions, personal characteristics of the deceased and human vectors (dismemberment, burning, burial, etc.). Prerequisite: ANTH 231 OR ANTH 455H.

460-1 to 12 Individual Study in Anthropology. Guided research on anthropological problems. The academic work may be done on campus or in conjunction with approved off-campus (normally field research) activities. Special approval needed from the instructor.

465-3 to 9 Internship. For anthropology majors only. This provides a supervised experience in a professional setting. Not for graduate credit. Special approval needed from the department.

470A-3 People and Cultures-Africa. (Same as ANTH 310A) A survey of the prehistory, cultural history, and modern cultures of peoples in Africa.

470C-3 People and Cultures-Caribbean. (Same as ANTH 310C) A survey of the prehistory, cultural history, and modern cultures of peoples in the Caribbean.

470D-3 People and Cultures-Europe. (Same as ANTH 310D) A survey of the prehistory, cultural history, and modern cultures of peoples in Europe.

470E-3 People and Cultures-South America. (Same as ANTH 310E) A survey of the prehistory, cultural history, and modern cultures of peoples in South America.

470F-3 People and Cultures-Middle East and North Af-

rica. (Same as ANTH 310F) A survey of the prehistory, cultural history, and modern cultures of peoples in the Middle East and North Africa.

470G-3 People and Cultures-North America. (Same as ANTH 310G) A survey of the prehistory, cultural history, and modern cultures of peoples in North America.

470I-3 People and Cultures-Mesoamerica. (Same as ANTH 310I) A survey of the prehistory, cultural history, and modern cultures of peoples in Mesoamerica.

470K-3 People and Cultures-Native Peoples-Southwest. (Same as ANTH 310K) A survey of the prehistory, cultural history, and modern cultures of the Native Peoples of the American Southwest.

480-3 Senior Seminar. Readings and discussion concerning major issues in the study of humankind. Not for graduate students or non-majors. Prerequisite: ANTH 240A,B,C,D and ANTH 300.

484-1 to 9 Internship: Curation of Archaeological Collections. This internship is intended to introduce students to the management of archaeological collections through hands-on work with materials, typically those housed at the Center for Archaeological Investigations' curation facility. Students will be exposed to a variety of issues that affect local, state, and national curation facilities such as conservation, preservation, accessibility, accountability, and ethical concerns. Internship projects range from collections documentation and research to object digitalization and other special curation projects. Special approval needed from the instructor to register.

485-3 to 9 Special Topics in Anthropology. Selected advanced topics in anthropology. Topics vary and are announced in advance. May be repeated as the topic varies. Special approval needed from the instructor.

490-3 Field Methods and Analysis in Linguistic Anthropology. Includes theoretical background and a project in the linguistic aspects of culture. Prerequisite: ANTH 240B or consent of instructor.

495-3 to 8 Ethnographic Field School. Apprentice training in the field in ethnographic theory and method. Students will be expected to devote full time to the field school. Special approval needed from the instructor.

496-1 to 12 Field School in Archaeology. Apprentice training in the field in archaeological method and theory. Students will be expected to be in full-time residence at the field school headquarters off campus. Special approval needed from the instructor. Students will be charged a \$50 fee for supplies.

497-3 to 6 Field School in Bioarchaeology. This course offers training in archaeological field techniques related to the excavation and analysis of human skeletal remains. Students are expected to be in full-time residence at the field school site, which may involve international travel. Offered during the summer. Special approval needed from the instructor.

499-3 Honors Thesis. Directed reading and field or library research. The student will write a thesis paper based on original research. Not for graduate students. Special approval needed from the department.

Anthropology Faculty

Adams, Jane, Professor, *Emerita*, Ph.D., University of Illinois, 1987.

Bachman, Dona R., Adjunct Assistant Professor, Ph.D., Northern Illinois University, 1979.

Balkansky, Andrew K., Professor, Ph.D., University of Wisconsin, Madison, 1997.

Barrios, Roberto E., Associate Professor, Ph.D., University of Florida, 2004.

Butler, Brian M., Adjunct Professor, *Emeritus*, Ph.D., Southern Illinois University, 1977.

Ciubrinskas, Vytis, Adjunct Assistant Professor, Ph.D., Vilnius University, 1993.

Corruccini, Robert S., Distinguished Professor, *Emeritus*, Ph.D., University of California at Berkeley, 1975.

Croissier, Michelle M., Visiting Assistant Professor, Ph.D., University of Illinois at Urbana-Champaign, 2007.

Dabbs, Grethen R., Assistant Professor, Ph.D., University of Arkansas, 2009.

DeHoet, Robert, Adjunct Instructor, M.F.A., University of Iowa, 1984.

Emoto, Tomomi (Jimee Choi), Adjunct Assistant Professor, Ph.D., Southern Illinois University, 2008.

Ford, Susan M., Professor, Ph.D., University of Pittsburgh, 1980.

Fuller, Janet M., Professor, Ph.D., University of South Carolina, 1997.

Gumerman, George J., Distinguished Professor, *Emeritus*, Ph.D., University of Arizona, 1969.

Handler, Jerome S., Distinguished Professor, *Emeritus*, Ph.D., Brandeis University, 1965.

Hardenbergh, Sabrina H. B., Adjunct Assistant Professor, Ph.D., University of Massachusetts, Amherst, 1993.

Hill, Jonathan, Professor, Ph.D., Indiana University, 1983.

Hofling, C. Andrew, Professor, Ph.D., Washington University, 1982.

Lapham, Heather A., Adjunct Associate Professor, Ph.D., University of Virginia, 2002.

Maring, Ester G., Assistant Professor, *Emerita*, Ph.D., Indiana University, 1969.

Maring, Joel M., Associate Professor, *Emeritus*, Ph.D., Indiana University, 1967.

McCall, John C., Associate Professor, Ph.D., Indiana University, 1992.

Montenegro, Jorge A., Adjunct Assistant Professor, Ph.D., Southern Illinois University, 2010.

Muller, Jon D., Professor, *Emeritus*, Ph.D., Harvard University, 1967.

Reichard, Ulrich H., Associate Professor, Ph.D., Georg-August University, Göttingen, Germany, 1995.

Rice, Don S., Professor, *Emeritus*, Ph.D., Pennsylvania State University, 1976.

Rice, Prudence M., Distinguished Professor, *Emerita*, Ph.D., Pennsylvania State University, 1976.

Riley, Carroll L., Distinguished Professor, *Emeritus*, Ph.D., University of New Mexico, 1952.

Rodriguez, Juan Luis, Adjunct Assistant Professor, Ph.D., Southern Illinois University, 2011.

Shimada, Izumi, Distinguished Professor, Ph.D., University of Arizona, 1976.

Steinbrink, Nate, Adjunct Instructor, M.F.A., Southern Illinois University Carbondale, 2005.

Sutton, David, Professor, Ph.D., University of Chicago, 1995.

Webster, Anthony K., Associate Professor, Ph.D., University of Texas at Austin, 2004.

Welch, Paul D., Associate Professor, Ph.D., University of Michigan, 1986.

Applied Economics

(SEE AGRIBUSINESS ECONOMICS)

Architectural Studies (Major, Courses, Faculty)

The most basic human response to the earth's environment has been the development of methods which increase the probability of survival. The most obvious of these was the creation of shelters by which the impact of climate and the changing seasons could be controlled. From this simple reaction, architecture has evolved which reflects and promotes the cultural, economic and philosophical trends of our societies.

The four-year curriculum in architectural studies offers the beginning level of education for those who intend to pursue a career in this profession or a related field. A structured sequencing of courses is included which provides for a gradual interactive development of required knowledge and skills. This pre-professional preparation is combined with the University Core Curriculum courses to provide a comprehensive scholarly foundation for advancement.

The Bachelor of Science in Architectural Studies (BSAS) is a four-year pre-professional program that prepares graduates for careers in architecture and related fields or to enter masters level programs. In addition, the School of Architecture offers a 1.5 year Master of Architecture (MArch) degree that is accredited by the National Architectural Accrediting Board (NAAB). The BSAS degree combined with the MArch degree is designed to fulfill accreditation requirements. In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted an 8-year, 3-year, or 2-year term of accreditation, depending on the extent of its conformance with established educational standards. Doctor of Architecture and Master of Architecture degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree that, when earned sequentially, constitute an accredited professional education. However, the pre-professional degree is not, by itself, recognized as an accredited degree. The NAAB grants candidacy status to new programs that have developed viable plans for achieving initial accreditation. Candidacy status indicates that a program should be accredited within 6 years of achieving candidacy, if its plan is properly implemented. Graduates with a BSAS degree are prepared for entry-level positions in architecture and related fields at a limited level. Ultimately, most graduates will continue their education in a professional-level Master of Architecture program in order to satisfy education requirements for licensure.

Students also are eligible for participation in the Intern Development Program (IDP) sponsored by the National Council of Architectural Registration Boards. A wide variety of employment options exist. Some areas include design, planning, preservation, government regulation, construction, building products and facilities management.

The amount of material to be covered, the fast pace of assignments, and the pressure of critical reviews combine to produce a highly charged and energetic atmosphere. Successful students must be able to handle multiple projects simultaneously and demonstrate an ability to manage their time wisely.

To support students in their educational endeavors, sophomores, juniors and seniors are provided dedicated studio space. Program facilities include a resource library, model/furniture shop and a dedicated computer graphics laboratory. The computer graphics laboratory will provide access to input/output devices. Each student is required to purchase or lease a laptop computer and software that meets program specifications prior to the start of the second year for those on the four-year plan or prior to the start of the first year for those on the three-year plan. Laptop and software specifications will be supplied during the registration process.

While facilities are provided for use, cost for supplies, individual equipment and field trips necessary to the successful completion of the program are borne by the student. Due to variation in individual materials used, it is impossible to predict the exact costs for each student. A reasonable estimate of additional expenses is in the range of \$1000 to \$2000 per academic year.

The Architectural Studies program maintains the right to retain student work for exhibition or for records and accreditation purposes. Students are advised to assemble photographic and digital files of their work for their portfolios.

Students are encouraged to participate in professional related student organizations, which include the American Institute of Architecture Students, Construction Specifications Institute, and Illuminating Engineering Society. Additional activities designed to enhance the overall quality of education include the University Honors Program, travel study programs, workshops and guest lectures.

Prospective students attending another college or university prior to transferring to Southern Illinois University Carbondale should concentrate on completing courses articulated or approved as substitutes for Southern Illinois University Carbondale's University Core Curriculum requirements. Prior to taking courses that appear to equate to the professional sequence, the applicant should consult with the school director or designated representative.

If a student receives a grade of F three times in the same course, the course cannot be taken again. Students cannot repeat Architectural Studies Prefix courses in which they received a grade of C or better.

Bachelor of Science Degree in Architectural Studies, College of Applied Sciences and Arts

University Core Curriculum 41¹

As per University requirements for baccalaureate degrees, but must include History 101A,B.

Requirements for Major in Architectural Studies (9) + 87

MATH 111 ²	(3) + 1
PHYS 203A	3
PHYS 253A	1
HORT 328A,B	(2) + 2
Electives	9
ARC 121, 122, 231, 232, 242, 251, 252, 271, 341, 342, 351, 352, 361, 362, 381, 451, 452, 462, 481, 482.....	(3) + 72
Total	128

¹ARC 231, 232, PHYS 203A and MATH 111 will apply toward nine hours of University Core Curriculum requirements making a total of 41 in that area.

²MATH 108 and 109 substitute for MATH 111. Hours will be (3) + 3. Total hours for the degree remains 128 when the extra hours are counted as an architecture elective.

³In order to meet NAAB pre-professional requirements, at least 45 hours of non-architecture courses must be completed.

Architectural Studies Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ARC 121, 122	4	4
ENGL 101, 102	3	3
UCOL 101, HIST 101B	3	3
MATH 111, CMST 101	4	3
Select Core	2	3
<i>Total</i>	16	16

SECOND YEAR	FALL	SPRING
ARC 231, 232	3	3
ARC 251, 252	4	4
ARC 271, 242	3	3
PHYS 203A, HORT 328A	3	2
PHYS 253A, HORT 328B	1	2
HIST 101A, Select Core	3	3
<i>Total</i>	17	17

THIRD YEAR	FALL	SPRING
ARC 341, 342	4	4
ARC 351, 352	5	5
ARC 361, 362	3	3
ARC 381, Select Core	2	3
<i>Total</i>	14	15

FOURTH YEAR	FALL	SPRING
ARC 451, 452	6	6
ARC 481, 462	3	3
Elective, ARC 482	3	3
Select Core	3	-
Elective	3	3
<i>Total</i>	18	15

Courses (ARC)

121-4 Design Communication I. (Same as ID 121) Introduction to basic drawing and graphic modeling for interior design, architecture, and graphic communication. Instruction in two- and three-dimensional visualization of form and space. Topics: freehand drawing and drafting skills, orthographic projection, shade and shadow, paraline drawing, sketching, drawing and

projection composition, and perspective geometry and projection. Restricted to Architectural Studies and Interior Design majors. Studio Fee: \$48.

122-4 Design Communication II. (Same as ID 122) Continuation of Design Communication I. This course is a continuation of sketching and black and white drawing techniques. The introduction of color and color presentation techniques with emphasis on advanced interior design and architectural graphics and presentation composition. Prerequisite: ARC 121. Restricted to Architectural Studies and Interior Design majors. Studio Fee: \$48.

199-1 to 10 Individual Study. Provides first-year students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Special approval needed from the sponsor and school director.

231-3 Architectural History I. (Same as ID 333) (Advanced University Core Curriculum Course) The study of the influences and the development of architecture from prehistoric to the 19th Century, in particular, the study of structure, aesthetics, and the language of architecture. With ID 334-Architectural History II, satisfies Core Curriculum Fine Arts requirement.

232-3 Architectural History II. (Same as ID 334) (Advanced University Core Curriculum Course) Course covers development of modern architecture and urban planning from the nineteenth century to the present, and includes American, British and Continental architecture and urban planning, and influences of Eastern Architecture and design. With ID 333, satisfies Core Curriculum Fine Arts requirement. Prerequisite: ARC 231.

242-3 Building Technology I: Wood. (Same as ID 242) Introduction to basic materials, components, processes, theories, and means of assembly of light wood frame construction. Building of full-scale projects on an off campus requiring the fabrication of wood structures with appropriate tools and equipment. Preparation of working drawings in light wood frame construction using BIM software. Prerequisite: ARC 122, 271. Restricted to major. Studio Fee: \$36.

251-4 Design I: Concept. (Same as ID 251) Introduction to the basic principles and elements of design by means of practical and abstract applications. Development of two- and three-dimensional solutions and presentations for conceptual design problems. Emphasis is on three-dimensional thinking and communication. Prerequisite: ARC 122. Restricted to Architectural Studies and Interior Design majors. Studio Fee: \$48.

252-4 Design II: Order. (Same as ID 252) A series of studio exercises to develop an understanding of the use of a model for structuring design information, fundamentals of programming, research, communication skills and the design process. This course is designed to satisfy the writing portion of the Communication-Across-the-Curriculum requirements. Prerequisites: ARC 251, 271 and ENGL 101. Restricted to Architectural Studies and Interior Design majors. Studio Fee: \$48.

258-1 to 30 Work Experience Credit. Credit granted for job skills, management-worker relations, and supervisor experience for past work experience while employed in industry, business, the profession, or service occupations. Credit will be

established by school director evaluation. Restricted to major.

259-1 to 60 Occupational Education Credit. A designation for credit granted for past occupational educational experiences related to the student's educational objectives. Credit will be established by school director evaluation. This credit may only be applied at the 100- and 200-level for the architectural studies degree unless otherwise determined by the director. Restricted to major.

271-3 Computers in Architecture. (Same as ID 271) This course serves as an introduction to various electronic media employed within the practice of interior design and architecture. Creative and effective skills in the use of computers in interior design and architecture applications are consistently stressed. Restricted to major.

299-1 to 16 Individual Study. Provides students with opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Special approval needed from the sponsor and school director.

314I-3 Expressions in Architecture. (University Core Curriculum) A study of the interconnected nature of the arts, history, environmental psychology, and architecture using the built environment as the foundation for the study. Students will learn to critically examine the built environment by learning how architecture expresses human cultures, social structures, economic and political status, and spiritual beliefs.

319-1 to 15 Occupational Internship. Each student will be assigned to a University approved organization engaged in activities related to the student's academic program and career objectives. The student will perform duties and services as assigned by the preceptor and coordinator. Reports and assignments are required to be completed by the student. Hours and credits to be individually arranged. Mandatory Pass/Fail. Restricted to major in architectural studies. Special approval needed from the instructor.

320-1 to 12 Architectural Cooperative Education. The student will participate in an Architectural Studies approved cooperative education program that includes formal instruction, training and/or career related work experiences. Students receive a salary or wages and engage in pre-arranged assignments related to their academic program and career objectives. Program faculty evaluations, cooperative agency student performance evaluations and student reports are required. Cooperative experience may be in one or more of the following broad areas: (a) schematic design, (b) design development, (c) construction documents, (d) bidding or negotiations, (e) construction administration. Hours and credit to be individually arranged. Restricted to major in architectural studies. Special approval needed from the instructor.

341-4 Building Technology II: Masonry and Concrete. Continuing study of materials and practices in document preparation for buildings using masonry and reinforced concrete construction. Investigation and use of local, state and federal codes regulating health and safety. Investigation of construction techniques relating to criteria of permanence, low maintenance and budget requirements. Produce a set of working drawings for a two-level, light commercial/industrial building. Prerequisite: ARC 242. Restricted to major. Studio Fee: \$48.

342-4 Building Technology III: Steel. Correlation of the design development and construction documents phases of a building project. Development of the project from design development through construction drawing phases with appropriate drawings required for each phase. Prerequisite: ARC 242. Restricted to major. Studio Fee: \$48.

350-1 to 32 Technical Career Subjects. In-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, professions, and health service occupations offered through various workshops, special short courses, and seminars. Hours and credit to be individually arranged. This course may be classified as independent study. Special approval needed from the instructor and school director.

351-5 Design III: Context. Continuing study of architectural design. Projects of increased scope and complexity. Continue design process study (synthesis) and appropriate design presentation (communication). Working with impingement introduced by external agencies such as social, government, and community, as part of a larger context of planning. Study of the impact of site development, for on-site as well as external, contextual issues. Prerequisite: ARC 252. Restricted to major. Studio Fee: \$60.

352-5 Design IV: Complexity. Completion of complex design projects in varied environmental settings. Rapidly paced projects designed to provide the maximum exposure to complex architectural typologies. Analysis of facility program toward management of complex patterns. Prerequisites: ARC 351, 381. Restricted to major. Studio Fee: \$60.

353-4 to 6 Architecture Vertical Studio. A series of studio exercises designed to allow students to earn credit for ARC 251, 252, 351, 352, 451, 452, or ID 251 or 252. Projects are designed to fulfill the goals of the course for which this is substituted. Prerequisites vary according to the course for which this is substituted. Sophomore standing or higher required. Course may be repeated once for up to 12 hours credit. Restricted to major in Architectural Studies or Interior Design. Studio Fee: \$12 per credit hour.

361-3 Structures I: Statics and Steel. Elementary study of forces and force systems using graphic and analytic methods. Basic structural concepts: reactions, shear and moment diagrams, axial, eccentric and combined loading on beams and columns. Design of floor and roof structural systems: load analysis, acting and resisting stresses. Truss stress analysis. Introduction to steel design. Prerequisites: PHYS 203A, PHYS 253A. Restricted to major.

362-3 Structures II: Wood and Concrete. Study of wood and concrete structural framing systems: investigation of wood and concrete materials and their limitations, and the use of appropriate structural design procedures for wood and concrete structures through selection of appropriate, common and economical shapes to satisfy building structural requirements and applicable building code requirements. Prerequisite: ARC 361. Restricted to major.

381-2 Environmental Design I: Site Planning. The fundamentals of site planning with reference to the historical, environmental, climatic, technologic, and legal aspects in site design. Introduction to use of surveying equipment and the preparation of a site design with emphasis on the principles of

sustainable design. Restricted to major. Studio Fee: \$24.

399-1 to 16 Individual Study. Provides students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of the entire institution. Each student will work under the supervision of a sponsoring staff member. Special approval needed from the faculty sponsor and school director.

434-3 Preservation Summer. (Same as HIST 496B) Field experience in research and historic preservation issues related to regionally and nationally significant historic sites in southernmost Illinois between the Ohio and Mississippi rivers. Not for graduate credit. Special approval needed from the instructor.

444-1 to 6 Architectural Field Studies. In site study of specified world area(s) concerning the influence of the region's particular culture on architecture, landscape, urban and interior design. The course reviews both historic and current; ethnicity, social, philosophical, religious, economic and political values of the region being visited to gain insights on the symbiotic relationship between culture and design. Not for graduate credit. Fees: cost of transportation, lodging, access fees and general cost related to delivery of the curriculum items that are in addition to on-site courses. Special approval needed from the instructor and school director.

451-6 Urban Design and Community. (Same as ARC 555) Study of urban design and community as cultural and spatial development of human settlement patterns. All previous design course experience will be brought to bear on the architectural projects within the context of urban and community criteria. Not for graduate credit. Prerequisite: ARC 352. Restricted to major. Studio Fee: \$72.

452-6 Design VI: Integration. (Same as ARC 556) This comprehensive design studio focuses the knowledge and skills developed in all previous courses on a single project. The course emphasizes the design integration of the building's structural and environmental systems. Not for graduate credit. Co-requisite: ARC 482. Prerequisites: ARC 342, 362, 451, 481. Restricted to major. Studio Fee: \$72.

462-3 Structures III: Analysis and Lateral Forces. (Same as ARC 562) Continuing study of framing materials and systems for buildings using advanced concepts of structural analysis. Included are earthquake resistant structures, wind resistant design, composite beams, plastic theory, statically indeterminate structures, long spans, moment distribution, multi-story structures, and other related topics. Not for graduate credit. Prerequisite: ARC 362. Restricted to major.

470-3 Architectural Visualization. This course is designed to give the student a fundamental understanding of the practices of 3D architectural modeling and visualization. Themes emphasized are: 3D modeling; still frame rendering; animation production; image editing and post production. Priority enrollment is given to graduate students in ARC 570 before ARC 470 is offered. Prerequisite: ARC 271. Restricted to architecture and interior design majors. Special approval needed from the advisor.

473-3 Computer-Aided Design and Animation. Skill development in the computer-aided design system for the schematic and design development phases of all architectural disciplines. The use of the computer-aided design system as a tool for three-dimensional creative problem solving. Not for graduate credit.

Pre-requisite: ARC 271. Special approval needed from the department chair.

481-3 Environmental Design II: Energy and Systems. (Same as ARC 583, ID 481) The study of the influence of energy, human comfort, climate, context, heating, cooling and water on the design of buildings and sites. The design of passive and active environmental systems and strategies for sustainability. Not for graduate credit.

482-3 Environmental Design III: Lighting and Acoustics. (Same as ARC 584, ID 382) This course provides a comprehensive overview of the luminous and sonic environment with emphasis on energy conscious design. Not for graduate credit.

491-3 Professional Practice I: Office Practice. (Same as ID 471) Introduction to the organization, management, and practice of architecture and interior design as a business and profession. Emphasis is placed on the range of services provided, professional ethics, business management, marketing, contracts and negotiations, design cost analysis/control and other aspects of professional practice. Not for graduate credit. Prerequisite: ARC 352. Restricted to major.

492-2 Professional Practice II: Specifications. Understand the function of a Project Manual with technical specifications as a contract document and the relationship of technical specifications to architectural drawings. Research, organization, format and content of various sections of the Project Manual-Technical Specifications document. Not for graduate credit. Prerequisite: ARC 342. Restricted to major in architectural studies.

499-1 to 16 Individual Study. Provides students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of the entire institution. Each student will work under the supervision of a sponsoring staff member. Not for graduate credit. Special approval needed from the faculty sponsor and school director.

Architectural Studies and Interior Design Faculty

Anz, Craig K., Associate Professor, Ph.D., Texas A&M, 2009, M.Arch., University of Texas at Arlington, 1991.

Bramlet, James E., Assistant Professor, *Emeritus*, M.A., Western Illinois University, 1970.

Brazley, Michael D., Associate Professor, Ph.D., University of Louisville, 2002, B.Arch., Howard University, 1978.

Davey, Jon, Professor, Ph.D., Southern Illinois University Carbondale, 2011.

Dobbins, John K., Associate Professor and Head of Master of Architecture Program, M.Arch., M.B.A., University of Illinois, 1986.

Gonzalez-Torres, Rolando E., Associate Professor, Ph.D., Universitat Politecnica de Catalunya, Spain, 2008, M.Ed., Western Kentucky University at Bowling Green, 2001, MLA, Texas A&M, 1996.

Hays, Denny M., Associate Professor, *Emeritus*, M.Arch., University of Utah, 1971.

Kremers, Jack, Professor, *Emeritus*, M.Arch., University of Michigan, 1966.

Lach, Norman, Assistant Professor, M.Arch., University of Illinois Champaign, 1974.

Ladner, Joel Brooks, Associate Professor, *Emeritus*, M.Arch., University of Houston, 1984.

LaGarce, Melinda, Associate Professor, M.F.A., Texas Technology University, 1972.

McDonald, Shannon, Assistant Professor, M.Arch., Yale University, 1992.

Morthland, Laura, Assistant Professor, M.I.Arc., University of Oregon, 2003.

Owens, Terry A., Associate Professor, *Emeritus*, M.S., Southern Illinois University Carbondale, 1984.

Poggas, Christy, Assistant Professor, *Emerita*, M.S. Ed., Southern Illinois University Carbondale, 1990. B.Arch., University of Arizona, 1975.

Schwartz, Chad J., Assistant Professor, M.Arch., Arizona State University, 2003.

Smith, Peter B., Associate Professor, M.Arch., University of Illinois, 1980.

Swenson, Robert, Associate Professor, *Emeritus*, M.Arch., Yale University, 1969.

Tully, Timothy R., Assistant Professor, *Emeritus*, M.S., Southern Illinois University Carbondale, 1990.

Wendler, Walter V., Professor and *Director*, Ph.D., University of Texas, 1991, M.Arch., University of California, Berkeley, 1975.

Wessel, Stewart P., Professor, M.F.A., University of North Texas, 1992.

White, David J., Associate Professor, M.S.Ed., Southern Illinois University Carbondale, 1991.

Wright, James K., Assistant Professor, *Emeritus*, M.Arch., University of Pennsylvania, 1966.

Army Military Science

(Department, Minor, Courses, Faculty)

Army Military Science is a voluntary course sequence, which may lead to a commission as an officer in the United States Army (Active Army, Army Reserves, or Army National Guard). The basic course, consisting of four 100 and 200 level courses plus one 400-level course, is open to all students and carries no military obligation. Students may take one or all of the basic courses offered, receiving credit hours for each course without incurring a commitment to further study in Army Military Science or any branch of the armed forces. If a student continues to the advanced course, the student will then incur a military obligation. The obligation may be served in the Active Army, Army Reserves, or Army National Guard after the student is commissioned as an officer upon completion of the Army Military Science program. Students who wish to complete the program and receive a commission must earn a bachelor's degree. The field of study is unrestricted. Courses in communication skills, computer literacy, and military history are required.

The Army Military Science program offers a progressive adventure-filled two-year and four-year program, designed to teach students the leadership and management skills needed to pursue an exciting career in the United States Army. The student who successfully completes the program will receive a commission in the Active Duty Forces, the Army Reserves, or the Army National Guard. Students may request and be guaranteed reserve forces duty, which allows the student to pursue parallel dual careers in the reserve components of the Army

and civilian economy. The four-year program is divided into the basic course, covering freshman and sophomore years, and the advanced course covering the junior and senior years.

The basic course prepares students for the advanced course and provides them with an education in national defense, basic leadership, and management skills. The advanced course is designed to provide training and instruction encompassing a wide range of subjects from organizational and managerial leadership, ethics and professionalism, and military justice, to the United States military history. The understandings and experiences derived from these courses and adventure-training exercises are required to enable a student to grow into an effective junior officer in the U.S. Army.

Veterans of any service, students who are currently members of the armed forces (Reserve or National Guard), and students who have successfully completed three or four years of Junior Reserve Officer Training Corps instruction, may be eligible to enroll in the advanced course when they have obtained junior academic status at the University. Students who have no prior military service may attend a 28-day Leadership Training camp at Fort Knox, Kentucky, which will qualify them for entrance into the advanced course of Army Military Science. This camp incurs no obligation on the part of the student.

All students enrolled in the Cadet Leaders Course will attend a 32-day advanced training camp at Fort Lewis, Washington between the first and second years of the advanced course (normally the summer between the student's junior and senior school year). Both the Leadership Training and Advanced Camp pay the student for travel and attendance at camp, plus provide free room, board, and uniforms.

The student additionally learns about the wide range of Army career specialties available and has the opportunity to request duty in those fields where qualified. Those students currently in the Guard or Army Reserves may continue to participate in their Guard/Reserve unit and pursue a commission through the Army's Simultaneous Membership Program (SMP). Participation in the (SMP) allows soldiers currently serving in the National Guard or Army Reserve to receive Sergeants (E5) pay while performing unit drills.

Freshman and sophomore students enrolled in the four-year program are eligible to compete for Army Military Science scholarships for up to three- and one-half-years. These scholarships pay full tuition, fees, books and up to \$500 per month subsistence allowance. Illinois residents who are enrolled in ROTC can compete for state Army ROTC tuition waivers, which pay tuition and other selected fees.

In addition to courses offered for academic credit, the Department of Army Military Science sponsors extracurricular activities. The Ranger Challenge Team, Color Guard Teams, and Pershing Rifles are open to all ROTC students. Adventure training takes place in the form of rappelling clinics, field training exercises, survival training, and Civil War Battlefield terrain walks. The department also conducts several traditional social functions throughout the year.

Further information may be obtained from the Department of Army Military Science, telephone (618) 453-7563 or 453-5786.

Army Military Science Minor

A minor in Military Science consists of at least 25 semester

hours, including completing the advanced course plus designated courses in communications, military history and computer literacy. Courses in national security affairs and management are also highly encouraged. With its emphasis on leadership and small unit tactics, this minor is structured to develop the attributes required of successful officers in today's United States Army. This minor also recognizes sustained course work in a discipline other than the student's major area of study. Students must discuss their minor program with the Director, Army Military Science, to design a coherent program to meet their individual needs.

Courses (AMS)

101-1 to 2 Introduction to the Army and Critical Thinking. Introduction to the personal challenges and competencies critical for effective leadership and communication. Course will demonstrate how the development of life skills, e.g. cultural understanding, goal-setting, time/stress management, and comprehensive fitness relate to leadership, officership, and the Army profession. Student will be introduced to the structure of ROTC Basic Course program, consisting of AMS 101, 102, 201, 202, plus Fall and Spring Leadership Labs and CIET. *Course offers optional leadership laboratory (one credit hour).

102-1 to 2 Introduction to the Profession of Arms. An introduction to the personal challenges and competencies critical to adaptive leadership; including the basics of the communications process and the importance of leaders' development of skills necessary to effectively relay information in the Army. Students will examine the Army as a profession and what it means to be part of it. * Course includes optional weekly leadership laboratory.

201-3 Foundations of Leadership I. Course explores the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and two historical leadership theories that form the basis of the army leadership framework. Aspects of personal motivation and team-building are practiced via planning, executing and assessing team exercises. Participation in weekly leadership lab is mandatory.

202-3 Foundations of Leadership II. This course examines the challenges of leading teams in a complex operational environment; highlighting dimensions of terrain analysis, patrolling, and operation orders. Further study of the theoretical basis of the Army Leadership Requirements Model explores the dynamics of adaptive leadership in the context of military operations. Cadets will develop greater self-awareness by assessing personal leadership styles and practice communication and team-building skills. Course includes weekly leadership laboratory.

203-6 Leader's Training Course. A special six-week training program designed to prepare students for the cadet leaders of ARMY ROTC. The course is conducted at Ft. Knox, Kentucky during the summer. Students are evaluated on their potential to become an Army Officer. Not for graduate credit. Special approval needed from the director of Army Military Science.

301-4 Mission Command. This course will challenge cadets to adapt as they are presented with various scenarios related to squad tactical operations. Cadets will receive systematic and specific feedback on leadership attributes and actions, and develop leadership and critical thinking abilities based on this

information, along with self-evaluation. The primary focus is to enhance cadets' tactical leadership skills to ensure success at Leader Development and Assessment Course (LDAC); a summer course held at Fort Knox, Kentucky. Course includes weekly leadership laboratory. Special approval needed from the Director of Army Military Science.

302-4 Adaptive Team Leadership. Course is designed to challenge cadets to study, practice, and evaluate adaptive leadership skills by introducing them to difficult scenarios involving tactical squad operations. Cadets will receive systematic feedback analyzing their leadership abilities and actions, which will be used to perform self-evaluations. By utilizing this information, cadets will enhance their leadership and critical-thinking abilities. Course includes weekly leadership laboratory. Special approval needed from the Director of Army Military Science.

358-6 Advanced Camp A special 35 day field study training program designed to further prepare Army ROTC advanced course students for the basic tasks that will be required of them as junior officers and leaders in the Army. The course is normally conducted at Ft. Lewis, Washington during the summer. Special approval needed from the director of Army Military Science.

401-4 Mission Command and the Army Profession. This course explores the dynamics of leading in the complex situations of current military operations. The student will examine variations in customs and courtesies, military law, principles of war, and rules of engagement-in the face of international terrorism. The student will be introduced to various aspects of interacting with non-government organizations, civilians on the battlefield, decision-making processes, and host nation support. Course includes weekly leadership laboratory.

402-4 Mission Command and the Company Grade Officer. An examination of the dynamics of leading in complex situations during Unified Land Operation I, II, and III, and the Art of Command and how to communicate effectively with Non-Commissioned Officers (NCO) and soldiers during Taking Charge 1, 2, 3 and developing Others (counseling). Cadets will discuss various situations regarding the effects of ethical decisions on personnel and the unit mission. Cadets will be introduced to Comprehensive Soldier Fitness, Being Ready Resilient and Individual and Family Readiness, which will enable future soldiers and families to manage stress during uncertain times. The course will focus on preparing cadets for Basic Officer Leader Courses (BOLC) and the first unit assignment. Primary focus will be preparing cadets to serve as commissioned officers in the U.S. Army. Includes weekly leadership laboratory.

403-1 to 3 Independent Study in Military Science. Directed independent study in selected areas. Students may register for one hour per semester or may register for one hour for the first semester and two hours for the second. They may not register for three hours during one semester. Not for graduate credit. Special approval needed from the director of Army Military Science.

404-2 U.S. Military History. This course provides a historical perspective to decisions made by American military leaders; emphasizing solutions to challenges future Army officers might face: battlefield complexity, resource limitations, teamwork deficiencies, etc. The student will learn how former military leaders confronted and coped with similar issues, using their

experiences and approaches to arm students with the ability to create their own solutions. Commissioning requirement for Army ROTC cadets. Course open to all students.

Army Military Science Faculty

Black, Matthew, Captain, Assistant Professor, M.S., University of Phoenix, 2010.

Downey, Thomas, Assistant Professor, M.S., Southern Illinois University Carbondale, 2004.

Gooding, Matthew, Lieutenant Colonel, Professor of Military Science, M.A., Webster University, 2003, M.P.A., University of Akron, 2009.

Morse, Matthew, Major, Assistant Professor, M.S., Southern Illinois University Carbondale, 2012.

Art and Design

(School, Majors [Art, Design], Courses, Faculty)

The School of Art and Design offers two undergraduate degrees, the Bachelor of Fine Arts and the Bachelor of Arts. The B.F.A., a professional degree, includes ten specializations: art education, ceramics, communication design, drawing, glass, industrial design, metalsmithing, painting, printmaking, and sculpture. Under the B.A. degree there are two majors: art and design. The B.A. degree in art includes three specializations: art education, art history, and general studio; and the B.A. in design includes the specialization of general design.

With a B.F.A. degree in ceramics, drawing, glass, metalsmithing, painting, printmaking, or sculpture, students are prepared to practice as studio artists, go on to advanced study, or enter careers related to their studio specializations. The B.F.A. specializations in industrial design and communication design prepare students with the intellectual, technological, and practical knowledge required in the professional world of design. With a specialization in industrial design, students are prepared to practice in the industrial field of contemporary product development.

Communication Design is the specialization that creates, informs, and modifies the world around us. Its curriculum provides students with a thorough understanding of and competence in communication in a digital-based society. It includes broad-based technical instruction along with instruction in typography, digital graphic technology, design concepts, information design, and industry standards required by the communication field.

Communication design students learn to combine and develop concepts and employ visualization techniques that instruct, interpret, and/or persuade. This curriculum focuses on message content and theory in print, web, and interactive/multimedia design.

Job titles in the fields of design include Multimedia Design, Web Designer, Web Communication Designer, Graphic Communication, Digital Imaging, Multimedia, Interactive Graphic Design, Internet Communication, Motion Graphics, Art Director, or Creative Director.

The specialization of art education is offered within a liberal arts (B.A.) as well as a professional (B.F.A.) curriculum format. Upon completion of either program, students in art education

are prepared and licensed to teach in the public schools. However, the Bachelor of Fine Arts degree program offers the student more studio electives in art and design. With the B.F.A. degree in art education, students are better prepared to teach studio arts in American schools or go on for advanced study either in art or art education.

Art History is a study of visual culture in its historical contexts. The B.A. specialization in art history provides rigorous liberal arts training in analytical and critical viewing, reading, thinking, speaking, and writing. It prepares students for graduate study, professional school, and careers in museums, auction houses, publishing, and other fields. Majors take courses in art history, studio art, and the University's core curriculum and enjoy a wide choice of electives.

The general studio specialization is the most flexible program. By means of both requirements and elective options, students may plan interdisciplinary programs in art or develop programs leading toward a specific career objective.

The education of teachers, scholars, artists, and designers requires both a comprehensive program in the specializations and a university core program outside of the major. In meeting these objectives the School emphasizes both theory and practice in its specializations. Studies are sequentially planned to facilitate orderly matriculation through the baccalaureate curricula.

Prior to entry into selected specializations, all majors are required to complete foundation studies: beginning coursework in art history, drawing, and two- and three-dimensional design. In addition, for entrance into the art B.F.A. specializations, students must have successfully completed a portfolio review of work from previous art studies (at SIU or elsewhere). The review will be conducted upon completion of the foundation studio courses and one or two courses specific to the specialization.

Students admitted to a design specialization must own a laptop computer and software as specified by Design faculty for subsequent courses. The hardware and software will be utilized throughout the Design course sequence beginning with the 300-level specialization courses. Financial aid may be available to eligible students. Students must consult the SIU Carbondale School of Art and Design website for current details on hardware and software requirements. Information is also available through faculty and the School's advisement office.

Transfer students seeking admission from another program at Southern Illinois University must meet the same requirements as those seeking admission from another institution (see Chapter 2). Evaluation of a studio course for transfer credit from another institution will be made on the basis of a presentation of the work (or professional quality images of the work) executed in the course to determine whether the course will be considered equivalent to a specific course or accepted as studio elective credit.

Most prerequisite courses must be completed with a grade of C or better before a student may advance into the next course. Students should refer to individual course descriptions for specific information. All specialization-specific courses in the BFA programs must be completed with a C or better.

Courses in art and design have limited enrollment, and enrollment may be cancelled for students who do not attend the initial class session of the semester. Courses in some programs must be taken in a certain sequence, and not all classes are of-

ferred every semester. Admission to certain courses is restricted, and permission must be obtained prior to registration. For some courses permission to register is based upon submission of a portfolio.

Instructional Support Equipment Fee

The School of Art and Design assesses all undergraduate art and design majors an instructional support equipment fee of \$10.00 per credit hour; a maximum of 12 credit hours will be charged each for fall and spring semesters and six for summer.

Art Major

Bachelor of Fine Arts Degree, College of Liberal Arts

A student majoring in art should select one of the following fields of interest by the end of the freshman year: art education, ceramics, communication design, drawing, glass, industrial design, metalsmithing, painting, printmaking, or sculpture.

ART MAJOR—ART EDUCATION SPECIALIZATION (BFA)

University Core Curriculum Requirements 41

The following must be taken in order to satisfy state teacher licensure requirements: Psychology 102; Education 311 and 314.

Art and Design 100A or B should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207A, B, or C should be taken as the humanities courses.

Requirements for Specialization in Art Education..... (9)+55

Foundation requirements: Art and Design (100A), 100B, 110, 120; two from 101 and/or (207A), (207B), 207C..... (9)+9

Studio requirements: Art and Design 201, 202, 203, 204, 219..15

Art education requirements: 208, 308, 318, 328, 338 15

Art and Design history elective (300 or 400-level)..... 3

Art and Design or Education electives 13

Professional Education Requirements: EDUC 301, 302, 303, 308, 313, 319, 401A..... 24

Total..... 120

Art Education Suggested Curricular Guide (BFA)

FIRST YEAR	FALL	SPRING
AD 100A,B.....	3	3
AD 110, 120.....	3	3
ENGL 101, 102.....	3	3
Math 101, Core Science.....	3	3
UCOL 101, PSYC 102.....	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
AD 219, 202.....	3	3
AD 207A/B/C.....	3	3
AD 201, 203.....	3	3
Core Science, EDUC 314.....	3	3
CMST 101.....	3	-
AD 208, EDUC 311.....	3	3
<i>Total</i>	18	15

THIRD YEAR	FALL	SPRING
AD 204, 328.....	3	3
AD Elective.....	3	6

AD 308, AD 318.....	3	3
Core Health.....	2	-
EDUC 313, 319.....	3	3
EDUC 301, 302.....	1	1
<i>Total</i>	15	16

FOURTH YEAR	FALL	SPRING
EDUC 303.....	1	-
AD Elective.....	4	-
Art History Elective.....	3	-
EDUC 308.....	3	-
AD 338, EDUC 401A.....	3	12
<i>Total</i>	14	12

ART MAJOR—CERAMICS SPECIALIZATION (BFA)

University Core Curriculum Requirements 41

Art and Design 100A or B should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207A, B, or C should be taken as the humanities courses.

Requirements for Specialization in Ceramics (9) + 79

Foundation requirements: Art and Design (100A); 100B; 110; 120; two from 101, (207A), (207B), and/or 207C..... (9) + 9

Major requirements: Art and Design 203; 204; 205; 214; 219; 303; 304A; 304B; 305A; 314A; 389; 404A; 404B; 404C; and 404D 51

Art and Design history electives (300- or 400-level) 6

Studio art electives 13

Total..... 120

ART MAJOR—COMMUNICATION DESIGN

SPECIALIZATION (BFA)

University Core Curriculum Requirements 41

Art and Design 100A or B should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207A, B, or C should be taken as the humanities courses.

Requirements for Specialization in Communication

Design (9) + 79

Foundation requirements: Art and Design (100A), 100B, 110, 120, two from (207A), (207B), (207C) (9) + 9

Major requirements: Art and Design 122; 219; 222; 249; one from 302A, 302B, 302C or 302D; 322; 332; 337; 339; 352; 16 credits from 372, 452, 472, and 489D (courses numbered 322 and above require ownership of MacIntosh laptop computer)..... 46

Art and Design electives 12

Electives 12

Total..... 120

ART MAJOR—DRAWING SPECIALIZATION (BFA)

University Core Curriculum Requirements 41

Art and Design 100A or B should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207A, B, or C should be taken as the humanities courses.

Requirements for Specialization in Drawing..... (9) + 79

Foundation requirements: Art and Design (100A), 100B, 110, 120, two from (207A), (207B), 207C (9) + 9

Major Requirements: Art and Design 200; 201; 202; 203; 204, 205 or 214; 219; 300-9; 301A; 301B; one from 302A, 302B, 302C, or 302D; 389; 400A; 400B; 400C 54

Art and Design history electives (300- or 400-level) 6

Studio art electives 10
 Total 120

ART MAJOR—GLASS SPECIALIZATION (BFA)

University Core Curriculum Requirements 41
 Art and Design 100A or B should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207A, B, or C should be taken as the humanities courses.
Requirements for Specialization in Glass (9) + 79
 Foundation requirements: Art and Design (100A); 100B; 110; 120; two from 101, (207A), (207B), and/or 207C ...
 (9) + 9
 Major requirements: Art and Design 200, 201 or 202; 203; 204; 205; 214; 219; 303; 304A; 305A; 314A; 314B; 389; 414A; 414B; 414C; 414D 54
 Art and Design history electives (300- or 400-level) 6
 Studio art electives 10
 Total 120

ART MAJOR—INDUSTRIAL DESIGN SPECIALIZATION (BFA)

University Core Curriculum Requirements 41
 Art and Design 100A or B should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207A,B, or C should be taken as the humanities courses.
Requirements for Specialization in Industrial Design ... (9) + 79
 Foundation requirements: Art and Design (100A), 100B, 110, 120, two from (207A), (207B), 207C (9) + 9
 Major requirements: Art and Design 200; 12 hours from 203, 204, 205, 300, 303, 304A or 305A; 213; 219; 223; 313; 323; 332; 337; 339; 363; 383; 423; 489A 55
 Art and Design or cognate electives 15
 Total 120

ART MAJOR—METALSMITHING SPECIALIZATION (BFA)

University Core Curriculum Requirements 41
 Art and Design 100A or B should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207A,B, or C should be taken as the humanities courses.
Requirements for Specialization in Metalsmithing (9) + 79
 Foundation requirements: Art and Design (100A); 100B; 110; 120; two from 101, (207A), (207B), and/or 207C (9) + 9
 Major requirements: Art and Design 203; 204; 205; 214; 219; 303; 304A; 305A; 305B; 314A; 389; 405A; 405B; 405C; 405D 51
 Art and Design history electives (300- or 400-level) 6
 Studio art electives 13
 Total 120

ART MAJOR—PAINTING SPECIALIZATION (BFA)

University Core Curriculum Requirements 41
 Art and Design 100A or B should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207A, B, or C should be taken as the humanities courses.
Requirements for Specialization in Painting (9) + 79
 Foundation requirements: Art and Design (100A), 100B, 110, 120, two from (207A), (207B), 207C (9) + 9
 Major requirements: Art and Design 200; 201; 202; 203; 204, 205 or 214; 219; 300-6; 301A; 301B; 301C; one from 302A, 302B, 302C, or 302D; 389; 401A; 401B; 401C 54
 Art and Design history electives (300- or 400-level) 6

Studio art electives 10
 Total 120

ART MAJOR—PRINTMAKING SPECIALIZATION (BFA)

University Core Curriculum Requirements 41
 Art and Design 100A or B should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207A, B, or C should be taken as the humanities courses.
Requirements for Specialization in Printmaking (9) + 79
 Foundation requirements: Art and Design (100A), 100B, 110, 120, two from (207A), (207B), and/or 207C (9) + 9
 Major requirements: Art and Design 200; 201; 202; 203; 204, 205 or 214; 219; 300-6; 301A; nine hours from 302A, 302B, 302C, or 302D; 389; 402A; 402B; 402C 54
 Art and Design history electives (300- or 400-level) 6
 Studio art electives 10
 Total 120

ART MAJOR—SCULPTURE SPECIALIZATION (BFA)

University Core Curriculum Requirements 41
 Art and Design 100A or B should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207A, B, or C should be taken as the humanities courses.
Requirements for Specialization in Sculpture (9) + 79
 Foundation requirements: Art and Design (100A), 100B, 110, 120, two from 101, (207A), (207B), and/or 207C . (9) + 9
 Major requirements: Art and Design 200, 201, or 202; 203; 204; 214; 219; 303-9; 304A; 305A; 314A; 389; 403A; 403B; 403C 51
 Art and Design history electives (300- or 400-level) 6
 Studio art electives 13
 Total 120

Ceramics Suggested Curricular Guide (BFA)

FIRST YEAR	FALL	SPRING
AD 100A,B.....	3	3
AD 110, 120.....	3	3
ENGL 101, 102.....	3	3
Core Mathematics, CMST 101.....	3	3
UCOL 101, Core Social Science.....	3	3
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
AD 204, 304A.....	3	3
AD 207A/B/C.....	3	3
AD 203, 205.....	3	3
Core Health, Core Science.....	2	3
Core Science, Core Social Science.....	3	3
<i>Total</i>	14	15
THIRD YEAR	FALL	SPRING
AD 219, 303.....	3	3
AD 304B, 404A.....	3	3
AD 305A, 314A.....	3	3
AD 389, Core Multicultural.....	3	3
AD 214, Art History Elective.....	3	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
AD 404B, 404D	6	6
Art History elective, AD 404C.....	3	3
AD Studio Electives	7	6
<i>Total</i>	16	15

Glass Suggested Curricular Guide (BFA)

FIRST YEAR	FALL	SPRING
AD 100A,B.....	3	3
AD 110, 120	3	3
ENGL 101, 102.....	3	3
Core Mathematics, CMST 101	3	3
UCOL 101, Core Social Science	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
AD 214, 314A	3	3
AD 207A/B/C	3	3
AD 200/201/202, 203	3	3
Core Health, Core Science	2	3
Core Science, Core Social Science	3	3
<i>Total</i>	14	15

THIRD YEAR	FALL	SPRING
AD 219, 303	3	3
AD 314B, 414A.....	3	3
AD 204, AD 304A	3	3
AD 389, Core Multicultural.....	3	3
AD 205, Art History Elective	3	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
AD 414B, 414D	6	6
Art History elective, AD 414C.....	3	3
AD Studio Electives	4	6
AD 305A.....	3	-
<i>Total</i>	16	15

Metals Suggested Curricular Guide (BFA)

FIRST YEAR	FALL	SPRING
AD 100A,B.....	3	3
AD 110, 120	3	3
ENGL 101, 102.....	3	3
Core Mathematics, CMST 101	3	3
UCOL 101, Core Social Science	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
AD 205, 305A.....	3	3
AD 207A/B/C	3	3
AD 203, 204	3	3
Core Health, Core Science	2	3
Core Science, Core Social Science	3	3
<i>Total</i>	14	15

THIRD YEAR	FALL	SPRING
AD 303, 304A.....	3	3
AD 305B, 405A	3	3
AD 214, AD 314A	3	3
AD 389, Core Multicultural.....	3	3
AD 219, Art History Elective	3	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
AD 405B, 405D	6	6
Art History elective, AD 405C.....	3	3
AD Studio Electives	7	6
<i>Total</i>	16	15

Communication Design Curricular Guide (BFA)

FIRST YEAR	FALL	SPRING
AD 100A,B	3	3
AD 110, 120	3	3
Core Math, CMST 101	3	3
ENGL 101, 102	3	3
UCOL 101, Core Social Science	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
AD 122, 222	3	3
AD 219, 249	3	3
AD 207A/B/C	3	3
Core Health, Social Science	2	3
Core Science	3	3
<i>Total</i>	14	15

THIRD YEAR	FALL	SPRING
AD 322, 372	3	3
AD 339, Art History elective	3	3
AD 352, 302A/B/C/D	3	3
AD electives	3	3
Core Multicultural, AD 332.....	3	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
AD 452, 489D	3	4
AD 472, AD 372/452/472	3	3
AD Electives	3	3
Electives	6	6
<i>Total</i>	15	16

Drawing Suggested Curricular Guide (BFA)

FIRST YEAR	FALL	SPRING
AD 100A,B.....	3	3
AD 110,120	3	3
ENGL 101, 102.....	3	3
Core Mathematics, CMST 101	3	3
UCOL 101, Core Science.....	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
AD 200, 300	3	3
AD 207A/B/C	3	3
AD 201, 202	3	3
Core Health, Core Social Science	2	3
Core Science, Core Multicultural	3	3
<i>Total</i>	14	15

THIRD YEAR	FALL	SPRING
AD 300	3	3
AD 203, 204/205/214	3	3
AD 389, Core Social Science	3	3
AD 219, Art History Elective	3	3
AD 301A, 301B	3	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
AD 400A, 400B	6	6
Art History elective, AD 400C	3	3
AD Studio Elective	4	6
AD 302A/B/C/D	3	-
<i>Total</i>	16	15

Painting Suggested Curricular Guide (BFA)

FIRST YEAR	FALL	SPRING
AD 100A,B	3	3
AD 110,120	3	3
ENGL 101, 102	3	3
Core Mathematics, CMST 101	3	3
UCOL 101, Core Science	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
AD 201, 301A	3	3
AD 207A,B,C	3	3
AD 200, 202	3	3
Core Health, Core Social Science	2	3
Core Science, Core Multicultural	3	3
<i>Total</i>	14	15

THIRD YEAR	FALL	SPRING
AD 300	3	3
AD 301B, 301C	3	3
AD 203, 204/205/214	3	3
AD 389, Core Social Science	3	3
AD 219, Art History Elective	3	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
AD 401A, 401B	6	6
Art History elective, AD 401C	3	3
AD Studio Electives	4	6
AD 302A/B/C/D	3	-
<i>Total</i>	16	15

Printmaking Suggested Curricular Guide (BFA)

FIRST YEAR	FALL	SPRING
AD 100A,B	3	3
AD 110,120	3	3
ENGL 101, 102	3	3
Core Mathematics, CMST 101	3	3
UCOL 101, Core Science	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
AD 202, 302A/B/C/D	3	3
AD 207A/B/C	3	3
AD 200, 201	3	3
Core Health, Core Social Science	2	3
Core Soc Science, Core Science	3	3
<i>Total</i>	14	15

THIRD YEAR	FALL	SPRING
AD 301A, 219	3	3
AD 302A/BC/D	3	3
AD 203, 204/205/214	3	3
AD 389, Core Multicultural	3	3
AD 300, Art History Elective	3	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
AD 402A, 402B	6	6
Art History elective, AD 402C	3	3
AD 300	3	-
AD Studio Electives	4	6
<i>Total</i>	16	15

Industrial Design Curricular Guide (BFA)

FIRST YEAR	FALL	SPRING
AD 100A,B	3	3
AD 110,120	3	3
ENGL 101, 102	3	3
MATH 101, CMST 101	3	3
UCOL 101, Core Science	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
AD 219, 200	3	3
AD 207A/B/C	3	3
AD 213, 332	3	3
AD 223, 313	3	3
Core Health, Social Science	2	3
<i>Total</i>	14	15

THIRD YEAR	FALL	SPRING
AD Elective, AD 363	3	3
AD 323, 383	3	3
Core Science, AD 337	3	3
AD Required Studio	3	3

Core Social Science, Multicultural.....	3	3
<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
AD 423, AD 489A	6	4
AD Required Studio	3	3
Art History Elective	3	-
AD Electives	3	9
<i>Total</i>	15	16

Sculpture Suggested Curricular Guide (BFA)

FIRST YEAR	FALL	SPRING
AD 100A,B.....	3	3
AD 110, 120	3	3
ENGL 101, 102.....	3	3
Core Mathematics, CMST 101	3	3
UCOL 101, Core Social Science.....	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
AD 203, 303	3	3
AD 207A/B/C	3	3
AD 200/201/202; 204	3	3
Core Health, Core Science	2	3
Core Science, Core Social Science	3	3
<i>Total</i>	14	15

THIRD YEAR	FALL	SPRING
AD 303	3	3
AD 314, 304A.....	3	3
Core Multicultural, AD 305A	3	3
Art History Elective	3	3
AD 389, 219	3	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
AD 403A,B	6	6
AD 314A, AD 403C	3	3
AD Studio Electives	7	6
<i>Total</i>	16	15

Bachelor of Arts Degree, College of Liberal Arts

A student majoring in art with a specialization in art history, art education, or general studio should select the specialization by the end of the freshman year.

ART MAJOR—ART HISTORY SPECIALIZATION (BA)	
<i>University Core Curriculum Requirements</i>	41
Two from Art and Design 207A, B, or C should be taken as the University Core Curriculum humanities courses. Art and Design 100A or B should be taken as the fine arts course.	
<i>Requirements for Specialization in Art History</i>	(9) + 79
Foundation requirements	(9) + 9
Studio courses	(3) + 6
AD 207A, B, C	(6) + 3

Major requirements: Art and Design 327 or 498; one from 407; 417; 427A,B or C; 437, or other approved pre-modern course; one from 358, 368, 458 or other approved non-Western course; 438, 489B	15
Art History electives ¹	15
Foreign language (French or German recommended)	6
Humanities electives (classics, east Asian, English, French, German, history, linguistics, or philosophy)	9
Approved electives (studio arts, design, museum studies, humanities, social sciences, foreign language, architecture, and other approved areas) ¹	25
<i>Total</i>	120

¹At least 27 hours of art history electives and approved electives must be 300- or 400-level.

Art History Suggested Curricular Guide (BA)

FIRST YEAR	FALL	SPRING
AD 100A/B, CMST 101	3	3
AD 207A/B/C	3	3
ENGL 101, 102.....	3	3
MATH 101, Core Science.....	3	3
UCOL 101, Core Social Science	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
AD 207A/B/C, Art History	3	6
Core Social Science, AD Studio	3	3
Foreign Language	3	3
Core Health, Core Multicultural	2	3
Core Science	3	-
<i>Total</i>	14	15

THIRD YEAR	FALL	SPRING
AD Studio, Art History	3	6
AD 438	3	-
Art History	3	-
Approved Electives	6	10
<i>Total</i>	15	16

FOURTH YEAR	FALL	SPRING
Art History	6	3
Approved Electives, AD 489B.....	9	3
Approved Electives	-	9
<i>Total</i>	15	15

ART MAJOR—GENERAL STUDIO SPECIALIZATION (BA)

<i>University Core Curriculum Requirements</i>	41
Art and Design 100A or B should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207A,B, or C should be taken as the humanities courses.	
<i>College of Liberal Arts Requirement</i>	6
Foreign language	6
<i>Requirements for Specialization in General Studio</i>	(9) + 73
Foundation requirements: Art and Design (100A), 100B, 110, 120, (207A), (207B), 207C	(9) + 12
Major requirements: Five courses from Art and Design 200, 201, 202, 203, 204, 205, 213, 214, or 249	15

Art and Design 219	3
300- and 400-level studio courses in at least three disciplines	27
AD 400C, 401C, 402C, 403C, 404C, 405C, or 414C	3
Art and Design History elective (300- or 400- level)	3
Liberal Arts electives (at least 6 credits must be 300- or 400-level)	10
Total	120

General Studio Suggested Curricular Guide (BA)

FIRST YEAR	FALL	SPRING
AD 100 A,B.....	3	3
AD 110, 120	3	3
ENGL 101, 102.....	3	3
Core Mathematics, CMST 101	3	3
UCOL 101, Core Social Science.....	3	3
Total	15	15

SECOND YEAR	FALL	SPRING
Beginning-level Studio.....	3	3
AD 207A/B/C	3	3
Beginning-level Studio.....	3	3
Core Health, Core Science	2	3
Foreign Language	3	3
Total	14	15

THIRD YEAR	FALL	SPRING
AD 219, Core Science	3	3
Beg.-level Studio, Upper-level Studio	3	9
AD 389/other WAC.....	3	-
AD 207A/B/C, Art History Elective.....	3	3
Core Social Science	3	-
Total	15	15

FOURTH YEAR	FALL	SPRING
Upper-level Studio	9	9
Liberal Arts Elective, AD 4XXC.....	4	3
Multicultural, Liberal Arts Elective	3	3
Total	16	15

Bachelor of Arts Degree, College of Liberal Arts or Bachelor of Science Degree, College of Education and Human Services

ART MAJOR—ART EDUCATION SPECIALIZATION (BA or BS)	
University Core Curriculum Requirements	41
To include Psychology 102, Education 311, 314.	
Requirements for Specialization in Art Education	55
Foundation requirements: Art and Design (100A); 100B; 110; 120; three from 101, (207A), (207B), and/or 207C..(9) + 12	
Studio requirements: Art and Design 201, 202, 203, 204, 219	15
Art education requirements: Art and Design 208, 308, 318, 328, 338	15
Studio and/or Art Education electives	13
Professional Education Requirements	24
Total	120

Art Education Suggested Curricular Guide (BA or BS)

FIRST YEAR	FALL	SPRING
AD 100A,B.....	3	3
AD 110, 120	3	3
ENGL 101, 102.....	3	3
Core Mathematics, Science.....	3	3
UCOL 101, PSYC 102	3	3
Human Health	-	2
Total	15	17

SECOND YEAR	FALL	SPRING
Core Science, EDUC 311	3	3
AD 207A/B/C, 202	3	3
AD 201, 203	3	3
CMST 101, AD 207A/B/C.....	3	3
AD 208, EDUC 314	3	3
AD 318	-	3
Total	15	18

THIRD YEAR	FALL	SPRING
AD 207A/B/C, Studio elective.....	3	3
AD 204, 328	3	3
AD 308, Studio/Art History elective.....	3	4
EDUC 313, 319	3	3
EDUC 301, 302.....	1	1
AD Studio elective	3	-
Total	16	14

FOURTH YEAR	FALL	SPRING
AD 219	3	-
AD 338, EDUC 401A	3	12
EDUC 308.....	3	-
EDUC 303.....	1	-
AD Studio/Art History Elective.....	3	-
Total	13	12

Art Minor

A total of 21 hours is required for the minor. The student must complete Art and Design 100A, 100B, and two from 207A, B, or C for 12 hours and may then elect studio or art history courses for the remaining nine hours. Transfer students must have taken at least 12 credit hours of art coursework at SIU in order to obtain a minor.

Art Education Minor

A total of 18 credit hours is required for the minor. The student must complete Art and design 100A, 100B, 208, and 308 for 12 hours and may then elect art education, studio, art history, or education courses for the remaining 6 hours.

Art History Minor

A minor consists of 18 credit hours of art history coursework. Students are strongly encouraged to take 207A, B, and C, which serve as prerequisites for many 300- and 400-level art history courses. Transfer students must have taken at least nine credit hours of art history coursework at SIU Carbondale in order to obtain a minor.

Design Major

Bachelor of Arts Degree, College of Liberal Arts (BA)

DESIGN MAJOR-GENERAL DESIGN SPECIALIZATION (BA)

<i>University Core Curriculum Requirements</i>	41
Art and Design 100A or B should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207A, B, or C should be taken as the University Core Curriculum humanities courses.	
<i>College of Liberal Arts Requirement</i>	6
Foreign language	6
<i>Requirements for Specialization in General Design</i>	(9) + 71
Foundation requirements: Art and Design (100A), 100B, 110, 120, six hours from (207A), (207B), 207C	
(9) + 9	
Major requirements: Art and Design 213, 219, 222, 249, 309, 332, 337, 339, 363, 489C	
42	
Art and Design electives (300- or 400-level), including industrial design or communication design course	
18	
Electives (300- or 400-level)	
16	
<i>Total</i>	120

General Design Curricular Guide (BA)

FIRST YEAR	FALL	SPRING
AD 100A, B	3	3
AD 110, 120	3	3
ENGL 101, 102	3	3
Core Mathematics, Science	3	3
UCOL 101	3	-
CMST 101	-	3
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
AD 207A/B/C	3	3
AD 213/222	3	3
AD 219	3	-
AD 249	-	3
Core Health, Science	2	3
Foreign Language	3	3
<i>Total</i>	14	15
THIRD YEAR	FALL	SPRING
AD 309, 332	3	3
AD 363	-	3
AD 337, 339	3	3
AD 3XX	6	-
Core Social Science	3	3
Core Multicultural	-	3
<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
AD 489C	-	3
AD 3XX	6	6
Electives	10	6
<i>Total</i>	16	15

Courses (AD)

100A-3 Foundation Studio A. (University Core Curriculum) A fundamental class with emphasis on contemporary and traditional two-dimensional processes, concepts and materials. Students will also experiment with digital and time-based work. Projects are designed to introduce and fuse content, skill and composition. Emphasis will be placed on solving visual problems and thinking critically and creatively. Incidental expenses will be incurred. Studio fee: \$30.

100B-3 Foundation Studio B. (University Core Curriculum) A fundamental class with emphasis on contemporary and traditional three-dimensional processes, concepts and materials. Projects are designed to introduce and fuse content, skill and the principles of design and composition. Emphasis will be placed on solving visual problems and thinking critically, analytically and creatively. Incidental expenses will be incurred. Studio fee: \$30.

101-3 Introduction to Visual Culture. (University Core Curriculum) [IAI Course: F2 900] This course aims to equip students with a critical awareness of contemporary visual culture - from art to advertising, from the built environment to cyberspace. Students will be encouraged to interrogate all varieties of visual forms and to consider the different viewing contexts, historical antecedents and cultural differences that condition their experience of the visual world. Weekly section meetings with a graduate assistant will provide an opportunity to discuss concepts presented in lectures and readings and to carry out assignments in the form of written reports and creative art and design projects. A field trip is required (a small fee will be required of those unable to provide their own transportation).

110-3 Introduction to Drawing I. Designed to help the student experience the concepts and processes that constitute the language of graphic expression. The goal is a working understanding of the still life. Incidental expenses required. Studio fee: \$20.

120-3 Introduction to Drawing II. Designed to help the student experience the concepts and processes that constitute the language of graphic expression. The goal is a working understanding of inanimate and animate forms in space. Incidental expenses required. Prerequisite: C or better in AD 110. Studio fee: \$20.

122-3 Communication Drawing. Drawing for communication: theoretical and applied concepts in drawing line, shape, form, perspective and color of images in a representational format. Prerequisite: C or better in AD 110. Studio fee: \$30.

200-3 Introduction to Drawing III. Concerned with the introduction to various media, compositional devices, spatial investigation, and the human figure. Incidental expenses not to exceed \$75. Prerequisite: C or better in AD 120. Studio fee: \$60.

201-3 Introduction to Painting. Emphasizing material, techniques, processes, and ideas fundamental to the discipline of painting. Prerequisite: C or better in AD 110. Studio fee: \$25. Incidental expenses not to exceed \$100.

202-3 Introduction to Printmaking. Lectures and films on the basic printmaking processes: relief, intaglio, plano graphic, stencil, and cast paper. Emphasis on studio lab work in relief and intaglio printmaking processes. Prerequisites for art majors: C or better in AD 100A, AD 110. Studio fee: \$60. Incidental

expenses not to exceed \$35.

203-3 Beginning Sculpture. Emphasis experience in materials, techniques, processes, and ideas fundamental to the discipline of sculpture. Prerequisite: C or better in AD 100A,B. Studio fee: \$50. Incidental expenses will be incurred.

204-3 Beginning Ceramics. Introduction to ceramic forming techniques of hand building and throwing on the potter's wheel. Students will explore traditional methods of ceramic form construction and will develop fundamental building skills through dialogue, projects, and problem-solving experiences. Studio fee: \$60. Incidental expenses not to exceed \$15.

205-3 Beginning Jewelry and Metalsmithing. An introduction to the fundamental skills and technology of jewelry and metalsmithing through practical experience. The properties of the medium will be explored and a survey of the field will be made. Prerequisite: C or better in AD 100A,B. Studio fee: \$75. Incidental expenses not to exceed \$10.

207A-3 Introduction to Art History I. (University Core Curriculum course) [IAI Course: F2 901] Studies the origins and nature of art in a variety of ancient civilizations from around the world, such as Ancient Egypt, Greece, China and the Americas. Sculptures, painting, architecture, metalwork, ceramics, textiles and other art works are studied in their social and historical contexts, with consideration of issues of style, subject matter, meaning, technique and aesthetics.

207B-3 Introduction to Art History II. (University Core Curriculum course) Studies art from Ancient Rome to the Early Renaissance in Europe, Africa and Asia. Sculptures, paintings, architecture, metalwork, ceramics, textiles and other art works are studied in their social and historical contexts, with consideration of issues of style, subject matter, meaning, technique and aesthetics.

207C-3 Introduction to Art History III. (University Core Curriculum course) This class studies art from the Renaissance to the present from around the world. Sculptures, painting, architecture, metalwork, ceramics, textiles and other art works are studied in their social and historical contexts, with consideration of issues of style, subject matter, meaning, technique and aesthetics.

208-3 Introduction to Art Education. A required course for those considering art education as a major, but open to all students interested in lifelong learning through art. Requirements include reading, writing, discussion, and art making. Areas of focus include introduction to careers in art education (schools and alternative settings), development of an art teaching portfolio, and service learning experiences. Required for the minor in art education. Studio and community outreach fee: \$30.

213-3 Industrial Design Basic Materials and Processes. This studio and lecture course is an introduction to the Industrial Design process. The first half features basic ID theory and practice via a series of introductory design process assignments. The second half contains increasingly complex assignments. All will utilize 2D and 3D techniques that will include the use of shop equipment and various materials. Portfolio review at course end. Prerequisites: C or better in AD 100A and AD 100B. Lab fee: \$100.

214-3 Glass Survey. Introduction to a variety of glass techniques, including hot glass blowing, cold working, and kiln forming. This beginning-level studio course is essential to un-

derstanding the artistic, architectural, design, and industrial application of glass. The course surveys the history of glass, modern and contemporary glass techniques, and contemporary art utilizing glass. This course is a hands-on studio course that includes demonstrations and exercises. Prerequisites: AD 100A, AD 100B with a grade of C, or consent of instructor. Studio fee: \$60.

219-3 Beginning Digital Art and Design. This class will introduce students to the computer as a tool for both creative visual production and for professional self-promotion. All aspects of the course are centered on improving the quality of the individual's artwork. Students will employ digital applications to utilize, improve and apply their 2-dimensional design fundamentals and conceptual thinking. Workshop fee: \$75.

222-3 Typography I. Introduction to digital typography through letterforms, spacing, layout and communication. Theoretical exercises in spatial and textural qualities of type. Problems in tension, activation and balance. Simple typographical applications, basic history of typography, and portfolio preparation. Studio fee: \$30.

223-3 Rendering and Graphics. An introduction to the techniques and materials used by industrial designers to two-dimensionally represent three-dimensional conceptual ideas. Students develop skills in drawing and rendering with pencils, markers, pastels, and airbrush. Emphasis is placed on understanding the significance of color and graphic applications for industrial design. Studio fee: \$50.

227-3 History of African American Art. (Same as AFR 227) (University Core Curriculum) [IAI Course: F2 906D] A history of African American visual arts, with a brief examination of the arts of various nations of Africa and how they affected art in America. Craft arts, architecture, painting and sculpture will be considered from the slave trade era to the Civil War era; the Harlem Renaissance and other 20th Century movements to the present day.

237-3 Meaning in the Visual Arts. Designed to provide students with a broad understanding of the history and meaning of art and its relevance to contemporary culture. Emphasis is placed upon interdisciplinary concerns, the environment and contemporary social issues. More detailed in historical content than AD 227.

249-3 Design Process and Presentation. Emphasis on basic design principles, design process, terminology, methods and presentation. Transition from theoretical to applied problems. Portfolio preparation. Overview of professional realities (social, ethical and legal) in communication design. Studio fee: \$30.

257-1 to 30 Work Experience. Credit for concurrent or non-structured work performed which is related to the student's educational objective. Credit to be granted by department evaluation. Mandatory Pass/Fail.

258-1 to 30 Work Experience. Credit for past work performed which is related to the student's educational objective. Credit to be granted by departmental evaluation. No grade for past work experience.

267-3 Picturing Difference: Native, African and European Americans in American Art. (University Core Curriculum) This course examines paintings, sculpture, photographs and films representing Native, European, and African Americans. All have represented themselves and been represented by

others, in works of visual art from the 18th century to the present. These will be examined within their own historical periods, within the history of art and within the historical development of multicultural American identities.

300-9 (3,3,3) Intermediate 2-D Studio - Drawing. This course is designed to develop an inventive and experimental approach to a variety of media, subjects, and topics in drawing (instructor defines the topic); to explore more advanced problems with an emphasis on creative interpretation; to guide students in the process of developing ideas; and to build skill with a variety of media and subjects in drawing. Studio fee: \$60. Expenses may exceed \$100.

301A-3 Intermediate 2-D Studio - Painting. An inventive and experimental approach to a variety of media, subjects, and topics (instructor determines topic); to explore more advanced problems with an emphasis on creative interpretation; to guide students in the process of developing ideas; and to build skill with a variety of media and subjects. Studio Fee: \$80. Expenses may exceed \$100.

301B-3 Intermediate 2-D Studio - Painting. An inventive and experimental approach to a variety of media, subjects, and topics (instructor determines topic); to explore more advanced problems with an emphasis on creative interpretation; to guide students in the process of developing ideas; and to build skill with a variety of media and subjects. Studio Fee: \$25. Expenses may exceed \$100.

301C-3 Intermediate 2-D Studio - Painting. An inventive and experimental approach to a variety of media, subjects, and topics (instructor determines topic); to explore more advanced problems with an emphasis on creative interpretation; to guide students in the process of developing ideas; and to build skill with a variety of media and subjects. Studio fee: \$25. Expenses may exceed \$100.

302A-3 Beginning Etching. Introduction to the basic processes of intaglio printmaking, including etching, aquatint, engraving, and drypoint. Emphasis will be placed on black and white printing. Studio fee: \$75. Incidental expenses not to exceed \$50.

302B-3 Beginning Lithography. Introduction to the history and basic processes of lithography, including use of stone and plate. Emphasis will be on black and white printing. Studio fee: \$85. Incidental expenses not to exceed \$45.

302C-3 Beginning Screen Printing. Introduction to the basic processes and history of screen printing, including hand and photographic stencil-making techniques. Studio fee: \$95. Incidental expenses not to exceed \$45.

302D-3 Beginning Woodcut. Introduction to the basic processes and history of woodcut printmaking; including single color (block) printing, reduction printing, multiple block printing and intaglio/relief printing. Studio fee: \$75.

303-9 (3,3,3) Intermediate Sculpture. A studio orientation to tools, techniques, materials, and problems involved in historical and contemporary sculpture. Metal fabrication, figure, wood and stone carving, and plaster fabrication will be emphasized. Prerequisite: C or better in AD 203. Studio fee: \$60. Incidental expenses will be incurred.

304A-3 Intermediate Ceramics. Focuses on structured problems designed to encourage the student to apply basic forming skills experienced at the introductory level. Pottery shapes requiring singular and multiple form components will be investi-

gated and simple glazing techniques will be introduced. Prerequisite: C or better in AD 204. Studio fee: \$65.

304B-3 Intermediate Ceramics. Stresses studio problems of a group nature and introduces glaze calculation as both theory and a practical tool. Personal and creative interpretation of assignments; some problems requiring group effort. Must be taken in A,B sequence. Prerequisite: C or better in AD 304A. Studio fee: \$65. Incidental expenses not to exceed \$10 for each section.

305A-3 Intermediate Metalsmithing. Exploration of various processes emphasizing the diversity of the technical possibilities within the discipline of metalsmithing. Studio fee: \$80.

305B-3 Intermediate Metalsmithing. Emphasis placed on the use of these processes to develop individual styles. Studio fee: \$80. Incidental expenses not to exceed \$25 for each section.

307I-3 Women in Visual Arts: Social and Educational Contexts. (Same as WGSS 307I) (University Core Curriculum) This interdisciplinary course examines women's lives as artists, visual representations of women, and issues of gender distinction in the history of Western art from the medieval period to the present. From perspectives that include social history and cultural anthropology as well as both traditional and feminist art history, the course considers the ways in which the experiences of women and opportunities available to them have historically differed from those of men. The course examines how such differences have affected the emphases, subject matter, and traditions of women's art as well as the ways in which women have been represented.

308-3 Artistic Inquiry, Histories & Philosophies of Art Education. Students develop an understanding of the major theoretical and philosophical issues in art education and develop a personal philosophy of art education. Requirements include reading, writing, research, discussion, and a group exhibition. Satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement for art majors. Prerequisites: AD 208 with a grade of C or concurrent enrollment and EDUC 311 with a grade of C or concurrent enrollment.

309-1 to 12 Independent Study. To be used by majors in the School of Art and Design to pursue independent research activities. Prerequisite: AD 100A, 100B, 110, 120, 207A, 207B, and 207C.

313-3 Computer-Aided Industrial Design. A computer course focused on learning and utilizing two- and three-dimensional data, drawing and modeling software and applications in the industrial design process. Includes: programming theory, 3-D modeling, design for manufacturing assembly and disassembly, product planning, graphics, detailing, assembly drawings, and bill of materials. Prerequisites: C or better in AD 213, AD 219, and AD 223. Studio fee: \$60.

314A-3 Kiln-Formed Glass. This course explores glass as a material for sculpture, architectural elements such as lighting and windows, and design utilizing glass forming techniques with different types of glass. This is a hands-on studio course that includes demonstrations and exercises on design, process planning, resource research, and a variety of glass forming techniques. Prerequisite: C or better in AD 214 or consent of instructor. Studio fee: \$100.

314B-3 Kiln-Formed Glass. Extension of experiences in (A) with in-depth development of the students' independence in the

kiln-forming process. Includes various mold-making methods, casting techniques, kiln firing, annealing, and finishing cold-working processes. Prerequisite: C or better in AD 314A or consent of instructor. Studio fee: \$100.

317I-3 Contemporary Native American Art: Anthropological Perspective. (University Core Curriculum) This interdisciplinary course considers contemporary Native American art and the social forces that have shaped it. Native American artistic traditions and the centrality of art to Native American life and culture will be addressed with an emphasis on 20th-century artists who have shaped the contemporary Native American art movement.

318-3 Curriculum Building with Art. Prepares students to organize art resources, materials, and concepts into effective art learning experiences. Requirements include readings and discussions on contemporary curriculum, the development of a differentiated unit plan with assessment along with service learning experiences in the field. Satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement for art majors. Prerequisites: C or better in AD 208 or concurrent enrollment and EDUC 314 or concurrent enrollment. Studio fee: \$30.

322-3 Print Technology. Emphasis on preparing design concepts to digital format for production or digital output for a variety of different purposes. Includes pre-press methods, file formatting, trapping, color separations and current reproduction methods. Prerequisite: C or better in AD 222 and AD 249. Studio/software fee: \$30.

323-3 Industrial Design Analysis. An introduction to the full industrial design process including ideation, consumer safety, environmental impact, and consumer research with an emphasis on human interface issues. Students learn to apply the ID process through a series of specific projects, including participation in a national design competition. Prerequisite: C or better in AD 213 and AD 223. Material fee: \$50.

327-3 Aesthetics. This course examines historical and modern philosophies of beauty and the role of art in society through a sustained engagement with selected texts and works of art from the Classical period to the present day. Prerequisite: AD 207A, B, or C, or consent of instructor.

328-3 Artistic Growth of Children. Prepares students to understand the artistic growth of the learner (0-12 years) through readings, discussion, and studio practice. Areas of focus include teaching strategies and methods and lesson plan development in conjunction with clinical field experiences and/or service learning. Prerequisite: C or better in AD 208 or concurrent enrollment. Studio fee: \$45.

332-3 Computer Graphics. Design and development of interactive media for the web through technical and design projects. Covers core concepts of web production, web design standards, and interactive and multimedia design with a primary focus on web delivery. Students will become proficient with web authoring tools through building block exercises, classroom demonstrations, and readings. Students will complete and launch a portfolio website with text, image gallery, and animated elements. Prerequisite: C or better in AD 219. Software fee: \$75.

337-3 History of Design, 1400-1850. A global survey of the history of designed objects including ceramics, metalwork, glass, wood, as well as typography and book illustration from

1400-1850. The course takes a chronological and thematic approach to study both cross-cultural themes in design history and its local specificities. With AD 339, it is the first semester of a two-semester survey of the history of design.

338-3 Artistic Growth of Adolescents and Adults. Prepares students to understand the artistic growth of the learner through readings, discussion, and studio practice. Areas of focus include teaching strategies and methods and lesson plan development in conjunction with clinical field experiences. Prerequisite: AD 208 or concurrent enrollment. Studio fee: \$45.

339-3 History of Design, 1850-Present. A survey of modern and contemporary design history from the mid-nineteenth century to the present day. The course shall explore significant aspects of international design, with a focus on its relationship to social, economic, political, and artistic trends. With AD 337, it is the second semester of a two-semester survey of the history of design.

347A-3 Survey of 20th Century Art-19th to Mid-20th Century. A survey of the major developments in painting, sculpture, architecture, and other selected areas of the visual arts from the late 19th century to the end of the 20th. These developments are studied in relation to other significant cultural, political, scientific and philosophical events and ideas. Covers late 19th to mid-20th century art and culture.

347B-Survey of 20th Century Art-Middle to End of the 20th Century. A survey of the major developments in painting, sculpture, architecture, and other selected areas of the visual arts from the late 19th century to the end of the 20th. These developments are studied in relation to other significant cultural, political, scientific and philosophical events and ideas. Covers the middle to the end of the 20th century.

348-3 Art for Classroom Teachers. A studio-based course that includes reading and discussion for non-art majors. Especially applicable to early childhood, elementary, inclusive, and special education programs. Introduction to uses and applications of art media, approaches to teaching art, artistic awareness, adaptation, and creative expression. Studio fee: \$45.

352-3 Typography II. Problems in composition; combining of typefaces, formats and their applications to a variety of design projects. Emphasis on grid development, multi-page documents. Basic introduction and hands-on experience with interaction/web graphics using creative processes and solutions. Portfolio preparation. Skill and content based. Prerequisite: C or better in AD 322 or concurrent enrollment. Studio fee: \$30.

357-3 19th Century European Art. The course will investigate the evolving discourse of modernity in the context of the 19th century European art. It will trace the origins and development of such key modernist ideas as originality, uniqueness, non-conformity, avant-garde and abstraction. The discussion of specific artistic trends, from Neo-Classicism and Romanticism in the first half of the century to Realism, Impressionism, Post-Impressionism, and Symbolism in the second half, will be framed by examination of the social milieu and the changing conditions of art-making and art-selling. In particular, the course will examine development of privately owned art galleries, shift from academic to studio based art education, as well as growing importance of the city and the urban experience. Prerequisite: AD 207C or consent.

358-3 Art of Small Scale Cultures. (Advanced University

Core Curriculum course) Covers a broad range of arts of Africa, Native North America, Pre-Columbian America, Oceania, primarily sculpture in wood, metal and shell, body decoration and fibers, ceramics, architecture, masking and performance arts of small scale villages; role of the artist, ancient technologies. Satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement.

363-3 Product Development. Investigation into project management; in-depth analysis of materials and processes; cost estimating; life cycle analysis as related to product environmental impacts; human factors and product interface content. Course parallels specific project work in AD 383 and must be taken concurrently. Corporate sponsored projects may be incorporated. Prerequisites: C or better in AD 313 and 323. Concurrent enrollment in AD 383. Studio fee: \$60.

368-3 Pre-Columbian Art. (Advanced University Core Curriculum course) Considers stone sculpture and architecture, fiber arts, ceramics, metal and 2-D arts of Meso-, Central and South America of the Pre-Columbian era. Considers ancient technologies, hieroglyphic and calendrical systems; some post contact arts also. Satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement.

372-3 to 6 Graphic Design I. Problems in promotional design applications including campaigns, games, packaging and advertising graphics. Emphasis on professional realities, problem solving, and further development of creative design abilities. Studio fee: \$30.

383-3 Practicum in Industrial Design. Advanced and comprehensive product design projects focusing on innovation and user needs. Projects may include corporate sponsors and/or interdisciplinary teams. Students will integrate research and 2D and 3D process documentation with additional focus on human factors and product interface. Course parallels work in AD 363 and must be taken concurrently. Prerequisites: C or better in AD 313 and 323. Concurrent enrollment in AD 363. Studio fee: \$60.

388-1 to 36 Study Abroad. Provides credit toward the undergraduate degree for study at an accredited foreign institution or approved overseas program. Final determination of credit is made on the student's completion of work.

389-3 BFA Seminar. Class helps prepare BFA majors for life after school in the art world. Portfolio enhancement covered; work on resume, autobiographical, aesthetic and educational statements. Slide quality and gallery discussions also covered. Satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement for art majors.

400A-3 to 6 Advanced 2D Studio - Drawing. Individual problem solving emphasizing technique and conceptual synthesis. Not for graduate credit. Prerequisite: C or better in 6 hours of AD 300. Studio fee: \$70. Expenses may exceed \$100 per course.

400B-3 to 6 Advanced 2D Studio - Drawing. Individual problem solving emphasizing technique and conceptual synthesis. Not for graduate credit. Prerequisite: C or better in 6 hours of AD 400A. Studio fee: \$70. Expenses may exceed \$100 per course.

400C-3 Advanced 2D Studio - Drawing - Senior Thesis. Individual problem solving emphasizing technique and conceptual synthesis. Satisfies the College of Liberal Arts Writing-

Across-the-Curriculum requirement. Not for graduate credit. Special approval needed from the instructor. Studio fee: \$80. Expenses may exceed \$100 per course.

400D-3 to 30 Advanced 2D Studio - Drawing. Individual problem solving emphasizing technique and conceptual synthesis. Prerequisite: C or better in 6 hours of AD 400B. Advisor approval required for graduate students. Studio fee: \$8 per credit hour. Expenses may exceed \$100 per course.

401A-3 to 6 Advanced 2D Studio - Painting. Individual problem solving emphasizing technique and conceptual synthesis. Not for graduate credit. Prerequisite: C or better in 6 hours of AD 301. Studio fee: \$4 per credit hour. Expenses may exceed \$100 per course.

401B-3 to 6 Advanced 2D Studio - Painting. Individual problem solving emphasizing technique and conceptual synthesis. Not for graduate credit. Prerequisite: C or better in 6 hours of AD 401A. Studio fee: \$4 per credit hour. Expenses may exceed \$100 per course.

401C-3 Advanced 2D Studio - Painting - Senior Thesis. Individual problem solving emphasizing technique and conceptual synthesis. Satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement. Not for graduate credit. Special approval needed from the instructor. Studio fee: \$80. Expenses may exceed \$100 per course.

401D-3 to 30 Advanced 2D Studio - Painting. Individual problem solving emphasizing technique and conceptual synthesis. Prerequisite: C or better in 6 hours of AD 401B. Special approval needed from advisor for graduate students. Studio fee: \$4 per credit hour. Expenses may exceed \$100 per course.

402A-3 to 6 Advanced Printmaking I. Advanced techniques in printmaking to include intense work in color printing. Not for graduate credit. Prerequisite: C or better in AD 302-6 hours. Studio fee: \$20 per credit hour enrolled. Incidental expenses may exceed \$50 for each section.

402B-3 to 6 Advanced Printmaking I. Individual research with emphasis on history, processes, and ideas which lead to the formation of personal content. Not for graduate credit. Prerequisite: 6 hours of C or better in AD 402A. Studio fee: \$20 per credit hour enrolled. Incidental expenses may exceed \$50 for each section.

402C-3 Advanced Printmaking I-Senior Thesis. Satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement. Not for graduate credit. Studio fee: \$30 per credit hour enrolled. Special approval needed from the instructor. Incidental expenses may exceed \$50 for each section.

402D-3 to 30 Advanced Printmaking I. Independent study in printmaking. Prerequisite: 6 hours of C or better in AD 402B. Special approval needed from advisor for graduate students. Studio fee: \$20 per credit hour enrolled. Incidental expenses may exceed \$50 for each section.

403A-3 to 6 Advanced Sculpture I. Foundry techniques and direct metal fabrication. Not for graduate credit. Prerequisite: C or better in AD 303-6 hours. Incidental expenses will be incurred. Studio fee: \$20 per credit hour.

403B-3 to 6 Advanced Sculpture I. Individual research with emphasis on history, materials, processes, and ideas that form personal content. Not for graduate credit. Prerequisite: 6 hours of C or better in AD 403A. Incidental expenses will be incurred. Studio fee: \$20 per credit hour.

403C-3 Advanced Sculpture I-Senior Thesis. Satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement. Not for graduate credit. Special approval needed from the instructor. Incidental expenses will be incurred. Studio fee: \$30 per credit hour.

403D-3 to 30 Advanced Sculpture I. Independent study in sculpture. Prerequisite: 6 hours of C or better in AD 403B. Special approval needed from advisor for graduate students. Incidental expenses will be incurred. Studio fee: \$20 per credit hour.

404A-3 Advanced Ceramics I. Assigned individual problems with emphasis on ceramic form and glazing. Not for graduate credit. Prerequisite: C or better in AD 304A,B. Studio fee: \$50 per credit hour enrolled.

404B-3 to 6 Advanced Ceramics I. Individual research with emphasis on kiln theory and design. Not for graduate credit. Prerequisite: C or better in AD 404A. Studio fee: \$40 per credit hour enrolled."

404C-3 Advanced Ceramics I-Senior Thesis. Satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement. Not for graduate credit. Must be taken concurrently with AD 404D. Special approval needed from the instructor. Studio fee: \$55 per credit hour enrolled.

404D-3 to 30 Advanced Ceramics I. Independent study in ceramics. Prerequisite: 6 hours of C or better in AD 404B. Special approval needed from advisor for graduate students. Studio fee: \$40 per credit hour enrolled.

405A-3 Advanced Metalsmithing. Emphasis will be placed on advanced processes to develop individual expression. Not for graduate credit. Prerequisite: C or better in AD 305A,B. Studio fee: \$120. Incidental expenses may exceed \$75 for each section and may be slightly higher for blacksmithing.

405B-3 to 6 Advanced Metalsmithing. Media exploration to develop individual styles. Not for graduate credit. Prerequisite: C or better in AD 405A. Studio fee: \$90. Incidental expenses may exceed \$75 for each section and may be slightly higher for blacksmithing.

405C-3 Advanced Metalsmithing-Senior Thesis. Satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement. Not for graduate credit. Special approval needed from the instructor. Studio fee: \$40 per credit hour enrolled. Incidental expenses may exceed \$75 for each section and may be slightly higher for blacksmithing.

405D-3 to 30 Advanced Metalsmithing I. Independent study in metalsmithing. Prerequisite: 6 hours of C or better in AD 405B. Special approval needed from advisor for graduate students. Studio fee: \$20 per credit hour enrolled. Incidental expenses may exceed \$75 for each section and may be slightly higher for blacksmithing.

407-3 to 9 (3 per topic) Art and Archaeology of the Ancient Mediterranean. (Same as ANTH 430D and CLAS 310) The course introduces students to art historical, archaeological, and historical approaches to the physical remains of the Ancient Mediterranean. The course can be repeated if offered on different topics in different years (e.g. ancient Greece, ancient Rome). The class is occasionally offered overseas.

414A-3 Advanced Glass I. Introduction to fundamental techniques of hot glass blowing. This course focuses on understanding the basics of hot glass material and processes. Not for grad-

uate credit. Prerequisite: C or better in AD 214 or consent of instructor. Studio fee: \$60 per credit hour enrolled.

414B-3 to 6 Advanced Glass I. Emphasis on development of individual work with glass medium and exercises on high degree of commitment and independence. Students will be expected to explore and expand their skills and concepts. Students will exercise a variety of glass techniques and hands-on skills. The course will also emphasize learning essential skills to be successful studio artists, including resource research, presentation, and critiques. Not for graduate credit. Prerequisite: C or better in AD 414A. Studio fee: \$80 per credit hour enrolled.

414C-3 Advanced Glass I-Senior Thesis. Satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement. Not for graduate credit. Must be taken concurrently with AD 414D. Special approval needed from the instructor. Studio fee: \$65 per credit hour enrolled.

414D-3 to 30 Advanced Glass I. Students will focus on studio practice and develop a mature body of work. With faculty guidance, students will identify concepts for an intensive level of visual research based on individual interests and commitments. Undergraduate students in this course will focus on creating a body of work for their senior thesis exhibition. Preparation for professional practices and graduation requirements, including individual portfolio presentation, slide portfolio, artist's statement, and senior thesis exhibition. This course is offered to graduate students who are interested in advanced and/or interdisciplinary research using glass. Prerequisite: C or better in 6 hours of AD 414B. Studio fee: \$80 per credit hour enrolled.

417-3 Medieval Art. Medieval art from the Fourth to the Fifteenth Century in Western Europe. Examination of selected art objects in terms of media and techniques, iconography, function, and cultural milieu. Field trip required. Documented research paper on an aspect of medieval art required for graduate credit. Prerequisite: AD 207A or consent of the instructor.

419-3 Gothic Art. This course will examine the development and dissemination of Gothic art in Western Europe in the High and Late Middle Ages. We will consider a variety of media, including architecture, metalwork, sculpture, manuscript illumination, panel paintings, fresco cycles and small devotional objects. Prerequisite: AD 207B.

423-6 Industrial Design Research and Professional Practice. This studio course develops the student's ability to conduct in-depth design research and to explore new needs and trends relating design to society. Additionally, students explore professional practice issues of designer/client, specific design business practices, and ethics. Prerequisite: C or better in AD 363, 383. Restricted to senior standing or consent of instructor. Satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement. Not for graduate credit. Studio Fee: \$50.

427A-3 Renaissance Art-Early Renaissance. This course will introduce students to paintings, sculpture and architecture created in Europe between 1300-1500. Works of art produced by Giotto di Bondone, Jan van Eyck, Hieronymus Bosch, Jean Fouquet, Albrecht Durer, Leonardo da Vinci, Michelangelo, Parmigianino, and Pieter Breugel will be considered. Prerequisite: AD 207B.

427B-3 Renaissance Art-High Renaissance. This course will introduce students to paintings, sculpture and architecture created in Europe between 1450-1600. Works of art produced

by Giotto di Bondone, Jan van Eyck, Hieronymus Bosch, Jean Fouquet, Albrecht Durer, Leonardo da Vinci, Michelangelo, Parmigianino, and Peter Breugel will be considered. Prerequisite: AD 207B.

427C-3-9 Renaissance Art-Selected Topics from the Renaissance Period. This course will introduce students to paintings, sculpture and architecture created in Europe. Works of art produced by Giotto di Bondone, Jan van Eyck, Hieronymus Bosch, Jean Fouquet, Albrecht Durer, Leonardo da Vinci, Michelangelo, Parmigianino, and Pieter Breugel will be considered. Prerequisite: AD 207B.

428-3 Native North American Art. Arts and material culture of traditional Native North American cultures, including the Northeast, Woodland and Mississippian areas, Plains, Southwest, West, Northwest Coast, Arctic and sub-Arctic. Fiber arts, sculpture, architecture, ceramics, metals, beads, role of the arts. St Louis Art Museum and Cahokia Mounds required field trips.

437-3 Eighteenth-Century Art. This course examines the art, architecture, and material culture of Europe and the United States from 1680 to 1815. The course will situate Baroque, Rococo, and Neo-Classical styles within their social and philosophical contexts. Prerequisite: AD 207B or C, or consent of instructor.

438-3 Writing About Art and Design. This course seeks to provide undergraduate and graduate students with the skills they need for writing both short critical essays and substantial research papers on the visual arts. It introduces students to basic research methods and to theoretical approaches that inform writing about the arts. The course is required for art history majors and is strongly recommended for incoming graduate students in art. Satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement. Prerequisite: AD 207A,B,C or consent of the instructor.

442-3 Moving Image Art. Project-based studio art course focusing on broadening the range of digital imaging through the integration of multi-media elements including animation, video, and sound. Prerequisite: AD 219. Studio fee: \$20.

447-3 Introduction to Museology. A survey of museum and gallery techniques (emphasis upon practical exhibit development) which will involve answering questions concerning contractual agreements, taxes, insurance, packing, shipping, exhibit design and installation, record systems, general handling, public relations, and sale of art works directed toward problems encountered by the artist outside the privacy of the studio.

452-3 to 6 Graphic Design II. Multifaceted problems with emphasis on continuity of design in more than one medium or format. Client-based projects, environmental graphics and identity issues in design. Professional proposals and portfolio preparation. Not for graduate credit. Satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement. Prerequisite: C or better in AD 322, 339, and 352. Studio fee: \$30.

458-3 African Arts. Covers a broad range of the arts primarily of west and central Africa, as well as north, south, and east Africa. Includes sculpture, masking and performance, body decoration and textiles, and architecture. Shows how arts are used in the daily life of traditional village societies in these areas.

459-1 to 6 Internship. Supervised work experience related to student's academic program and career objectives. Not repeatable for credit. Not for graduate credit. Special approval needed

from design area head. Mandatory Pass/Fail.

467-3 Critical Issues in Contemporary Art. An examination of the style and meaning of contemporary art in relation to the current political, social, and cultural issues. Will include visual arts, architecture, and communications media. Prerequisite: AD 207A and B or consent of instructor.

472-3 to 6 Graphic Design III. Special study in current communication design topics. Selected topics will vary with emphasis on studio problems and concept development. Applied problems in advanced digital technologies may include interaction/motion and/or web design. Portfolio preparation. Not for graduate credit. Prerequisite: C or better in AD 322, 332, 339, and 352. Studio fee: \$30.

477-3 United States Art of the Thirties. This course situates U.S. art of the 1930s within the society that produced it, addressing such issues as the Great Depression, gender and race relations, immigration, the farm crisis, social realism, regionalism, labor relations, and urbanism. The role that government agencies played in this era will be a particular focus of attention. Media discussed include painting, sculpture, architecture, design, crafts, photography, and film. Field trips may be required. Prerequisite: AD 207C or consent of the instructor.

478-3 Topics In American Art. This course deals with selected topics in the history of both elite and popular art of the Americas, with a focus on the art of the United States. Topics vary, but generally will include the study of architecture, design, crafts, photography and film as well as, or instead of, painting and sculpture. Field trips may be required. Prerequisite: AD 207C or consent of the instructor.

489A-4 Senior Thesis-Industrial Design. The culminating experience for majors. Creative project development individualized by the student with a professional sponsor. Develops students' portfolios and professional practice contacts and prepares students for interviewing, etc. Not for graduate credit. Prerequisite: C or better in AD 423. Restricted to senior standing. Satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement. Studio fee: \$40.

489B-3 Senior Thesis-Art History. The culminating experience for art history majors. Substantial research paper written in consultation with a faculty member. Not for graduate credit. Prerequisite: AD 438. Restricted to senior standing. Satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement.

489C-3 to 6 Senior Thesis. The culminating experience for majors. Thesis for general design. In-depth design project chosen by student in consultation with a faculty member. Not for graduate credit. Restricted to senior standing. Satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement.

489D-4 Senior Thesis-Communication Design. Design capstone for communication design. Development of senior thesis project with formal promotion and documentation. Exhibition. Not for graduate credit. Restricted to senior standing. Special approval needed from the instructor. Satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement.

497A-3 Problems in Art History-Portraiture. A close examination of selected categories of works of art from various periods, media, and cultures as illustrative of particular art historical problems. Sections a through c may be taken only once

each. Art historical perspectives to include formal analysis, iconography, art theory, social history, connoisseurship. Prerequisite: AD 207A, 207B and 207C.

497B-3 Problems in Art History-Landscape and Still Life. A close examination of selected categories of works of art from various periods, media, and cultures as illustrative of particular art historical problems. Sections a through c may be taken only once each. Art historical perspectives to include formal analysis, iconography, art theory, social history, connoisseurship. Prerequisite: AD 207A, 207B and 207C.

497C-3 Problems in Art History-Narrative. A close examination of selected categories of works of art from various periods, media, and cultures as illustrative of particular art historical problems. Sections A through C may be taken only once each. Art historical perspectives to include formal analysis, iconography, art theory, social history, connoisseurship. Prerequisite: AD 207A, 207B and 207C.

497D-3 to 6 Problems in Art History-Other Selected Topics. A close examination of selected categories of works of art from various periods, media, and cultures as illustrative of particular art historical problems. Section d may be repeated as topics vary. Art historical perspectives to include formal analysis, iconography, art theory, social history, connoisseurship. Prerequisite: AD 207A, 207B and 207C.

498-3 Art Criticism. The course will familiarize students with history, methodology and contemporary practice of art criticism through close reading and comparative analysis of key texts. It will also provide students with writing, and critical and analytic skills necessary for writing effective art criticism. Field trip required. Prerequisite: AD 207 or consent of instructor.

499-1 to 21 Individual Problems. Art studio course directed toward individual research in the student's major field. Emphasis is placed upon the history, materials, processes, and ideas that form the content and experience of the student's major field. Designed to adapt to students' individual needs in problem research. Restricted to senior standing in the School of Art and Design. Prerequisite: an overall 3.0 GPA. Special approval needed from the instructor.

Art and Design Faculty

Abdul-Musawwir, Najjar, Associate Professor, M.F.A., Southern Illinois University Carbondale, 1997.

Abrahamson, Roy E., Associate Professor, *Emeritus*, Ed.D., Columbia University, 1965.

Addington, Aldon M., Associate Professor, *Emeritus*, M.F.A., Cranbrook Academy of Art, 1966.

Archer, Richard E., Assistant Professor, *Emeritus*, M.S., Governors State University, 1979.

Belletire, Steven P., Professor, BFA, University of Illinois, 1971.

Bernstein, Lawrence A., Associate Professor, *Emeritus*, M.F.A., Cranbrook Academy of Art, 1953.

Bickel, Barbara A., Associate Professor, Ph.D., The University of British Columbia, 2008.

Boysen, Bill H., Professor, *Emeritus*, M.F.A., University of Wisconsin, 1966.

Briggs, Larry S., Associate Professor, *Emeritus*, B.F.A., University of Oklahoma, 1956.

Bukowski, Marie, Professor and *Director*, M.F.A., University of Pennsylvania, 2000.

Busch, W. Larry, Associate Professor, *Emeritus*, M.S., Southern Illinois University, 1970.

Chalmers, Patricia, Associate Professor, M.F.A., University of Minnesota, 2001.

Deller, Harris, Professor, *Emeritus*, M.F.A., Cranbrook Academy of Art, 1973.

Feldman, Joel B., Professor, *Emeritus*, M.F.A., Indiana University, 1967.

Gradle, Sally A., Associate Professor, Ed.D., University of Illinois, Urbana-Champaign, 2004.

Greenfield, Sylvia R., Professor, *Emerita*, M.F.A., University of Colorado, 1967.

Kim, Sun Kyoung, Assistant Professor, M.F.A., University of Illinois, Urbana-Champaign, 2008.

Lee, Jiyong, Associate Professor, M.F.A., Rochester Institute of Technology, 2001.

Lintault, M. Joan, Professor, *Emerita*, M.F.A., Southern Illinois University, 1962.

Lopez, Alex, Associate Professor, M.F.A., Alfred University, 1998.

Lopez, Robert A., Assistant Professor, M.F.A., University of Illinois, Urbana-Champaign, 2000.

Mavigliano, George J., Associate Professor, *Emeritus*, M.A., Northern Illinois University, 1967.

Mawdsley, Richard, Professor, *Emeritus*, M.F.A., University of Kansas, 1969.

Monteith, Jerry Carlis, Professor, M.F.A., Cranbrook Academy of Art, 1978.

Onken, Michael O., Associate Professor, *Emeritus*, M.A., Northern Illinois University, 1966.

Palmer, Erin, Associate Professor, M.F.A., Yale University, 1993.

Paulson, Robert L., Professor, *Emeritus*, M.F.A., University of Wisconsin, 1967.

Pease, Mark, Assistant Professor, M.F.A., University of Pennsylvania, 2003.

Scott, Aaron, Assistant Professor, M.F.A., Purdue University, 2008.

Shang, Xuhong, Professor, M.F.A., Temple University, 1992.

Shay, Edward Holden, Professor, *Emeritus*, M.F.A., University of Illinois, 1971.

Sloboda, Stacey, Associate Professor, Ph.D., University of Southern California, 2004.

Smith, Richard E., Professor, M.F.A., Southern Illinois University Carbondale, 1992.

Sullivan, James E., Associate Professor, *Emeritus*, M.A., University of California at Los Angeles, 1965.

Sullivan, Milton F., Professor, *Emeritus*, M.A., Columbia University, 1951.

Walsh, Thomas J., Professor, *Emeritus*, M.F.A., University of Michigan, 1962.

Youngblood, Michael S., Associate Professor, *Emeritus*, Ph.D., University of Oregon, 1975.

Zivkovich, Kay M., Professor and *Assistant Director*, M.F.A., Southern Illinois University Carbondale, 1973.

Asian Studies (Minor)

Asian Studies is a minor offered in the College of Liberal Arts. The Asian studies program includes a variety of courses of the languages, civilizations, and contemporary issues of Asia. The program is intended to prepare a student for a number of career options with Asia interests. Through this program, a student may prepare for more advanced work on another campus, may develop a teaching specialty, or may broaden skills and knowledge which would be useful for professional and occupational interests in Asia.

A minor in Asian studies requires a minimum of 20 hours selected from a list of approved courses. Not more than eight hours may be taken in any one department for credit toward the 20 hours.

Automotive Technology

(Division, Major, Courses, Faculty)

The Automotive Technology program in the College of Applied Sciences and Arts provides students with an opportunity to obtain a solid foundation of knowledge, experience and skills that will assist in job entry and career advancement in the automotive industry.

Current automotive trends indicate that the automobile will continue to experience changes that include expanded use of electronics and computerized controls for improving engine performance, fuel efficiency, on-board diagnostics, exhaust emissions, and passenger comfort and safety. These changes will require persons knowledgeable and highly skilled in specialized areas of automotive technology. This program offers the student an opportunity to specialize in chosen automotive subject areas and offers the opportunity to develop technical, communication and supervisory skills. The student should expect to spend about \$1500 for a required basic tool kit consisting of metric tools and a digital multimeter.

The Automotive Technology program has achieved master certification by the National Institute for Automotive Service Excellence (ASE). Instruction is offered in all eight areas of ASE certification—engine repair, automatic transmissions/transaxles, manual drive trains and axles, suspension and steering, brakes, electrical/electronic systems, heating and air conditioning, and engine performance. Students are encouraged to complete the certification process by taking the ASE certification exams.

An advisory committee composed of leaders in the automotive field provides additional guidance to the program. Current members include representatives from General Motors Company, Ford Motor Company, Chrysler Group LLC, Toyota Motor Sales, U.S.A., Inc., Nissan Motor Corporation, Mitsubishi Motors North America, Inc., Cummins, Inc., American Honda Motor Co., Inc., NAPA, training providers, vocational directors, automotive dealerships, and wholesale/retail outlets.

Bachelor of Science Degree

The Bachelor of Science Degree in Automotive Technology is designed to provide an educational environment for students to acquire the professional, research, and technical skills necessary for success in the automotive and related industries. The

degree provides theoretical and practical hands-on application of knowledge through a combination of automotive technical courses and automotive business/management courses, along with computing and communication courses. The flexibility of the curriculum accommodates the needs of both incoming freshman and transfer students. Students have the option of focusing on multiple areas of emphasis, earning a minor, and possibly earning dual degrees. Students can adjust their focus in areas such as: automotive technical, automotive business operations, automotive management, automotive technical education, marketing, and management.

The program can strengthen previous automotive training and the Capstone Option is available to qualified A.A.S. graduates entering the Automotive Technology bachelor's degree program as explained in this catalog.

Automotive and truck manufacturers, component manufacturers and suppliers, government agencies, insurance organizations, educational institutions, training and curriculum organizations, and service providers are seeking four-year automotive technology graduates. The number of job titles in the area of automotive technology reflects the nature of a diverse and expanding field. Job titles include field service engineer, technical assistance specialist, serviceability engineer, district parts/service manager, customer support manager, automotive instructor, account manager, fleet manager, service advisor, dealership service manager, technical training specialist, district sales manager, field executive, technical writer, and product engineer. These positions require a four-year degree with skills in communications, management and consumer relations as well as technical knowledge.

Admission to Automotive Technology

Those interested in applying to the Automotive Technology program are encouraged to begin the application process approximately one year in advance. Admission requirements to the applicant pool are the same as those to the University. After acceptance to the University and indicating Automotive Technology as the primary intended major, students are placed into the Automotive Technology Applicant Pool. No separate application is needed. Additional review of applicants will occur on predetermined dates for possible acceptance into the Automotive Technology major. The review criteria and dates are available from the Department and are on the Department's website: automotive.siu.edu.

The Automotive Technology Program welcomes students with AAS degrees in Automotive Technology from regionally accredited colleges. These students may qualify for the Capstone Option, as discussed in chapter 3, which reduces the overall Core Curriculum requirements necessary for the bachelor's degree. If you have questions about what classes are needed to qualify for the Capstone Option, contact your community college advisor and the Automotive Technology program.

Internship Programs

Automotive Technology majors can participate in paid internship experiences and may be able to earn credit toward graduation. Opportunities occur during all semesters (including the summer term), with some programs available for two sequential terms. Internship sites are situated in various locations throughout the United States. Internship opportunities may

be available with Chrysler Group LLC, Cummins Inc., Toyota Motor Sales, U.S.A., Inc., Eaton Corporation, General Motors Company, Robert Bosch Corporation, Ford Motor Company, Sherwin-Williams Automotive Finishes, Motors Insurance Corporation, General Services Administration (GSA) of the Federal Government, and other various automotive businesses.

Bachelor of Science Degree in Automotive Technology, College of Applied Sciences and Arts

AUTOMOTIVE TECHNOLOGY MAJOR

<i>University Core Curriculum</i>	41 ¹
<i>Requirements for Major in Automotive Technology</i>	79
AUT 100 and 200 level courses:	
(or Approved Equivalents)	36
AUT 120, 150, 170, 180, 215, 216, 240, 250 and 280	
AUT 300 and 400 technical courses:	
(or Approved Equivalents)	15 ²
Select from: AUT 330, 340, 355, 360, 390, 440, 450, 480, 490	
Business/Management Courses	
(or Approved Equivalents):	15
Group I: Select one course from the following:	
ENGL 291, TRM 316, WED 302	
Group II: Take: AUT 335	
Group III: Select one course from the following:	
AUT 325, MGMT 304, 350, TRM 364	
Group IV: Select two courses from the following:	
AUT 345, 435, 485, ACCT 210, FIN 270, 280, MGMT 208, MKTG 304, 305, 350, PSYC 323, TRM 361, 362, 383	
Support Courses: (discipline related and approved by department)	
13	
<i>Total</i>	120

Note: Credit from all areas must total a minimum of 42 hours of 300 and 400 level courses.

¹Capstone= 30; UCC= 41.

²Consent of department.

Automotive Technology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
AUT 150, 180	9	-
AUT 120, 170	-	9
ENGL 101	-	3
UCOL 101	3	-
CMST 101, MATH	3	3
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
AUT 215, 216, 280.....	9	-
AUT 240, 250	-	9
Business/Management Group II	-	3
Human Health	2	-
PHYS 101	-	3
ENGL 102	3	-
<i>Total</i>	14	15
THIRD YEAR	FALL	SPRING
AUT 300/400 Technical.....	9	-
Business/Management Group III.....	-	3

Social Science	3	3
Fine Arts	-	3
Humanities	3	3
Science Group II.....	-	3
<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
AUT 300/400 Technical	-	6
Business/Management Group IV	3	3
Business/Management Group I.....	-	3
Multicultural	3	-
Support	9	4
<i>Total</i>	15	16

Courses (AUT)

100-3 Automotive Laboratory Practices. Course covers universal automotive shop practices including safety, tool usage, fasteners, sealants and measurement devices. Lecture topics cover safety and environmental concerns, service information retrieval, and correct application of sealants and fasteners. Laboratory activities include thread repair, automotive measurements, electrical repair, and cutting/grinding equipment usage. Restricted to major. Fee: \$36.

120-3 Automotive Electrical Principles. A course of study in the design and theory of automotive electrical circuits. Particular emphasis placed on the study of how electricity behaves in series and parallel DC circuits, general application of these theories to automotive electrical systems, and the proper use of typical electronic and electrical circuit diagnostic equipment. Also emphasizes the understanding of automotive wiring diagrams, and relay and solenoid operation. Restricted to major. Lab fee: \$45.

150-6 Internal Combustion Engine Principles. Course combines the study of engine operational theory with practical technical skills. Content emphasizes the 720 degree power cycle and the dynamics of engine operation, design and efficiency (thermal, mechanical & volumetric). Laboratory experience consists of engine disassembly, component design study, inspection and measurement of components and engine assembly techniques. Restricted to major. Fee: \$90.

170-6 Automotive Powertrain Electronics. Course includes design and operation of solid state devices, wiring, batteries, starting and charging systems, and basic powertrain control systems. Lectures emphasize the operation of these systems and their individual components. Emphasis placed on system diagnosis. Laboratories allow the study of digital multimeters, battery/starting/charging system test equipment and scan tools. Restricted to major. Lab fee: \$120.

180-3 Manual Drivetrains. A detailed study of automotive manual transmission and transaxle assemblies, clutch assemblies, drive axles, and four-wheel drive transfer cases, including an introduction to noise, vibration, and harshness (NVH) diagnostics. Lectures focus on the basic theory of operation and diagnostics of the automotive drivetrain. Laboratory experience provides the opportunity to study approved inspection, maintenance, and diagnostic procedures. Restricted to major. Lab fee: \$60.

215-3 Automotive Braking Systems. Course covers brake

system design, operation and diagnosis. Lectures describe brake system component interrelationships and an introduction to ABS. Special emphasis placed on component diagnosis and maintenance procedures. Laboratory experience provides students the opportunity to use specialized tools, such as on-the-car lathes, brake bleeding equipment, and brake system diagnostic equipment. Restricted to major. Special approval needed from the advisor. Lab fee: \$105.

216-3 Automotive Suspension and Steering Systems. Course covers suspension and steering system design, operation, maintenance and diagnosis. Emphasis is placed on component diagnosis and maintenance procedures. Laboratory experience provides students the opportunity to use computerized alignment, wheel balance and vibration correction equipment. Restricted to major. Special approval needed from the advisor. Lab fee: \$105.

240-6 Introduction to Engine Controls. A study of automotive engine electronics. Lectures focus on engine control circuits, fuel injection and ignition systems with emphasis on operation, application and diagnosis. Discussion topics include operational strategies, fuel delivery, sensor inputs and actuator outputs. Laboratory includes the use of electronic diagnostic tools for engine performance diagnosis. Prerequisite: AUT 150 & AUT 170 or consent of the department. Restricted to major. Special approval needed from the advisor. Lab fee: \$150.

250-3 On Board Diagnostics and Emissions. The specialized study of automotive fuels, electronic fuel injection systems, and related emission control systems. Lectures focus on the operational and diagnosis of electronic fuel injection systems and emission control systems. Laboratory experience provides the opportunity to study the use of electronic diagnostic tools, specialized equipment, and diagnostic systems. Co-requisite: AUT 240 or consent of department. Prerequisites: AUT 150 and AUT 170. Restricted to major. Special approval needed from the advisor. Lab fee: \$75.

258-1 to 30 Automotive Work Experience. A designation for credit granted for past documented automotive job skills, management-worker relations and supervisory practice gained through experiences related to the student's academic and career objectives. Credit will be established by departmental evaluation. This credit may be applied only to 100 and 200 level automotive technical courses as determined by the department coordinator. Restricted to automotive technology major.

259-1 to 40 Automotive Occupational Training. A designation for credit granted for past documented automotive educational experiences related to the student's educational objectives. Credit will be established by departmental evaluation. This credit may be applied only to 100 and 200 level automotive technical courses as determined by the department coordinator. Restricted to automotive technology major.

280-3 Automotive Air Conditioning Systems. A study of refrigeration systems, temperature controls, and automotive HVAC vacuum/electrical circuits. Emphasis placed on environmental impact of refrigerants, environmentally safe refrigerant technology and applicable legislation. Laboratory experiences provide the opportunity to study the use of air conditioning system diagnostic tools, refrigerant recovery/recycling equipment, and diagnostic and repair services. Prerequisite: AUT 170. Restricted to major. Special approval needed from the advisor.

Lab fee: \$75.

299-1 to 16 Individual Study. Provides students with opportunity to develop a special program of study to fit a particular need not met by other offerings. Each student will work under the supervision of a sponsoring faculty. Special approval needed from the department.

320-1 to 6 Automotive Internship. Students will participate in a program approved automotive related internship that includes formal instruction, training and/or career related work experience. Students receive a salary or wages and engage in prearranged assignments related to their academic program and career objectives. Program faculty evaluations, supervisor performance evaluations, and student reports are required. Internship experiences may be in one of the following areas: automotive service technical, engineering, parts, business, management, training, or government agencies. Hours and credits to be individually arranged. Restricted to major. Special approval needed from the advisor.

325-3 Automotive Fixed Operations Management. An introduction to management of automotive retail fixed operations. A study of the automotive retail industry and environment, developing concepts and methods to improve customer satisfaction along with an increase in market penetration, profits and efficiency are emphasized. Planning of workflow control and human resource management will be included. This course is writing intensive and reflects the Colleges' Communication-Across-the-Curriculum initiative. Prerequisite: ENGL 101. Restricted to major. Special approval needed from the advisor.

330-3 Vehicle Stability and NVH. Suspension and braking control systems that provide additional safety to vehicle operation. Topics covered include antilock brakes, traction control, electronic stability assist, electronic power steering, variable power steering, active suspensions, and tire pressure monitoring. Course includes techniques in diagnosing noise, vibration and harshness (NVH) concerns. Restricted to major. Special approval needed from the advisor. Lab fee: \$90.

335-3 Automotive Data Systems. Course introduces software and hardware tools used in the automotive industry through project-based learning exercises relevant to automotive technology applications. Topics include automotive information systems, automotive diagnostic systems, and an introduction to microcontrollers. Lab fee: \$15.

340-6 Drivability and Emission Diagnostics. An in-depth study of electronic engine controls and emission systems. Lectures focus on fuel analysis, advanced diagnostics, legislative regulations and new technologies related to engine controls and emission systems. Laboratory activities include the use of advanced diagnostic tools such as oscilloscopes, scan tools, exhaust gas analyzers, and chassis dynamometer. Restricted to major. Special approval needed from the advisor. Lab fee: \$180.

345-3 Advanced Automotive Data Systems. Course is an in-depth study of the tools and methods used in the acquisition, analysis, warehousing, and dissemination of automotive data. Emphasis is on advanced spreadsheet and database techniques used in decision-making processes. Other topics include an introduction to automotive data communication technologies and data networks. Prerequisite: AUT 335 or CS 200B. Restricted to major. Lab fee: \$15.

355-6 Lighting, Convenience, and Safety Systems. Course covers theory of operation and diagnosis of standard body electrical systems. Topics include power windows, power door locks, power seats, lighting, instrumentation, cruise control, and supplemental restraints. Emphasis is placed on analysis of electrical diagrams and development of diagnostic techniques. Laboratory provides the opportunity to practice troubleshooting skills. Restricted to major. Special approval needed from the advisor. Lab fee: \$150.

358-1 to 30 Automotive Management Work Experience. A designation for credit granted for past documented automotive management work experiences related to the student's educational objectives. Credit will be established by departmental evaluation. This credit may be applied only to automotive technical, business/management, or support courses requirement of the automotive technology degree as determined by the department chair. Restricted to major. Special approval needed from the advisor.

359-1 to 60 Automotive Education Credit. A designation for credit granted for past documented automotive educational experiences related to the student's educational objectives. Credit will be established by departmental evaluation. This credit may be applied only to automotive technical, business/management, or support courses requirement of the automotive technology degree as determined by the department chair. Restricted to major. Special approval needed from the advisor.

360-6 Automotive Transmissions and Transaxles. Course covers the theory of operation, diagnosis, and repair of modern transmissions. The course will break down the transmission into basic components and provide the depth required for complete understanding of the specific transmission. The laboratory will allow students to understand correct service procedures, and test the transmission on a dynamometer. Restricted to major. Special approval needed from the advisor. Lab fee: \$150.

390-3 Network Systems and Vehicle Electronics. A study of specialized body electrical systems. Topics include data communication networks, theft deterrent systems, automatic temperature controls, and audio systems. Emphasis is placed on current and developing technologies. Laboratory experiences provide the opportunity to use scan tools, oscilloscopes, and on-board self-diagnostic systems. Restricted to major. Special approval needed from the advisor. Lab fee: \$60.

420-1 to 12 Automotive Service Operations Internship. Each student will be assigned to a University approved work site to engage in work experience related to the Automotive Technology curriculum and the student's career objectives. The student will perform duties and services as assigned by the work site supervisor and internship coordinator. A written assignment is also required as determined by the program. One hundred hours of successfully completed work is required for each semester hour of credit. Not for graduate credit. Restricted to senior standing, major. Special approval needed from the advisor.

430-1 to 6 Automotive Investigations. Provides opportunities for students to conduct research in such areas as: green vehicle technology, emissions and clean air testing; diagnostic software debugging; diagnostic methods; development of training information; alternative fuel systems; business operations; management/marketing practices; and production systems. Independent study. Student can take a maximum of 12 hours to-

ward degree. Restricted to major. Special approval needed from the advisor.

435-3 Automotive Financial Management and Operations. This course will provide insight into the applied analysis and management of automotive retail dealership financial operations. Studies will focus on fixed and variable operations with emphasis on manufacturer/dealer performance expectations, and management techniques essential to successful operations. Not for graduate credit. Special approval needed from the advisor.

440-6 Diesel Engine Performance and Emissions An in-depth study of electronic diesel engine controls and emission systems. Lectures focus on electronic fuel and intake air system controls, advanced diagnostics, legislative regulations and new technologies related to diesel engine controls and emission systems. Laboratory activities include the use of advanced diagnostic tools and equipment. Restricted to major. Special approval needed from the advisor. Fee: \$180.

450-3 Hybrid and Electric Vehicle Technology. This course introduces and investigates hybrid electric and electric vehicle technologies through lecture and laboratory demonstrations. Emphasis will be placed on developing an understanding of the functions of hybrid/electric components and subsystems, the diagnosis and maintenance of electrical subsystems, and high-voltage/high current safety practices. Prerequisite: AUT 250 or consent of department. Special approval needed from the advisor. Fee: \$120.

475-1 to 6 Special Projects in Automotive Technology. Investigation of contemporary issues within the automotive, ground transportation and power generation fields. Example subjects include emission laws and regulations; passenger and pedestrian safety; inspection, maintenance, diagnostic, and servicing procedures; consumer protection legislation; diagnostic systems; waste material regulations; industry wholesale and retail business operations and procedures. Independent study. Student can take a maximum of 12 hours toward degree. Restricted to major. Special approval needed from the advisor.

480-3 Alternative Fueled Vehicles. Study of alternative fuel and energy systems, fuel delivery systems, alternative propulsion systems, hybrid and alternative propulsion. Study of energy conversion, battery design, fuel cells, renewable and fossil fuel. Environmental concerns with current legislative actions will be discussed. Laboratory includes demonstrations with alternative fueled propulsion. Not for graduate credit. Restricted to major. Special approval needed from the advisor. Lab fee: \$60.

485-3 Automotive Warranty Administration and Customer Relations. This course investigates the various federal and state laws and regulations impacting the operations of the automotive wholesale and retail business. There will be specific concentration on the warranty policies of automotive manufacturers, warranty decisions, law covering warranties, and the legal aspects of product campaigns. Emphasis will be placed on the use of the warranty and goodwill process to increase customer satisfaction. Not for graduate credit. Restricted to major. Special approval needed from the advisor.

490-6 Comprehensive Vehicle Diagnostics. Course encompasses all technical areas of the vehicle with emphasis on diagnostic strategies and routines. Students engage in systematic

diagnosis following the Symptom to System to Component to Cause (SSCC) strategy to determine the root cause of failure. Course utilizes problem-based learning through the use of lab vehicles, experiments and exploratory research. Not for graduate credit. Prerequisites: AUT 335 or CS 200B, AUT 340, or consent of department. Restricted to major. Special approval needed from the advisor. Lab fee: \$180.

Automotive Technology Faculty

Behrmann, Michael, Associate Professor and *Chair*, M.S.Ed., Southern Illinois University Carbondale, 1995.

Black, Neil, Assistant Instructor, B.S., Southern Illinois University Carbondale, 2012.

Boyle, Sean M., Associate Professor, M.S.Ed., Southern Illinois University Carbondale, 1996.

Cash, Joe R., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1996.

Collard, Rodney, Associate Professor, M.S.Ed., Southern Illinois University Carbondale, 1990.

Croxell, Andrew, Assistant Professor, M.S.Ed., Southern Illinois University Carbondale, 2010.

Gilbert, David W., Associate Professor, Ph.D., Southern Illinois University Carbondale, 2006.

Greer, Jack, Assistant Professor, *Emeritus*, M.S.Ed., Southern Illinois University Carbondale, 1997.

Heisner, Blaine, Senior Lecturer, M.S.Ed., Southern Illinois University, 2010.

Janello, Tim, Associate Professor, M.S.Ed., Southern Illinois University Carbondale, 2008.

Jeralds, Lawrence E., Assistant Professor, *Emeritus*, M.S., Southern Illinois University Carbondale, 1988.

Kazda, Joseph G., Assistant Professor, *Emeritus*, M.S.Ed., Southern Illinois University Carbondale, 1965.

Komnick, Benjamin, Assistant Professor, M.S.Ed., Southern Illinois University Carbondale, 2004.

Morris, Michael D., Assistant Professor, *Emeritus*, M.S.Ed., Southern Illinois University Carbondale, 1997.

Pickerill, Ken, Assistant Instructor, M.S.Ed., Indiana State University, 2008.

Simpson, Jerry, Assistant Professor, *Emeritus*, M.S., Colorado State University, 1966.

Talley, Eugene R., Assistant Professor, M.B.A., Baker College, 2008.

Tate, Ralph F., Associate Professor, M.S., Air Force Institute of Technology, 1991.

Trinidad, Omar, Associate Professor, M.S.Ed., Southern Illinois University Carbondale, 2008.

White, James E., Assistant Professor, *Emeritus*, B.S.Ed., Southern Illinois University Carbondale, 1961.

Aviation Flight

(Major, Courses, Faculty)

The Aviation Flight program is designed to prepare beginning students for the Federal Aviation Administration Commercial Pilot Certificate including the multi-engine and instrument ratings. Instruction is conducted at Southern Illinois Airport, Carbondale, Illinois. Flight theory courses will supplement and

complement each flight course. In order to maintain the highest possible standards for flight and theory courses, each lesson of every course is submitted to and approved by the Federal Aviation Administration. FAA designated check pilots will examine the student's performance and effectiveness periodically during each flight course. University Core Curriculum Requirements and basic science courses will be supplemented with a required core of flight courses and other related technical courses to enhance the student's professional value to the aviation industry. A grade of C or better is required for all Aviation Flight (AF) courses to satisfy the requirements for a major in Aviation Flight. In addition to the University tuition and fees, substantial lab fees are assessed for each flight course. For current charges, contact the Aviation Flight program.

The Associate in Applied Science degree can be completed in two academic years plus one summer semester at Southern Illinois University Carbondale or in combination with community college or other acceptable extra-instructional educational experience; however, the twenty-one semester hours of aviation flight courses must be taken at SIU. If a Private Pilot certificate is earned prior to enrollment at SIU, students will be required to take AF199. Upon successful completion of AF199, credit will be given for AF201A and 201B. Contact the Aviation Flight program at (618) 453-1147 for further information.

The aviation flight degree program requires the submission of a program application in addition to the University admission application. One cannot be fully admitted to the SIUC Aviation Flight Program until the response to the second application is received. All applicants must satisfy University baccalaureate entrance requirements in order to be admitted to the University and to the Aviation Flight applicant pool. Enrollment in Aviation Flight will be based on selective criteria. It is recommended that the program application be completed and returned to the Aviation Flight Program by December 1 of the year prior to desired Fall enrollment in the program or four months prior to desired Spring or Summer term entry.

After completing the Aviation Flight program the majority of graduates proceed on to a Bachelor of Science in Aviation Management (AVM) degree program on a "Two-Plus-Two" basis. In conjunction with enrollment in the Aviation Management program, Aviation Flight graduates are eligible for a wide range of flight operations internships at such airlines as United, Delta, American, and Cape Air. Also available is a flight internship experience via the SIU Aviation Flight program as a flight instructor. Finally, Aviation Flight 220 "Practicum in Air Carrier Operations" offers post-associate course work and flight experience as a pilot in command of the University's twin-engine aircraft.

Aviation Flight has a Random Student Drug Testing Program. For details refer to the departmental website at <http://www.aviation.siu.edu/flight/safety>.

Associate In Applied Science Degree in Aviation Flight, College of Applied Sciences and Arts

AVIATION FLIGHT MAJOR

University Core Curriculum Requirements

English 101, 102, Communication Studies 101, UCOL 101/
AF 101, University Core Group I science and Mathematics
108 or 125 or equivalent 18

Requirements for the Major in Aviation Flight

Core Requirements 42
 Aviation Flight Courses: 201A,B, 203, 204, 206A,B, 207A,B
22
 Aviation Flight Technical Courses: 200, 202, 205,
 210, 211, 260 20
 Total 60

Aviation Flight Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101/AF 101, 201B	3	2
AF 200, 202.....	3	3
AF 201A, 203	3	5
ENGL 101, 102.....	3	3
MATH 108 or 125, CMST 101	3	3
<i>Total</i>	15	16

SECOND YEAR	FALL	SPRING
AF 204, 210.....	5	4
AF 205, 207A.....	3	2
AF 206A, 206B	1	2
AF 260, 211	4	3
Group 1 Science.....	-	3
<i>Total</i>	13	14

SECOND YEAR	SUMMER
AF 207B.....	2

All Aviation Flight courses are restricted to AF majors.

Courses (AF)

101-3 Foundations of Inquiry: Aviation Management and Flight. This First-Year Seminar supports the transition of first-year students as they enter our research university. Students will demonstrate the knowledge, skills, and behaviors critical for academic and personal success; acquiring these capabilities as they are introduced to the foundations of inquiry. Successful completion of AF 101 will fulfill the University Core Curriculum requirements for Area 1-Inquiry for Aviation Management and Flight students.

199-2 Intermediate Flight/Program Transition. This course is for the first time entry-level student certificated as a Private Pilot who was certified and trained outside SIUC. It provides orientation training in the areas of SIUC flight procedures and standards, SIUC flight training aircraft, local airspace and airport environments. The course as delivered will consist of twenty (20) hours of ground instruction, fourteen (14) hours of flight instruction, and will be restricted to Aviation Flight Majors only. Upon successful completion with a grade of C or better, credit will be posted for AF 201A and 201B and the student will be able to enroll in AF 203. Credit in AF 199 does not count in the Aviation Flight major. Departmental approval required.

200-3 Primary Flight Theory. Prepares the beginning aviation student for the FAA Private Pilot Written Examination. Consists of instruction in aerodynamics, FAA regulations, primary navigation, use of computer, weather, and radio navigation.

201A-3 Primary Flight I. Provides flight instruction in prepara-

tion for solo flight. Consists of dual flight instruction, limited solo flight and ground instruction in conjunction with each training flight and other flight-related topics. Restricted to admission to the SIUC aviation flight program.

201B-2 Primary Flight II. Provides flight instruction in preparation for the acquisition of the private pilot certificate, as well as serves as a prerequisite for 203 for those entering the aviation flight program who already possess a private pilot certificate. Consists of dual flight instruction, solo flight, and ground instruction in conjunction with each training flight and other flight-related topics. Prerequisite: AF 201A or FAA private pilot certificate.

202-3 Flight - Basic and Intermediate Theory. Instruction in Federal Aviation Administration regulations pertaining to commercial flight operations. Includes advanced instruction in aerodynamics, weather and safe operation of aircraft. Prerequisite: AF 200.

203-5 Flight - Basic. Beginning course in preparation for the Commercial Certificate. Major emphasis is upon solo and solo cross-country flight, with ground instruction in conjunction with each training flight and other flight related topics. Prerequisite: AF 201 and a valid Private Pilot Certificate. Special approval needed from the department.

204-5 Flight - Intermediate. Continuing preparation for the Commercial Certificate. Including dual, solo and night flight instruction and advanced maneuvers. Ground instruction is provided in conjunction with each training flight. Prerequisite: AF 203.

205-3 Flight - Instrument Theory. Course is directed to the theory of flight by instrument. Includes classroom instruction in Federal Aviation Administration regulations pertaining to instrument flight, navigation by radio aids, aviation weather, and function, use, and limitations of instruments required for instrument flight. Prerequisite: AF 202.

206A-1 Flight-Instrument I. The course continues preparation for the Commercial Certificate. Includes instrument flight instruction. Prerequisite: AF 203, AF 204. Special approval needed from the department.

206B-2 Flight-Instrument II. The course continues preparation for the Commercial Certificate. Includes instrument flight instruction. Prerequisite: AF 206A. Special approval needed from the department.

207A-2 Flight Advanced. This course completes the requirements for the Commercial Pilot Certificate. Includes dual and solo flight maneuvers. Prerequisite: AF 206A, AF 206B.

207B-2 Flight Multi-Engine Operations. Prepares the student for the FAA Multi-Engine rating (airplane). Includes multi-engine flight instruction and individual ground instruction. Prerequisite: AF 207A.

210-4 Human Factors for Aviators. Provide the student specialized instruction in the areas of: physiological aspects of aviation, psychological aspects of aviation, aeronautical decision making and crew resource management. This course is writing intensive and reflects the College's Communication-Across-the-Curriculum initiative. Prerequisite: AF 202, ENGL 101.

211-3 Aviation Weather. The course will provide both understanding and application of weather theory in relation to commercial flight operations. This course includes regulations issued by the Federal Aviation Administration relating to weather and

safe flight. Problem based learning situations and presentations in the classroom on the adverse effects of weather are presented to increase hazardous weather awareness for pilots.

220-2 Practicum in Air Carrier Operations. Students gain practical experience and training by participating as flight officers on passenger aircraft flights. Enables students to practice, under close supervision, the role of first officer within a passenger carrier format. Course includes 20 hours of flight time and a minimum of 40 hours pre- and post-flight activities and instruction. Mandatory Pass/Fail. Prerequisite: AF 207B. Special approval needed from the department.

260-4 Reciprocation and Jet Airplane Systems. Students will have knowledge of construction, operation, and components of reciprocating and jet powerplants. They will understand the operation and components of cabin pressurization and air conditioning systems, flight control systems, landing gear systems, fuel systems, electrical systems, antiicing systems, and fire detection systems.

299-1 to 6 Aviation Flight Continuing Enrollment. This course is to be taken to maintain continuing enrollment for flight students who have not finished the requirements of their degree program. Restricted to Aviation Flight or Aviation Management majors or consent of department.

300A-1 Flight-Instructor I (Airplane). First of two university courses to prepare a commercial pilot for a FAA Flight Instructor Certificate. Prerequisite: AF 207A. Special approval needed from the department.

300B-1 Flight-Instructor II (Airplane). Second of two university courses to prepare a commercial pilot for a FAA Flight Instructor Certificate. Prerequisite: AF 300A. Special approval needed from the department.

301-1 Flight-Instructor (Airplane-Multi-Engine). This course consists of 5 hours of dual flight instruction and 10 hours of classroom instruction. Prepares the holder of a flight instructor certificate for the addition of the multi-engine flight instructor rating. Prerequisite: AF 300A, AF 300B.

302-1 Flight-Instructor (Airplane Instrument). Designed to prepare the flight instructor to teach instrument flying, and to acquire the Instrument Flight Rating. Course consists of 10 hours of dual flight instruction and 15 hours of classroom instruction. Prerequisite: AF 300A, AF 300B.

303-3 Flight Instructor Ground School. This course is designed to aid the student who is obtaining a flight instructor's rating. It will cover principles to teaching as well as practical aspects of teaching flight maneuvers necessary for instruction. Prerequisite: AF 205.

305-3 Airline and Turbine Aircraft Operations. This course uses a combination of class lectures and computer based flight training to develop an understanding of airline operational requirement and turbine aircraft operations. Topics include: turbine aircraft systems, Federal Aviation Regulation part 121 regulations, airline operational specifications, advanced aircraft avionics, advanced weather avoidance, crew resource management and airline career professional development. The course format includes a two hour lecture period and a two hour computer based flight training device session per week. Prerequisite: AF 207B.

306-2 Introduction to Technically Advanced Aircraft Operations. This course uses a combination of orientation and

simulation lessons to develop an understanding of Technically Advanced Aircraft (TAA) systems, navigation and autopilot. The student will develop the skills required to perform scenario based training missions in a TAA Flight Training Device (FTD). The course consists of 10 hours of orientation lessons and 16 hours of FTD lessons. Prerequisites: AF 206A and AF 206B, or consent of the department.

311-3 Aviation Weather II. This course will provide the student with an understanding of aviation weather theory and products and the ability to apply these to flight operations. The course will focus on weather theory as it applies to the flight environment, and the ways in which pilots and air traffic controllers access and utilize aviation weather information. In-class problem based learning, including case studies and group work, will build upon readings and self-assessments completed outside of class. Prerequisite: AF 200 or passed FAA private pilot written exams.

Aviation Management and Flight Faculty

Biggs, V. Eugene, Assistant Professor, *Emeritus*, M.S., Southern Illinois University Carbondale, 1971.

Bowman, Terry S., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1993.

Caldwell, William R. Associate Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 2001.

Carter, Kim, Senior Lecturer, Assistant Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 1996.

Harrison, Bryan, Assistant Professor, M.S., Southern Illinois University Carbondale, 2007.

Kampe, David, Senior Lecturer, *Assistant Chief Flight Instructor*, M.S., Southern Illinois University Carbondale, 1997.

Kaps, Robert W., Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1996.

NewMyer, David, Professor, *Emeritus*, Aviation Management and Flight, Ph.D., Southern Illinois University Carbondale, 1987.

Pavel, Samuel, Assistant Professor, Ph.D., University of Notre Dame, 2001.

Phillips, Edwin, Assistant Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 2000.

Robertson, Michael, Associate Professor, M.S., Southern Illinois University Carbondale, 2006.

Ruiz, Jose, Professor and *Chair*, Ph.D., Southern Illinois University Carbondale, 2003.

Ruiz, Lorelei, Associate Professor/*Assistant Chief Flight Instructor*, M.S., Southern Illinois University Carbondale, 1997.

Thiesse, James, Assistant Professor, *Emeritus*, Ed.D., Auburn University, 1980.

Thornhill, Gerald, Senior Lecturer, M.S., Central Missouri State University, 1993.

Voges, John K., Associate Professor, *Chief Flight Instructor*, M.S., Southern Illinois University Carbondale, 1999.

Widick, Leland, Assistant Professor, *Emeritus*, *Chief Flight Instructor*, M.S., Southern Illinois University Carbondale, 1994.

Wilson, Keith, Senior Lecturer, *Assistant Chief Flight Instructor*, M.S., Southern Illinois University Carbondale, 1997.

Aviation Maintenance Technology

(SEE AVIATION TECHNOLOGIES MAJOR)

Aviation Management (Major, Courses, Faculty)

The Aviation Management major is designed to build upon technical training in aviation maintenance, flight, avionics technology, air traffic control, aircraft operations support or other aviation-related fields. The technical training may be gained through Southern Illinois University Carbondale, other post-secondary institutions, proprietary schools, and military, government agencies (international or domestic) or through government certified flight or maintenance training schools. To be considered for enrollment into the Aviation Management program, prospective students must first obtain admission to the University. To be approved for entry into the program, a separate application is required.

Before beginning 300-level Aviation Management coursework, all AVM students are expected to have an aviation-related background consisting of a prior aviation associate degree, a military aviation background, civil aviation background or similar. If a prior aviation background is not acquired prior to admission, the student will be required to take one of the Minors in Aviation Management.

A C or better grade is required for all Aviation Core Courses to satisfy the requirements for a major in Aviation Management.

The Aviation Management program has signed a number of “Program Articulation Agreements” with aviation-related community college degree programs in order to facilitate the transfer of community college aviation students to SIU. These agreements take full advantage of the Capstone Option for admission to the Bachelor of Science in Aviation Management. This option is available to either on- or off-campus students. The community colleges with which SIU has signed such an agreement include: Craven Community College (NC), Gateway Technical College (WI), Southwestern Illinois College (IL), Indian Hills Community College (IA), Iowa Lakes Community College (IA), Kishwaukee College (IL), Lincoln Land Community College (IL), Mt. San Antonio College (CA), Mercer County Community College (NJ), Miramar College (CA), Mountain View College (TX), Palomar College (CA), and Rock Valley College (IL). If you have questions about how these agreements apply to your personal situation, contact your community college aviation program representative or the academic advisor in the Aviation Management program.

Students who major in aviation management have the opportunity to participate in the following aviation management-related internship programs:

1. The American Airlines Flight Operations Internship.
2. Cape Air/Nantucket Airlines First Officer Program.
3. The Delta Airlines Internship in Flight Operations and Management.
4. The United Airlines/SIUC Cooperative Education Program in Aviation Flight and Aviation Management.
5. The Illinois Aviation Trades Association Intern Program.

6. Internships at various Midwest airports.

7. AAR Corporation.

These internship programs enrich an undergraduate student’s academic experience by “extending the SIU campus” to aviation headquarters or business locations around the nation. Graduates of the Aviation Management program obtain professional, technical and management positions in aviation manufacturing, the airlines, general aviation, military aviation and government agencies related to aviation.

Bachelor of Science Degree in Aviation Management, College of Applied Sciences and Arts

AVIATION MANAGEMENT MAJOR

<i>University Core Curriculum Requirements</i>	41
<i>Requirements for Major in Aviation Management</i>	48
Core Requirements: Twenty-one hours selected from the following as approved by the advisor: Aviation Management 301, 302, 303, 371, 377, 385, 386, or 402	21
Six hours selected from Aviation Management 360, 361, 362, 370, 372, 373, 374, 375, 376, 378, 460, or 461.....	6
Twelve hours selected from the following as approved by the advisor: Aviation Management 300, 319(A-I), 320(A-I), 349, 350, 401, 450; or approved equivalent	12
Nine hours of additional advisor approved, 300- or 400-level Aviation Management courses or advisor approved specialization electives	9
<i>Approved Career Electives</i>	31
<i>Total</i>	120

Aviation Management Suggested Curricular Guide

THIRD YEAR	FALL	SPRING
AVM Core	6	6
AVM 372, 374	3	3
University Core	3	3
Independent Study, Internship or approved equivalent	3	3
<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
AVM Core	6	3
AVM 373, 375	3	3
AVM 360 or 376.....	-	3
University Core	3	3
Independent Study, Internship or approved equivalent	3	3
<i>Total</i>	15	15

Airport Management and Planning Minor

The purpose of this minor is to provide preparation for students who wish to enter the airport-related segment of the aviation industry. This minor requires a total of 15 semester hours of coursework: Aviation Management 370, 372, 374, Political Science 340 and one additional Aviation Management course at the 300- or 400-level. All course prerequisites must be completed prior to enrolling in each course. Students wishing to enter this minor must do so by contacting the Aviation Management advisor.

Aircraft Product Support Minor

The minor in Aircraft Product Support is a multi-disciplinary minor offered by The Aviation Management and Aviation Technologies Program. The purpose of this minor is to provide additional preparation for student's who wish to enter the field of aircraft product support with aerospace manufacturers, suppliers, airlines, the military and related aviation/aerospace industry segments. The courses required to complete this minor include: Aviation Management 301 or 376, 461, Aviation Technologies 370, 380, 390 and one additional approved course from either Aviation Management or Aviation Technologies degree program. All prerequisites for these courses must be fulfilled prior to enrollment in each course. All students who wish to enroll in this minor must do so through either the Aviation Management advisor or the Aviation Technologies advisor. Aviation Management students must complete Aviation Management 301 in their major. Aviation Technologies students must complete Aviation Management 376 in their major.

Air Traffic Control Minor

The purpose of the Air Traffic Control (ATC) Minor is to prepare students for entry into the ATC career field. Students completing the minor will have the basic knowledge to enter the ATC discipline as air traffic controllers or other ATC related positions.

The ATC Minor requires a total of 12 semester hours of coursework: AF 311-Aviation Weather II, AVM 361-Basic Air Traffic Control, AVM 362- Advanced Air Traffic Control, AVM 460-National Airspace System.

Prerequisites: AF 200-Basic Flight Theory and Co-Prerequisite AF 205 or Private Pilot Certificate is a prerequisite for AVM 361. AVM 361-Basic Air Traffic Control is a prerequisite of AVM 362.

Courses (AVM)

258-1 to 30 Aviation Work Experience. Credit granted for prior job skills, management-worker relations and supervisory experience while employed in the aviation industry. Credit will be established by program evaluation. This credit may be applied only to the approved career electives requirement of the aviation management degree, unless otherwise determined by the program chair. Restricted to aviation management major.

259-1 to 60 Aviation Occupational Education Credit. A designation for credit granted for past occupational education experiences related to the student's educational objectives in the aviation field. Credit will be established by program evaluation. This credit may be applied only to the approved career electives requirement of the aviation management degree, unless otherwise determined by the program chair. Restricted to aviation management major.

298-1 Multicultural Applied Experience. (Multicultural Applied Experience Course) An applied experience, service-oriented credit in American diversity involving a group different from the student who elects the credit. Difference can be manifested by things such as age, gender, ethnicity, nationality, political affiliation, race, or class. The student can sign up for the one credit experience in the same semester he or she fulfills the multicultural requirement for the University Core Curriculum, or the credit can be coordinated with a particular Core Course on American diversity, although neither is a requirement. Stu-

dents should consult the respective program for course specifications regarding grading, work requirements and supervision. Special approval needed from the site representative, faculty supervisor, and department chair.

300-3 Introduction to Aviation Management Research.

An introduction to library resources, electronic media resources and formal academic writing styles common to aviation management research. Introduction to basic theories, concepts and practices pertinent to aviation management. May be independent study. Restricted to AVM major.

301-3 Aviation Management Writing and Communication.

This course is a study of the writing and communication skills used by managers in the aviation industry. Foundations of technical writing style and documentation are followed by descriptions of specific aviation-related technical writing applications such as correspondence, grants, manuals, progress reports and promotional materials. Specialized skills such as conflict resolution, technical presentations and electronic communication complete the course.

302-3 Current Aviation Management Practices and Processes.

This course is a study of the structures, processes and skills involved in aviation management. Specific issues such as job design, decentralization, planning, decision-making and leadership will be discussed and related to aviation industry. Prerequisite: AVM 301.

303-3 Introduction to Aviation Management. Provides an overview of the aviation industry, available career paths, major challenges, key private and governmental agencies, and the skills and knowledge necessary to succeed within the industry.

319A-1 to 15 Aviation Occupational Internship-Airline.

Each student will be assigned to a program approved work site engaged in activities related to the student's academic program and career objectives. The student will be assigned to an unpaid, internship position and will perform duties and services in an instructional setting as previously arranged with the sponsoring work site supervisor. Prior program approval, supervisor evaluations and student reports are required. Hours and credits to be individually arranged. Mandatory Pass/Fail.

319B-1 to 15 Aviation Occupational Internship-Airport.

Each student will be assigned to a program approved work site engaged in activities related to the student's academic program and career objectives. The student will be assigned to an unpaid, internship position and will perform duties and services in an instructional setting as previously arranged with the sponsoring work site supervisor. Prior program approval, supervisor evaluations and student reports are required. Hours and credits to be individually arranged. Mandatory Pass/Fail.

319C-1 to 15 Aviation Occupational Internship-Corporate Aviation.

Each student will be assigned to a program approved work site engaged in activities related to the student's academic program and career objectives. The student will be assigned to an unpaid, internship position and will perform duties and services in an instructional setting as previously arranged with the sponsoring work site supervisor. Prior program approval, supervisor evaluations and student reports are required. Hours and credits to be individually arranged. Mandatory Pass/Fail.

319D-1 to 15 Aviation Occupational Internship-Fixed Base Operation. Each student will be assigned to a program

approved work site engaged in activities related to the student's academic program and career objectives. The student will be assigned to an unpaid, internship position and will perform duties and services in an instructional setting as previously arranged with the sponsoring work site supervisor. Prior program approval, supervisor evaluations and student reports are required. Hours and credits to be individually arranged. Mandatory Pass/Fail.

319E-1 to 15 Aviation Occupational Internship-Flight Instruction. Each student will be assigned to a program approved work site engaged in activities related to the student's academic program and career objectives. The student will be assigned to an unpaid, internship position and will perform duties and services in an instructional setting as previously arranged with the sponsoring work site supervisor. Prior program approval, supervisor evaluations and student reports are required. Hours and credits to be individually arranged. Mandatory Pass/Fail.

319F-1 to 15 Aviation Occupational Internship-Air Traffic Control. Each student will be assigned to a program approved work site engaged in activities related to the student's academic program and career objectives. The student will be assigned to an unpaid, internship position and will perform duties and services in an instructional setting as previously arranged with the sponsoring work site supervisor. Prior program approval, supervisor evaluations and student reports are required. Hours and credits to be individually arranged. Mandatory Pass/Fail.

319G-1 to 15 Aviation Occupational Internship-Government. Each student will be assigned to a program approved work site engaged in activities related to the student's academic program and career objectives. The student will be assigned to an unpaid, internship position and will perform duties and services in an instructional setting as previously arranged with the sponsoring work site supervisor. Prior program approval, supervisor evaluations and student reports are required. Hours and credits to be individually arranged. Mandatory Pass/Fail.

319H-1 to 15 Aviation Occupational Internship-Consulting Firm. Each student will be assigned to a program approved work site engaged in activities related to the student's academic program and career objectives. The student will be assigned to an unpaid, internship position and will perform duties and services in an instructional setting as previously arranged with the sponsoring work site supervisor. Prior program approval, supervisor evaluations and student reports are required. Hours and credits to be individually arranged. Mandatory Pass/Fail.

319I-1 to 15 Aviation Occupational Internship-Other, as arranged. Each student will be assigned to a program approved work site engaged in activities related to the student's academic program and career objectives. The student will be assigned to an unpaid, internship position and will perform duties and services in an instructional setting as previously arranged with the sponsoring work site supervisor. Prior program approval, supervisor evaluations and student reports are required. Hours and credits to be individually arranged. Mandatory Pass/Fail.

320A-1 to 12 Aviation Cooperative Education-Airlines. Students will participate in a program approved cooperative education program that includes formal instruction, training and/or career related work experience. Students receive a salary or wages and engage in pre-arranged assignments related to

their academic program and career objectives. Program faculty evaluations, cooperating agency student performance evaluations and student report are required. Hours and credits to be individually arranged.

320B-1 to 12 Aviation Cooperative Education-Airport. Students will participate in a program approved cooperative education program that includes formal instruction, training and/or career related work experience. Students receive a salary or wages and engage in pre-arranged assignments related to their academic program and career objectives. Program faculty evaluations, cooperating agency student performance evaluations and student report are required. Hours and credits to be individually arranged.

320C-1 to 12 Aviation Cooperative Education-Corporate Aviation. Students will participate in a program approved cooperative education program that includes formal instruction, training and/or career related work experience. Students receive a salary or wages and engage in pre-arranged assignments related to their academic program and career objectives. Program faculty evaluations, cooperating agency student performance evaluations and student report are required. Hours and credits to be individually arranged.

320D-1 to 12 Aviation Cooperative Education-Fixed Base Operations. Students will participate in a program approved cooperative education program that includes formal instruction, training and/or career related work experience. Students receive a salary or wages and engage in pre-arranged assignments related to their academic program and career objectives. Program faculty evaluations, cooperating agency student performance evaluations and student report are required. Hours and credits to be individually arranged.

320E-1 to 12 Aviation Cooperative Education-Flight Instruction. Students will participate in a program approved cooperative education program that includes formal instruction, training and/or career related work experience. Students receive a salary or wages and engage in pre-arranged assignments related to their academic program and career objectives. Program faculty evaluations, cooperating agency student performance evaluations and student report are required. Hours and credits to be individually arranged.

320F-1 to 12 Aviation Cooperative Education-Air Traffic Control. Students will participate in a program approved cooperative education program that includes formal instruction, training and/or career related work experience. Students receive a salary or wages and engage in pre-arranged assignments related to their academic program and career objectives. Program faculty evaluations, cooperating agency student performance evaluations and student report are required. Hours and credits to be individually arranged.

320G-1 to 12 Aviation Cooperative Education-Government. Students will participate in a program approved cooperative education program that includes formal instruction, training and/or career related work experience. Students receive a salary or wages and engage in pre-arranged assignments related to their academic program and career objectives. Program faculty evaluations, cooperating agency student performance evaluations and student report are required. Hours and credits to be individually arranged.

320H-1 to 12 Aviation Cooperative Education-Consulting

Firm. Students will participate in a program approved cooperative education program that includes formal instruction, training and/or career related work experience. Students receive a salary or wages and engage in pre-arranged assignments related to their academic program and career objectives. Program faculty evaluations, cooperating agency student performance evaluations and student report are required. Hours and credits to be individually arranged.

320I-1 to 12 Aviation Cooperative Education-Other, as arranged. Students will participate in a program approved cooperative education program that includes formal instruction, training and/or career related work experience. Students receive a salary or wages and engage in pre-arranged assignments related to their academic program and career objectives. Program faculty evaluations, cooperating agency student performance evaluations and student report are required. Hours and credits to be individually arranged.

349-3 Readings in Aviation Management. The use of written and electronic media resources relevant to aviation management and the development of an aviation management research bibliography. The use of bibliographic resources to produce written comparative or persuasive research reports. May be independent study. Prerequisite: AVM 300. Restricted to AVM major.

350-1 to 32 Aviation Career Subjects. In-depth competency, skill development and exploration of innovative techniques and procedures used in aviation businesses, government operations related to aviation and other aviation related organizations. Subjects and topics may include present or planned future operations as well as domestic or international enterprises. Study of program approved topics or projects may include workshops, special short courses, seminars, research or independent study. Special approval needed from the instructor.

360-3 The Air Traffic Control System, Procedures and Rules. This course introduces students to the history, evolution and operation of the US Air Traffic Control System. ATC procedures and rules are emphasized with student pilots treated as users of the system and prospective controllers treated as future ATC providers. Students will be able to apply air traffic control procedures and rules. FAA Private Certificate or FAA ATC Certificate. Special approval needed from the advisor.

361-3 Basic Air Traffic Control. This course is the first course in a series designed to prepare students for a career as an Air Traffic Controller or in Air Traffic Control support and consulting positions. Students will become familiar with the structure of the National Airspace System (NAS) and the structure of the FAA Air Traffic Control system. Prerequisites: AF 205, AF 311.

362-3 Advanced Air Traffic Control. This course is the second course in a series designed to prepare students for a career as an Air Traffic Controller or in Air Traffic Control support and consulting positions. Students will learn standard ATC phraseology and separation standards used in Terminal and Enroute facilities. The course is a combination of classroom lecture and ATC simulation. Prerequisite: AVM 361.

370-3 Airport Planning. To acquaint the student with the basic concepts of airport planning and construction, as well as an investigation of various community characteristics and resources.

371-3 Aviation Industry Regulation. Students will have a

thorough understanding of the US regulatory system. Topics include the history of administrative law, political influence in the regulatory system, current aviation regulations and regulatory agencies, how to create/modify/remove regulations, and how to work within the complex regulatory environment.

372-3 Airport Management. A study of the operation of an airport devoted to the phases of lighting, fuel systems, field marking, field buildings, hangars, and surrounding community.

373-3 Airline Management. A study of the administrative aspects of airline operation and management including a detailed study of airline organizational structure.

374-3 General Aviation Operations. A study of general aviation operations including fixed base operations (fuel, sales, flight training, charter, etc.), corporate aviation (business aviation, corporate flight departments, executive air fleets, etc.) and the general aviation aircraft manufacturing industry.

375-3 Legal Aspects of Aviation. The student will develop an awareness of air transportation. The course will emphasize basic law as it relates to contracts, personnel, liabilities, and legal authority of governmental units and agencies. Lecture three hours.

376-3 Aviation Maintenance Management. To familiarize the student with the functions and responsibilities of the aviation maintenance manager. Maintenance management at the fixed base operator, commuter/regional airline, and national air carrier levels will be studied. Aviation maintenance management problems areas will be reviewed using the case study method.

377-3 Aviation Safety Management. This course will survey the various aspects of aviation flight and ground safety management. Weather, air traffic control, mechanical and human factors in aviation safety management will be reviewed. Case studies of individual aviation accidents and incidents will be analyzed.

378-3 Aviation Security Regulations and Management. Provides a thorough review of the aviation security environment including the key regulations governing aviation security, the key agencies involved in regulating aviation security, and impacts of aviation security regulations on airlines, airports and general aviation companies. Pre and Post 9/11 attack comparisons will be identified in the class and case studies of aviation security problems will be used to illustrate solutions to the problem.

385-3 Air Transport Labor Relations. The legislation governing labor relations in the U.S. consists of two pieces of legislation, the Railway Labor Act for labor relations in the railroad/airline industries; and the National Labor Relations Act for all other industrial sectors. This course focuses on the examination of air transport labor relations in the context of these key laws. Students will apply this knowledge in mock negotiations. Restricted to Aviation Management major.

386-3 Fiscal Aspects of Aviation Management. An introduction to the fiscal problems encountered in the administration of aviation facilities. Special approval needed from the advisor.

401-3 Analysis of Issues in the Aviation Industry. The identification and study of current economic, regulatory or operational issues impacting the aviation industry. The use of both written and oral reports to present a critical analysis of selected topics. May be independent study. Not for graduate

credit. Prerequisite: AVM 349. Restricted to AVM major.

402-3 Aviation Industry Career Development. Provides description of the employment in the aviation industry, as well as applying for such employment. Also covered: professionalism, professional ethics/integrity, workplace behavior, personal assessment, resume construction, interviewing skills, writing cover letters, the use of references, networking, employment referral agencies and continuing education. Not for graduate credit. Restricted to Aviation Management major.

450-3 Management Problems in the Aviation Industry. The identification and study of problems related to management within the aviation industry. The application of aviation management theories, concepts and practices to the identified management problems. The use of written and electronic media research resources to produce a written problem solving report. May be independent study. Not for graduate credit. Prerequisite: AVM 401. Restricted to AVM major.

460-3 National Airspace System. The evolution, current state, and future of the National Airspace System with emphasis on its current and future impact on the domestic and international aviation industry. Defines the Federal Aviation Administration's role in the operation, maintenance, and planned modernization of Air Traffic Control facilities, airways and navigational aids, landing aids, and airports. The users of the system, their needs, and issues with the system's operation and planned modernization are examined. Not for graduate credit. Prerequisite: AVM 360.

461-3 Aviation Product Support Management. This course will acquaint students with concepts and techniques used in analysis and development of an aviation product support program. Concepts discussed in this course will provide a basic understanding of complexities and issues associated with design of a fully integrated aviation product support program. Design considerations, integration of product support into the total product design, support planning and post-delivery support will be covered. Not for graduate credit. Prerequisite: AVM 376.

Aviation Management and Flight Faculty

Biggs, V. Eugene, Assistant Professor, *Emeritus*, M.S., Southern Illinois University Carbondale, 1971.

Bowman, Terry S., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1993.

Caldwell, William R. Associate Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 2001.

Carter, Kim, Senior Lecturer, Assistant Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 1996.

Harrison, Bryan, Assistant Professor, M.S., Southern Illinois University Carbondale, 2007.

Kampe, David, Senior Lecturer, *Assistant Chief Flight Instructor*, M.S., Southern Illinois University Carbondale, 1997.

Kaps, Robert W., Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1996.

NewMyer, David, Professor, *Emeritus*, Aviation Management and Flight, Ph.D., Southern Illinois University Carbondale, 1987.

Pavel, Samuel, Assistant Professor, Ph.D., University of Notre Dame, 2001.

Phillips, Edwin, Assistant Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 2000.

Robertson, Michael, Associate Professor, M.S., Southern Illinois University Carbondale, 2006.

Ruiz, Jose, Professor and *Chair*, Ph.D., Southern Illinois University Carbondale, 2003.

Ruiz, Lorelei, Associate Professor/*Assistant Chief Flight Instructor*, M.S., Southern Illinois University Carbondale, 1997.

Thiesse, James, Assistant Professor, *Emeritus*, Ed.D., Auburn University, 1980.

Thornhill, Gerald, Senior Lecturer, M.S., Central Missouri State University, 1993.

Voges, John K., Associate Professor, *Chief Flight Instructor*, M.S., Southern Illinois University Carbondale, 1999.

Widick, Leland, Assistant Professor, *Emeritus*, *Chief Flight Instructor*, M.S., Southern Illinois University Carbondale, 1994.

Wilson, Keith, Senior Lecturer, *Assistant Chief Flight Instructor*, M.S., Southern Illinois University Carbondale, 1997.

Aviation Technologies

(Major, Courses, Faculty)

Whether general aviation aircraft or transport, modern aircraft require highly trained technicians to manage hardware, troubleshoot systems and maintain airframe structures and powerplants. The Aviation Technologies program is ranked among the best in the country and was developed with input from industry representatives and the Federal Aviation Administration (FAA) to provide the requisite skills and broad educational experience necessary in today's competitive environment. Optional paths within the major provide a great deal of flexibility in preparing for a career in the aviation industry. Students may pursue the FAA approved airframe and powerplant certificate in a five or seven semester sequence of coursework or they may include the airframe and powerplant certificate, with additional coursework, as part of their four-year bachelor's degree in Aviation Technologies.

The Bachelor of Science degree program in Aviation Technologies is designed to enhance technical training students have received in aviation maintenance or electronics. This technical training may be acquired through SIU (FAA Airframe and Powerplant Certificate), at other post-secondary institutions, in the military, or in the case of aviation maintenance, at other FAA approved maintenance schools certified under F.A.R. Part 147.

Aviation Technologies has signed a number of Program Articulation Agreements with aviation-related community college degree programs to facilitate the transfer of these particular community college aviation students to SIU. The community colleges with which SIU has signed such an agreement include: Southwestern Illinois College (IL), Rock Valley College (IL), and Indian Hills Community College (IA).

Many students entering the Aviation Technologies program are encouraged to have completed an appropriate associate degree or its equivalent under the provisions of the Capstone Option as explained in Chapter 3. The Capstone Option allows qualified students to fulfill their degree requirements by completing no more than 60 semester hours of coursework beyond their associate degree. Students may choose from three specializations: Aircraft Maintenance, Helicopter Maintenance and Aviation Electronics.

Courses in each of these areas have been selected and designed to provide the student with optimum exposure to theory in the classroom and develop practical, hands-on skills both in the hangar and in specially-designed, task-dedicated laboratories. The Aviation Technologies facilities, located at Southern Illinois Airport between Carbondale and Murphysboro, Illinois, provides students with more than 14 million dollars of the best available equipment including fixed and rotary wing aircraft, airline-type cockpit procedure trainers (CPT's), an advanced composite structures laboratory and computer laboratory. Students should expect to spend \$500 to \$1000 for a tool kit. In addition to university tuition and fees, lab fees are assessed for the lab portions of appropriate courses.

Executives in the aviation industry constitute an advisory committee, which serves the Aviation Technologies program. Current members are: Charles Fisher, Bell Helicopter Textron, Inc., Fort Worth, TX.; Joe Cooley, United Parcel Service Airlines, Louisville, KY.; Joseph A. DePaola, SimuFlite Training International, Dallas/Fort Worth, TX.; Harry B. Fanning, The Boeing Company, Saint Louis, MO.; Terry Washow, Ryan International Airlines, Chicago, IL.; Jim Fisher, Rockwell Collins Avionics, Cedar Rapids, IA.; David Gallagher, G. E. Aircraft Engines, Cincinnati, OH.

FAA Approved Airframe and Powerplant Certificates Only

First Semester: MATH, AVT 101, 110, 111, 113	22 ¹
Second Semester: AVT 112, 116, 203, 204, 206, 214	22 ¹
Third Semester: AVT 211, 212, 213, 310	20 ¹
Fourth Semester: AVT 305, 315, 316, 327	20 ¹
Summer Session: AVT 340, 345	12 ¹
Total	96¹

¹All Aviation Technologies coursework requires a C average for graduation. To meet FAA requirements, all courses required for the A&P must be passed with C or higher.

Bachelor of Science Degree in Aviation Technologies, College of Applied Sciences and Arts

AVIATION TECHNOLOGIES MAJOR - AIRCRAFT MAINTENANCE SPECIALIZATION

The aircraft maintenance specialization provides students who have completed a FAA approved airframe and powerplant program with the opportunity to advance their technical knowledge and skills in flight management systems, advance composites, advance propulsion systems, and flight line maintenance. Additional elective courses complement this specialization.

<i>University Core Curriculum Requirements</i>	41
<i>Requirements for Aircraft Maintenance Specialization</i>	43
Core Requirements.....	10 ¹
AVT 310	5
AVT 327	5
Specialization Requirements	15 ¹
AVT 405	3
AVT 410	3
AVT 416	3
AVT 380	3
AVT 390	3
Specialization Electives	18 ¹
AVT 301 AND 302, 303, 304 AND 306, 321, 370, 422;	

AVM 376,385,TRM 364 ; or advisor approved electives.	
<i>Technical or Career Electives</i>	36
An Associate in Applied Science degree or equivalent certification in Aviation Maintenance (Airframe and Powerplant) from an accredited college, community college, or technical institute meets this requirement.	
Total	120

¹All Aviation Technologies coursework requires a C average for graduation. To meet FAA requirements, all courses required for the A&P must be passed with C or higher.

Aircraft Maintenance Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101.....	3	-
ENGL 101, 102.....	3	3
MATH 108 or 125, CMST 101	3	3
Core Humanities	3	3
Technical Electives	3	6
Total	15	15

SECOND YEAR	FALL	SPRING
Core Science	3	3
Core Social Science ¹	3	3
Core Fine Arts	3	-
Core Multicultural	-	3
Technical Electives	6	6
Total	15	15

THIRD YEAR	FALL	SPRING
Specialization Electives	3	3
AVT 380, 390.....	3	3
AVT 310, 327.....	5	5
AVT 410	3	-
Technical Electives	-	5
Total	14	16

FOURTH YEAR	FALL	SPRING
Core Human Health	-	2
Specialization Electives	12	-
Technical Electives	3	7
AVT 416	-	3
AVT 405.....	-	3
Total	15	15

¹Students may take only one history course to satisfy this requirement.

Bachelor of Science Degree in Aviation Technologies, College of Applied Sciences and Arts

AVIATION TECHNOLOGIES MAJOR - AVIATION ELECTRONICS SPECIALIZATION

The aviation electronics specialization is designed to accommodate freshman or transfer students. Freshmen can pursue a combined electronics and aviation electronics curriculum or a combined FAA Airframe and Powerplant Certificate and aviation electronics curriculum. Transfer maintenance students (airframe and powerplant) will develop flight line maintenance and troubleshooting skills in aviation electronics. Additional elective courses complement this specialization.

University Core Curriculum Requirements 41
Requirements for Aviation Electronics Specialization 42
 Core Requirements..... 10¹
 AVT 310 5
 AVT 327 5
 Specialization Requirements 20¹
 AVT 321 3
 AVT 317 3
 AVT 318 3
 AVT 405 3
 AVT 422 3
 AVT 465 5
 Specialization Electives 12¹
 AVT 301 & 302, 303, 304 & 306, 370, 380, 390, 410, 416; ...
 AVM 376, 385, TRM 364; or advisor approved electives.
Technical or Career Electives 37
 An Associate in Applied Science degree or equivalent certification in Aviation Maintenance (Airframe and/or Airframe and Powerplant) or Electronics from an accredited college, community college, or technical institute meets this requirement.
Total 120

¹All Aviation Technologies courses require a minimum grade of C.

Aviation Electronics Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101.....	3	-
ENGL 101, 102.....	3	3
MATH 108 or 125, CMST 101.....	3	3
Core Humanities	3	3
Technical Electives	3	6
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
Core Science	3	3
Core Social Science ¹	3	3
Core Fine Arts	3	-
Core Multicultural	-	3
Technical Electives	6	6
<i>Total</i>	15	15

THIRD YEAR	FALL	SPRING
AVT 321.....	3	-
AVT 405	-	3
AVT 310, 327	5	5
AVT 317, 318	3	3
Specialization Elective	3	-
Technical Electives	-	5
<i>Total</i>	14	16

FOURTH YEAR	FALL	SPRING
Core Human Health.....	2	-
AVT 422.....	-	3
AVT 465.....	-	5
Specialization Elective.....	6	3

Technical Electives	6	3
<i>Total</i>	14	14

¹Students may take only one history course to satisfy this requirement.

Bachelor of Science Degree in Aviation Technologies, College of Applied Sciences and Arts

AVIATION TECHNOLOGIES MAJOR - HELICOPTER SPECIALIZATION

The helicopter specialization provides students who have completed an FAA approved airframe and powerplant program with the opportunity to advance technical skills in helicopter theory, maintenance and overhaul, and inspection. Additional elective courses complement this specialization.

University Core Curriculum Requirements 41
Requirements for Helicopter Specialization 46
 Core Requirements 10¹
 AVT 310 5
 AVT 327 5
 Specialization Requirements 18¹
 AVT 301 3
 AVT 302 6
 AVT 304 3
 AVT 306 6
 Specialization Electives 18¹
 AVT 303, 321, 370, 380, 390, 405, 410, 416, 422;
 AVM 376, 385, TRM 364; or advisor approved electives.
Technical or Career Electives 33
 An Associate in Applied Science degree or equivalent certification in Aviation Maintenance (Airframe and Powerplant) from an accredited college, community college, or technical institute meets this requirement.
Total 120

¹All Aviation Technologies courses require a minimum grade of C.

Helicopter Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101.....	3	-
ENGL 101, 102.....	3	3
MATH 108 or 125, CMST 101.....	3	3
Core Humanities	3	3
Technical Electives	3	6
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
Core Science	3	3
Core Social Science ¹	3	3
Core Fine Arts	3	-
Core Multicultural	-	3
Technical Electives	6	6
<i>Total</i>	15	15

THIRD YEAR	FALL	SPRING
Core Interdisciplinary	3	-
Core Human Health	-	2
AVT 310, 327	5	5

Specialization Electives	3	3
Technical Electives	7	5
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
AVT 301, 302	9	-
AVT 304, 306	-	9
Specialization Electives	6	6
<i>Total</i>	15	15

¹Students may take only one history course to satisfy this requirement.

Aircraft Product Support Minor

The minor in Aircraft Product Support is a multi-disciplinary minor offered by the Aviation Management and the Aviation Technologies programs. The purpose of this minor is to provide additional preparation for students who wish to enter the field of aircraft product support with aerospace manufacturers, suppliers, airlines, the military and related aviation/aerospace industry segments. The courses required to complete this minor include: Aviation Management 301 or 376, 461, Aviation Technologies 370, 380, 390 and one additional approved course from either Aviation Management or Aviation Technologies degree programs. All prerequisites for these courses must be fulfilled prior to enrollment in each course. All students who wish to enroll in this minor must do so through either the Aviation Management advisor or the Aviation Technologies advisor. Aviation Management students must complete Aviation Management 301 in their major. Aviation Technologies students may complete Aviation Management 376 in their major.

Courses (AVT)

101-5 Applied Science. Students will understand and demonstrate the application of physical laws including weight and balance, pressure, force, motion, mechanical advantage, heat and sound. The student will interpret blueprints and schematic diagrams, perform basic mechanical drawing using drawing instruments to accomplish orthographic projections, sections and dimensioning of working drawings. Hydraulic tubes, hoses and fittings will be studied. Course fee: \$40.

110-5 Aircraft Structures. Students will be able to identify and select materials employed in aircraft construction. Using appropriate FAR's, they will demonstrate competence in repair of honeycomb, fiberglass, welded, wood, or fabric aircraft members. The student will inspect aircraft members for defects and, if necessary, inspect completed repairs for airworthy condition. Course fee: \$55.

111-5 Materials Processing. Students will be able to identify, select, and inspect aircraft hardware and materials. They will be able to select and apply appropriate cleaning materials and to implement corrosion controls. They will become proficient in the use of precision measurement equipment and related inspection tools. Course fee: \$35.

112-5 Aircraft Electricity. Students will have basic knowledge of electricity generation, AC and DC circuitries, and controls. They will be able to solve problems associated with electrical measurement (AC and DC), circuit interpretations and inspection, aircraft electrical load analysis, circuit malfunctions, cir-

cuit or component servicing, and basic aircraft electronics. Prerequisite: AVT 101, MATH 108 or 125. Course fee: \$25.

113-3 Federal Aviation Regulations. Students will be able to select and use FAA technical and legal publications in order to perform the duties of an aircraft technician. Course fee: \$65.

116-3 Aircraft Instruments. Students will have a knowledge of operation, installation, marking, and interpretation of synchro and servo systems, aircraft and powerplant instruments. They will be able to install, adjust, and calibrate these instruments in accordance with FAA and manufacturers' recommendations. Prerequisite: AVT 101. Course fee: \$30.

199-1 to 10 Individual Study. Provides students with the opportunity to develop a special program of study to fit a particular need not met by other offerings. Enrollment provides access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Special approval needed from the department.

203-3 Aircraft Aerodynamics. Students will have knowledge of flight theory and factors affecting aircraft in flight. They will explain and compare aircraft design features in subsonic, transonic, and supersonic aircraft. They will be able to assemble and rig various aircraft control systems, analyzing and correcting faulty flight characteristics. Course fee: \$25.

204-4 Hydraulics (Aircraft). Students will have a knowledge of fluid theory and applied physics which relates to aircraft hydraulics. They will know the theory of operation, maintenance requirements, and adjustments of various hydraulic components and systems. They will be able to test, inspect, troubleshoot, and service hydraulic systems in accordance with technical specifications. Prerequisite: AVT 101, MATH 108 or 125. Course fee: \$35.

206-4 Metals Processing. Students will be able to make appropriate sheet metal repairs using correct repair procedures, tools, and materials. They will be required to demonstrate correct use of and interpretation of structural repair diagrams and correct interpretation of charts and tables from AC 43, 13-1B pertaining to materials and methods. Prerequisite: AVT 101, 111, 113, MATH 108 or 125. Course fee: \$50.

211-5 Reciprocating Powerplant. Students will have a knowledge of construction, operation, and timing mechanisms associated with aircraft reciprocating powerplants. They will be able to disassemble, clean, measure, inspect, and reassemble a powerplant to airworthy condition in accordance with appropriate FAA and manufacturers' regulations and practices. Prerequisite: AVT 101, 111, 113, MATH 108 or 125. Course fee: \$60.

212-5 Carburetion, Lubrication, and Fuel. Students will be able to demonstrate their competence in identifying fuels, oils, and related system components including carburetors, understanding the operating principles of each. They will be able to inspect, adjust, troubleshoot, and overhaul these components according to manufacturers' and federal regulations. Prerequisite: AVT 101, 111, 113, MATH 108 or 125. Course fee: \$40.

213-5 Ignition Systems. Successful students should have a knowledge of the operation, repair, inspection, and service of reciprocating and jet powerplant ignition systems and reciprocating starting systems. They will be able to time, overhaul, and troubleshoot the various components of each system. Prerequisite: AVT 111, 112. Course fee: \$40.

214-3 Propellers. Students will have a knowledge of the physi-

cal laws and design characteristics governing propeller operation. They will be able to identify components, troubleshoot, and adjust fixed and variable pitch propellers. They will maintain fixed pitch propellers, and governor systems for variable pitch propellers in accordance with FAA and manufacturers' standards. Course fee: \$35.

258-1 to 30 Aviation-Technology Work Experience. Credit granted for prior aviation technologies related job skills, work experience, management-worker relations and supervisory experience while employed in the aviation industry. Credit will be established by program evaluation. This credit may be applied only to the technical or career electives requirement of the aviation technologies degree, unless otherwise determined by the program.

259-1 to 60 Aviation-Technology Occupational Education Credit. A designation for credit granted for past occupational educational experiences related to the student's educational objectives in aviation technologies. Credit will be established by program evaluation. This credit may be applied only to the technical or career electives requirement of the aviation technologies degree, unless otherwise determined by the program chair of Aviation Technologies.

301-3 Helicopter Theory and General Maintenance Practice. The student will have an in-depth knowledge of rotary wing aerodynamics, main and tail rotor systems, rotor blades, primary and secondary controls, and general maintenance practices to include inspection and nondestructive testing. Lecture three hours. Prerequisite: FAA certificate with airframe and powerplant ratings. Departmental approval required.

302-6 Helicopter General Maintenance Laboratory. The student will perform general maintenance on rotary wing main rotor systems, tail rotor systems, flight and powerplant control systems to include malfunction analysis, tracking, static and dynamic balancing, rigging, and repair. Co-requisite: AVT 301. Course fee: \$40.

303-3 Technical Evolution of Aviation. This course will introduce the student to aviation's rich heritage. The coursework will include numerous reading and research assignments to provide the student opportunity to become well acquainted with events, persons and technological developments that have permitted aviation to become what it is today. Emphasis will be placed on the "cause and effect" of selected aviation-related events.

304-3 Helicopter Power Train and Inspection. The student will have in-depth knowledge of the operation, function, and inspection of all rotational components of a rotary wing aircraft to include transmission, gear boxes, drive trains, and drive shafts. Prerequisite: AVT 301.

305-5 Cabin Environment and Jet Transport Systems. Students will understand the operation of and be able to identify the components of flight controls, landing gear, fuel, anti-icing, fire detection, and environmental systems of current jet transport aircraft. They will have knowledge of procedures for aircraft ground handling, APU operation and system servicing. Prerequisite: AVT 203, 212, 213, 310. Course fee: \$50.

306-6 Helicopter Power Train Laboratory. The student will perform all functions of overhaul concerned with rotary wing transmissions, gear boxes, and drive trains. The student will demonstrate skill in disassembly, inspection, discrepancy

analysis, reassembly, and non-destructive testing. Co-requisite: AVT 304. Course fee: \$40.

310-5 Aircraft Electrical Systems. Students will have a knowledge of the operation, repair, inspection and service of small and large aircraft electrical systems to include understanding and/or use of maintenance manuals, inspection manuals, schematic diagrams, and electrical systems components. Prerequisite: AVT 112, approved math course. Special approval needed from the advisor.

315-5 Powerplant Testing. Students will have an understanding of the correct procedures and precautions to be observed during engine installation, ground operation, and fuel and oil servicing. They will be required to inspect and troubleshoot reciprocating and jet engines for airworthy condition and interpret engine instrument readings to diagnose engine malfunctions. Prerequisite: AVT 211, 212, 213, 310. Course fee: \$60.

316-5 Jet Propulsion Powerplant. Students will be able to apply and understand physics laws related to jet engines; identify and understand the operation of jet engines and their components; inspect, check, repair, troubleshoot and adjust jet engines and accessories; analyze engine performance and interpret operational charts, graphs and tables. Prerequisite: AVT 111, 203, 212. Course fee: \$55.

317-3 Introduction to Aviation Electronics. An introduction to electron devices used in analog and digital electronics equipment. Device operation analyzed from theoretical perspective and applied to circuits for power supplies, amplifiers, control devices, and communication data bussing. Course is writing intensive and reflects the College's Communication-Across-the-Curriculum initiative. Prerequisite: AVT 112, ENGL 101. Course fee: \$40.

318-3 Aviation Electronics Control Systems. Coursework is based upon theory and application of analog and digital control systems. Topics include transducers, control input devices, instrument panel displays and feedback sensor circuits. Data recording and monitoring systems will also be presented. Lecture two hours, laboratory two hours. Prerequisite: AVT 317. Course fee: \$30.

319-1 to 15 Aviation Technologies Internship. Each student will be assigned to a program approved work site engaged in activities related to the student's academic program and career objectives. The student will be assigned to an unpaid internship position and will perform duties and services in an instructional setting as previously arranged with the sponsoring work site supervisor. Prior program approval, supervisor evaluations and student reports are required. Hours and credits to be individually arranged. Mandatory Pass/Fail. Special approval needed from the department.

320-1 to 12 Aviation Technologies Cooperative Education. Students will participate in a program approved cooperative education program that includes formal instruction, training, and/or career related work experience. Students may receive a salary or wages and will engage in pre-arranged work assignments related to their academic program and career objectives. Program faculty evaluations, cooperating agency student performance evaluations, and student reports are required. Hours and credit to be individually arranged. Special approval needed from the department.

321-3 Radio Theory and Practice. Students will have knowl-

edge of Advanced Radio Theory and Practice including Federal Communications Commission requirements for aircraft station licenses, aeronautical ground stations, and radio telephone operator's privileges and limitations. Prerequisite: AVT 317.

327-5 Aircraft Communication, Navigation and Pulse Systems. This course will introduce the student to the theory of operation of communication transceivers, navigation receivers, the Air Traffic Control Radar Beacon System (ATCRBS) and Distance Measuring Equipment (DME). Student will be introduced to performance testing and trouble analysis techniques using test equipment. Lecture four hours, laboratory two hours. Prerequisite: AVT 310. Course fee: \$25.

340-6 Aircraft Inspection. Students will be able to perform an annual inspection of an aircraft, demonstrate knowledge of FAR's, AD's, classifying repairs and specific service problems; complete the required maintenance forms, records, and reports; and learn the effects of human factors in aircraft maintenance. Prerequisite: AVT 110, 112, 116, 203. Special approval needed from the advisor. Course fee: \$50.

345-6 Powerplant Inspection. Students will be able to perform periodic inspection of powerplants. They will demonstrate their knowledge of FAR and application of FAA AD's, Service Bulletins, and proper use of inspection equipment. They will use knowledge learned in the powerplant curriculum to perform malfunction analysis of powerplant and related systems. Live equipment is used on a return to service basis. Prerequisite: AVT 214, 315, 316. Course fee: \$50.

350-1 to 32 Technical Subjects in Aviation Technologies. In-depth competency, skill development and exploration of innovative techniques and procedures used in Aviation Technologies. Study of program approved topics or projects may include workshops, short courses, seminars, research or independent study. Special approval needed from the department.

370-3 Reliability, Maintainability, and Fault Prediction and Analysis. Students will develop an understanding of the concepts of reliability, maintainability and failure modes to a level which facilitates fault prediction and the analysis of logistical systems. The topics of logic symbols, fault tree analysis, statistical analysis, fault criticality and engineering for reliability and maintainability will be presented as these relate to the maintenance and logistical management of aerospace hardware. Prerequisite: MATH 108 or approved substitute.

380-3 Aerospace Supply Chain Logistics. This course is a study of the logistics of efficiently scheduling, producing, transporting, storing, and supplying components and hardware in the context of the aerospace industry. Students will learn to improve efficiencies in supply chain logistics as correlated with advancements in management information system technology in order to facilitate the delivery of the desired goods and services to the correct location at the proper time.

390-3 Management Information Systems for Aerospace Applications. Provides an understanding of various types of Management Information Systems (MIS) currently used in Aerospace Support, focusing on the planning, implementation, and evaluation of these. Through this course, the student will become familiar with MIS applications relevant to aerospace product support activities, learn to evaluate the strengths and weaknesses of various systems designs, develop problem solving and critical thinking skills as apposite to logistics applica-

tions, and acquire knowledge of basic database management, design, and security. Prerequisite: AVT 370, 380 or concurrent enrollment, and Information Systems and Applied Technologies 229 or equivalent computer literacy. Course fee: \$20.

405-3 Flight Management Systems. Using industry type computer instruction and flight simulation trainers, students will develop knowledge of the operation and management of autopilots, auto throttles, inertial reference systems, electronic instrument systems, and flight management computers on advanced technology aircraft. Not for graduate credit. Prerequisite: AVT 305; or AF 207A, B. Course Fee: \$35."

410-3 Advanced Composites. Topics include the theory and application of advanced composite materials used in modern aircraft structures and engine components. Students will evaluate structures and implement various methods of repair and maintenance using both cold and heated application methods. Not for graduate credit. Prerequisite: AVT 110. Course fee: \$60.

416-3 Advanced Propulsion Systems. A study of advanced turbine powerplants and their control systems. Students will demonstrate an understanding of the operation and construction of integrated composite engines and analyze digital control systems. Topics include the interfacing of powerplant controls and monitoring systems, aircraft electronic data bussing and indicating displays. Not for graduate credit. Prerequisite: AVT 316. Course fee: \$25.

422-3 Aviation Radar Systems. Introduces the student to applications of airborne radar equipment, including weather detection and tracking. The student will gain an understanding of installation techniques, system performance specification, operational analysis and troubleshooting. Not for graduate credit. Prerequisite: AVT 317. Co-requisite: AVT 318.

465-5 Digital Data Bussing and Electronic Flight Instrument Systems (EFIS). This course will introduce digital data bus systems, control protocols and exchange formats. Students will study electronic flight instrumentation systems, engine indication and alerting systems found on various general, business, and air transport category aircraft while becoming familiar with the use of integrated test equipment to evaluate, test, and troubleshoot software routines for digital information transfer. Students will interpret blueprints and schematic diagrams to construct complex digital data bus harnesses to aircraft specifications. Not for graduate credit. Co-requisite: AVT 318. Course fee: \$30.

Aviation Technologies Faculty

Bartlett, Donald R., Assistant Professor, M.S., Aviation Safety, Central Missouri State University, 2010.

Berentsen, Lowell W., Associate Professor, *Emeritus*, M.Ed., University of Idaho, 2003.

Burgener, Michael A., Associate Professor and *Chair*, M.B.A., The Citadel, Charleston, SC. 2001.

Hannon, Dennis R., Assistant Professor, M.P.A., Aviation, Southern Illinois University Carbondale, 2007.

Harrison, Matthew W., Associate Professor, M.S.ED., Southern Illinois University Carbondale, 2008.

Mattingly, Daniel I., Assistant Professor, M.S., Aeronautical Science, Embry-Riddle Aeronautical University, 2007.

Mitchell, Keven R., Associate Professor, M.S., Applied and Natural Sciences in Aviation and Space, Oklahoma State Uni-

versity, 2000.

Rodriguez, Charles L., Assistant Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1997.

Russell, Lewis G., Assistant Professor, *Emeritus*, M.S. ED., Southern Illinois University Carbondale, 1978.

Sullivan, Karen J., Associate Professor, M.S.ED., Southern Illinois University Carbondale, 2007.

Behavior Analysis and Therapy

(Major, Courses)

The Bachelors of Science Program in Behavior Analysis and Therapy aims to prepare students to enter into careers in Behavior Analysis and Therapy. Students will be eligible for Bachelors-level positions as Assistant Behavior Analysts, among a variety of other positions, Working in a diverse range of human service agencies with a number of clinical populations. Students will also be competitive applicants for any of the U.S.'s graduate programs in Behavior Analysis.

Program Goals:

1. Graduates will be coursework eligible for national credentialing as Assistant Behavior Analysts (BCaBA), an employment position recognized in the state of Illinois.
2. Graduates will be extremely competitive for positions of employment at human service agencies serving individuals with intercultural disability, autism, traumatic brain injury, the elderly, and other clinical populations.
3. Graduates of the program interested in pursuing advanced degrees will be competitive for entry into one of the many masters programs in behavior analysis nation-wide (including the one in the Rehabilitation Institute at SIUC, which is internationally recognized as the first graduate training program in the U.S., and is accredited by the Association of Behavior Analysis International).

Bachelor of Science Degree in Behavior Analysis Therapy, College of Education and Human Services

Required Courses:

- BAT 200-3: Skeptical Thinking
- BAT 312-3: Applied Behavior Analysis I
- BAT 406-3: Applied Behavior Analysis II
- BAT 430-3: Behavior Therapy
- BAT 433-3: Applied Behavior Analysis with Pediatric Populations
- BAT 440-3: Ethics in Behavior Analysis and Therapy
- BAT 441-3: Assessment and Measurement
- BAT 445H-3: Autism and Intellectual Disabilities
- BAT 452-3: Behavior Analytic Approaches to Individualized Service Planning
- BAT 474-3: Performance Management
- BAT 495-6: Practicum
- PSYC 211-4: Research Methods and Statistics
- PSYC 102-3: Intro to Psychology (counted in UCC)
- PLB 115/ZOOL 115-3 (counted in UCC)

Required Credits : 49 (48 minimum requirement)
 UCC:41 (to include PSYC 102, PLB/ZOOL 115)
 Electives by Advisement: 36 (6 hrs @ 300-400 level)
 TOTAL: 120 (120 required for graduation)

Behavior Analysis and Therapy Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
MATH 101, CMST 101	3	3
Fine Arts, Humanities	3	3
UCOL 101, Human Health	3	2
PSYC 102, PLB/ZOOL 115	3	3
<i>Total</i>	15	14

SECOND YEAR	FALL	SPRING
BAT 200, Social Science.....	3	3
Humanities, Science Group I	3	3
Multicultural, Elective.....	3	3
PSYC 211, Elective	4	3
Elective, BAT 312.....	3	3
<i>Total</i>	16	15

THIRD YEAR	FALL	SPRING
BAT 440, 406.....	3	3
BAT 441, 445H	3	3
Elective, BAT 493	3	3
Electives	3	3
Electives	3	3
<i>Total</i>	15	15

* Cannot take BAT 406 without completion of BAT 312.

* Cannot take BAT 493 without completion of BAT 312 and completion of or simultaneous enrollment in BAT 406.

FOURTH YEAR	FALL	SPRING
BAT 452, 430.....	3	3
BAT 474, 433	3	3
BAT 495, 495	3	3
Electives	3	3
Elective , Elective (300-400 level)	3	3
<i>Total</i>	15	15

* Cannot take BAT 452, 430, 433, or 474 without completion of BAT 312 or 406.

*Cannot take BAT 495 without prior completion of BAT 312, 406, or 440.

Courses (BAT)

200-3 Skeptical Thinking. This class will introduce students to common errors in thinking about many myths in society today. Students will be introduced to scientific thinking, and will learn to apply it to the study of everyday curiosities in the world around them. Students will also be introduced to the distinction between science, pseudoscience, and anti-science, particularly as it relates to the treatment of a variety of behavioral disorders.

312-3 Applied Behavior Analysis I. This course will provide students with an introduction to the principles of the science of behavior known as behavior analysis. The philosophical system known as behaviorism that underlies this area of study will be explored, as will the application of behavioral principles to a

number of areas of social life.

406-3 Applied Behavior Analysis II. This course is an advanced survey of basic and applied research related to the principles and procedures in behavior analysis. As the second part of the ABA courses, this course serves to extend student's understanding of the principles of respondent and operant conditioning through exposure to basic research and demonstrations of interventions across diverse populations and settings. Prerequisite: REHB 312 with a minimum grade of C.

430-3 Behavior Therapy. This course will trace the history of behavior therapy from early days where aversive and punishment procedures were instated to modern day positive-based interventions. Various therapeutic approaches will be covered including behavioral relaxation training, functional analytic psychotherapy, acceptance therapy and positive/mindful therapies. Prerequisite: BAT 312, BAT 406 with minimum grades of C.

433-3 Applied Behavior Analysis with Pediatric Populations. This course provides students with knowledge related to the application of behavior analytic approaches to assessment and treatment of many childhood behavior problems. Topics covered will include assessment and treatment of problem behavior exhibited in school and home settings displayed by typically-functioning individuals, as well as individuals with a variety of developmental disorders. Prerequisite: BAT 312, BAT 406.

440-3 Ethics in Behavior Analysis & Therapy. This course focuses on ethical conduct within the field of behavior analysis, and emphasizes problem-solving strategies to assist practitioners in resolving ethical dilemmas that may come in the delivery of behavioral services. The course will provide an interpretation of the Behavior Analyst Certification Board guidelines for ethical conduct.

441-3 Assessment & Measurement. This course will provide an overview of behavioral observation methods, including approaches for monitoring and recording behavior over the course of behavior analytic services. Issues of reliability and validity will also be examined. Prerequisite: BAT 312.

452-3 Behavior Analytic Approaches to Individualized Service Planning. This course provides students with the skills to develop and evaluate service plans for individuals receiving community education, rehabilitation, and other services from a behavior analytic perspective. Topics covered include person-centered assessment, functional community based training, individualized assessment, and written treatment plans. Prerequisite: BAT 312; BAT 406 with minimum grades of C.

474-3 Performance Management. This course focuses on the application of behavior analysis within organizations. Using the principles of behavioral science, students will learn how to manage employee behavior, develop organizational goals and objectives, track performance of work teams, and provide objective measures of compensation. Topics will include program evaluation, motivation, performance reviews, and emerging trends in organizational design. Prerequisite: BAT 312; BAT 406 with minimum grades of C.

493-3 Single-Case Research Methodology. This course will provide students with the skills necessary to act as critical consumers of intervention research. It will also provide students with the analytical skills necessary to apply the logic of single-

case research methodology to their work with the consumer. Emphasized will be the critique and interpretation of published research, as well as the writing competencies required for a student to successfully prepare a research paper. Prerequisite: BAT 312 and simultaneous enrollment in or prior completion of BAT 406.

495-3 Practicum. Application of behavioral analytical principles to clinical settings, cooperatively guided by Behavior Analysis and Therapy program faculty and human service agency staff. Prerequisite: BAT 312, BAT 406; BAT 440 with minimum grades of C.

Honors Courses (BAT)

445H-3 Autism and Intellectual Disabilities. This class introduces students to the variety of intellectual disabilities found within our society. Topics will range from how genetic mutations can result in life long disabilities, as well as how unknown factors produce disorders such as autism. Students will learn about diagnoses, assessment and treatment for a variety of disorders and how to manage such disabilities throughout the lifespan.

Biochemistry (Courses, Faculty)

Biochemistry (BCHM) courses at the advanced undergraduate level are offered by the Department of Biochemistry and Molecular Biology. Faculty members of the Biochemistry and Molecular Biology department are also involved in School of Medicine programs, the Physician Assistant program and graduate program in Molecular Biology, Microbiology and Biochemistry (MBMB).

Courses (BCHM)

451A-3 Biochemistry (Same as CHEM 451A and MBMB 451A) First half of the 451A,B two semester course. Must be taken in A,B sequence. Three lectures per week. Introduction to biomolecules, biochemical techniques, expression of genetic information, basic thermodynamics, ligand binding, aqueous solutions, protein structure, hemoglobin, spectroscopy. Prerequisites: CHEM 340 and CHEM 342 or 442, or equivalents.

451B-3 Biochemistry (Same as CHEM 451B and MBMB 451B) Second half of 451A,B two semester course. Must be taken in A,B sequence. Basic kinetics, enzyme kinetics, enzyme inhibitors, regulation of enzymes, oxidation-reduction, high energy bonds, transport across membranes, intermediary metabolism, hormonal control of metabolism. Prerequisites: MBMB 451A or BCHM 451A or CHEM 451A or equivalent.

456-3 Biophysical Chemistry (Same as CHEM 456 and MBMB 456) A one-semester course in Biophysical Chemistry intended for biochemists and molecular biologists. Emphasis will be on solution thermodynamics, kinetics and spectroscopy applied to biological systems. Prerequisites: CHEM 340 and CHEM 342 or 442, MATH 141 or 150, MBMB 451A or BCHM 451A or CHEM 451A, or equivalents.

490-1 to 3 Undergraduate Research Participation Investigation of a problem, either individually or as a research group, under the direction of a member of the faculty. Not for graduate credit. Prerequisites: 3.0 grade point average in sciences courses. Special approval needed from the instructor.

Biochemistry Faculty

- Bartholomew, Blaine**, Professor, *Emeritus*, Ph.D., University of California, Davis, 1988
- Bhaumik, Sukesh**, Associate Professor, Ph.D., University of Bombay, India, 1997.
- Davie, Judith K.**, Associate Professor, Ph.D., University of California, Berkeley, 1998.
- Gagnon, Keith**, Assistant Professor, Ph.D., North Carolina State University, 2007.
- Gupta, Ramesh**, Professor and *Chair*, Ph.D., University of Illinois, 1981.
- Hardwicke, Peter M.D.**, Professor, *Emeritus*, Ph.D., Kings College, London, 1969.
- Kadyrov, Farid A.**, Assistant Professor, Ph.D., Institute of Biochemistry and Physiology of Microorganisms of the Russian Academy of Sciences, 1997.
- Niederhoffer, Eric C.**, Associate Professor, Ph.D., Texas A&M University, 1983.
- Schmit, Joseph C.**, Associate Professor, *Emeritus*, Ph.D., Purdue University, 1971.
- Weilbaeher, Rodney G.**, Research Assistant Professor, Ph.D., University of California, Berkeley, 1997.

Bio Fuels

(SEE AGRIBUSINESS ECONOMICS)

Biological Sciences (Major, Minor, Courses)

Biological Sciences is an appropriate major for students wishing to pursue a career in secondary-school biology education, a pre-professional human-health curriculum, or an interdisciplinary program in ecology. Students in the major must choose one of these specializations to complete their degree. The Biological Sciences major provides interdepartmental, interdisciplinary training for specific career-paths in the life sciences. The curriculum is drawn from the resources of four life-science departments (Microbiology, Physiology, Plant Biology, and Zoology), each of which has its own undergraduate degree.

Students with a major in Biological Sciences may not select one of the four life-science areas as a minor, and students electing to pursue a double major may not use more than 11 semester hours of biological sciences courses to satisfy the requirements for both majors. In addition to biological sciences courses, students are required to take courses in physical sciences and mathematics.

Students planning a major in Biological Sciences should consult with the Director of Biological Sciences for program information and assignment to a home department for faculty mentoring. Students cannot repeat a majors course or its equivalent in which a grade of B or better was earned without consent of the Director of Biological Sciences.

**Bachelor of Science Degree in Biological Sciences, College of Education and Human Services, Biology Education Specialization
Biology Designation for the Illinois Secondary (6-12) Science Teaching License**

This specialization prepares students for certification as sec-

ondary-school biology teachers. Course requirements match content areas specified by the Illinois State Board of Education for teacher licensure in science with a designation in biology.

University Core Curriculum Requirements41¹⁻³
To include MATH 109; BIOL 200A-advanced UCC Group II Science; CHEM 200/201/202-advanced UCC Group I Science; PSYC 102-Social Science; EDUC 314-advanced UCC Social Science; EDUC 311-advanced UCC Multicultural; and PHIL 307I-UCC Humanities.

Biological Sciences Major Requirements 55-56⁴

Life Science	
BIOL 200A, 200B	5 (+3) ⁵
BIOL 304, 305, 306, 307	12
PHSL 201, 208	2 (+2) ⁶
MICR 301; or PLB 300; or ZOOL 220	4-5
Six hours of 400-level electives in BIOL, MICR, PHSL, PLB, or ZOOL	6
BIOL 485, MICR 495, PHSL 490, PLB 480, or ZOOL 482 ...1	
Mathematics and Statistics	
MATH 109.....	(+3) ⁷
MATH 282 or PLB 360 or QUAN 402.....	3
Physical Science	
CHEM 200, 201, 202, 210, 211, 212	7 (+3) ⁸
GEOL 220 and 223, or 221 and 224, or 222 and 223....	4
PHYS 103, 203A, 203B, 253A, 253B.....	11
<i>Professional Education Sequence</i>	30
CI 360, 468	6
EDUC 301, 302, 303, 308, 313, 319, 401A	24
<i>Total</i>	126-127

¹ENGL 101 and 102 with a grade of C or better are required for admission to the Teacher Education Program.
²PHIL 307I should be taken to satisfy 3 hours of the Humanities requirement of the University Core Curriculum.
³PSYC 102 is a prerequisite for EDUC 314 and should be taken to satisfy 3 hours of the Social Science requirement in the University Core Curriculum.
⁴A minimum 2.75 grade point average in all Biological Sciences major courses is required.
⁵Satisfies the Science (Group II) requirement of the University Core Curriculum. BIOL 200A and B with grades of C or better are required for admission to the Teacher Education Program.
⁶Satisfies the Human Health requirement of the University Core Curriculum.
⁷Satisfies the Mathematics requirement of the University Core Curriculum.
⁸Satisfies the Science (Group I) requirement of the University Core Curriculum.

Biology Education Suggested Curricular Guide*

FIRST YEAR	FALL	SPRING
UCOL 101, ENGL 101	3	3
MATH 109, CMST 101	3	3
CHEM 200, 201, 202; 210, 211, 212	5	5
BIOL 200A, 200B	4	4
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
ENGL 102, EDUC 314.....	3	3
PHYS 203A, 253A; 203B, 253B.....	4	4
GEOL 220, 223; Fine Arts	4	3
PSYC 102, ZOOL 220.....	3	5
<i>Total</i>	14	15

THIRD YEAR	FALL	SPRING
BIOL 305, 306; 304, 307	6	6
PHYS 103, EDUC 301	3	1
PHIL 307I, Humanities	3	3
EDUC 311, 313.....	3	3
<i>Total</i>	15	13

FOURTH YEAR	FALL	SPRING
EDUC 302, 319; 303, 308	4	4
PHSL 201, 208; PLB 480	4	1
CI 468, 360	3	3
PLB 360	-	3
Life Science 400-level electives	3	3
<i>Total</i>	14	14

Student Teaching12

*In addition to the courses listed here, one semester of student teaching (EDUC 401A, 12 hours) is required.

Bachelor of Science Degree in Biological Sciences, College of Science, Biomedical Science Specialization

Designed for Biological Sciences majors planning careers as biomedical researchers, chiropractors, dentists, medical doctors, optometrists, pharmacists, physical therapists, physician assistants, or podiatrists. Pre-professional students must register with the College of Science Pre-Health Professions Advisement Office.

<i>University Core Curriculum Requirements</i>	41
<i>College of Science Academic Requirements</i>	6 ¹
Biological Sciences-completed with the Biological Sciences major	
Mathematics-completed with the Biological Sciences major	
Physical Sciences-completed with the Biological Sciences major	
Supportive Skills: CS 105 or 200B or 201 or 202; ENGL 290 or 291 or 391; or any two-semester sequence of a foreign language.	
<i>Biological Sciences Major Requirements</i>	64-66
BIOL 200A, 200B	5(+3) ^{2,3}
BIOL 305 or MICR 302	3 ²
BIOL 306, 409	6 ²
CHEM 200, 201, 202, 210, 211, 212, 340, 341	12(+3) ⁴
CHEM 442 and 443, or 350 and 351	5
MATH 108 and 109, or 111 or 141 or 150	1-3(+3) ⁵
MATH 282 or QUAN 402 or PLB 360	3
MICR 301	4 ²
BIOL 485 or MICR 495 or PHSL 490 or PLB 480 or	
ZOOL 482	1
PHSL 310.....	5(+2) ^{2,6}
PHYS 203A, 203B, 253A, 253B.....	8
Twelve hours of life science electives chosen from the following:	
MICR 403, 421, 425, 441, 453, 460, 470, 477, 480, 481;	
PHSL 301, 320, 401A, 401B, 410A, 410B, 430, 433, 434,	
450, 462, 470, 492; PLB 317, 419, 425, 427, 438, 455,	
471, 475; ZOOL 407, 409, 418, 426, 432, 433, 434, 438,	
450, 472	12
<i>Electives</i>	8-10 ⁷
<i>Total</i>	120

¹Supportive skills courses are not required for students with three years of

foreign language in high school, but computer science and technical writing courses are recommended.

²Students must have a grade point averages of 2.0 or better in these biological science requirements.

³Satisfies the 3-hour University Core Curriculum Group II Science requirement.

⁴Satisfies the 3-hour University Core Curriculum Group I Science requirement.

⁵Satisfies the 3-hour University Core Curriculum Mathematics requirement. Students should consult with the Pre-Health Professions Advisement Office about additional mathematics recommendations for particular programs.

⁶PHSL 310 satisfies the 2-hour University Core Curriculum Human Health requirement.

⁷Students are strongly encouraged to obtain research experience under the supervision of a faculty mentor. To prepare for an undergraduate research project, students should consider enrolling in UNIV 301A. Credit for research experience can be obtained by enrolling in MICR 490, PHSL 492, PLB 493A-C, or ZOOL 492.

Biomedical Science Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101, ENGL 101	3	3
MATH 108,109	3	3
CHEM 200, 201, 202; 210, 211, 212	5	5
BIOL 200A, 200B	4	4
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
ENGL 102, 290.....	3	3
PHYS 203A, 253A; 203B, 253B.....	4	4
CS 201.....	3	-
BIOL 306, PHSL 310	3	5
CMST 101, Social Science	3	3
<i>Total</i>	16	15

THIRD YEAR	FALL	SPRING
BIOL 305, 409	3	3
MICR 301, PLB 360	4	3
CHEM 340, 341; 350, 351	5	5
Humanities, Social Science	3	3
<i>Total</i>	15	14

FOURTH YEAR	FALL	SPRING
Life Science 400-level electives	6	6
Humanities, BIOL 485.....	3	1
Fine Arts, Multicultural	3	3
Electives	4	4
<i>Total</i>	16	14

Bachelor of Science Degree in Biological Sciences, College of Science, Ecology Specialization

Ecology is an important topic for students wishing to pursue careers in any aspect of the natural sciences, including environmental science, ecosystem management, teaching, and basic research. The track in ecology is also appropriate for students planning to pursue graduate studies in the natural sciences. Students pursuing the Ecology track can specialize in Environmental Studies by selecting the corresponding minor.

University Core Curriculum Requirements	41
College of Science Academic Requirements	6
Biological Sciences-completed with the Biological Sciences major	
Mathematics-completed with the Biological Sciences major	
Physical Sciences-completed with the Biological Sciences major	
Supportive Skills: at least 6 credit hours chosen from CS 105 or 200B or 201 or 202; ENGL 290, 291 or 391; or any two semester sequence of a foreign language ¹	
Biological Sciences Major Requirements	68
BIOL 200A, 200B	5(+3) ^{2,3}
BIOL 304, 305, 307	9 ³
CHEM 200, 201, 202, 210, 211, 212, 340, 341, 350 ...	15(+3) ⁴
MATH 141	1(+3) ⁵
MATH 282 or PLB 360 or QUAN 402	3
MICR 301	4 ²
PHSL 310	3(+2) ^{2,6}
PHYS 203A and 253A, or 205A and 255A	4
PLB 300	4 ²
ZOOL 220	5 ²
Life Science electives: At least seven hours of Microbiology, Plant Biology or Zoology 400-level courses, including one of : MICR 423, 454, 470, 477; PHSL 433, 434; PLB 416, 435, 440, 443, 444, 445, 451, 452; ZOOL 410, 411, 415, 435, 440, 441, 445, 458, 468, 469, 471, 490	7
Ecology electives: at least five credits chosen from the following (including at least one lab course): ANTH 410K; FOR 331, 402, 406, 415, 452, 454A-D; GEOG 439; GEOL 425, 428; PLB 303I, 351; CSEM 240, 370, 441; ZOOL 351	5
MICR 490 or PLB 492 or 493A or ZOOL 491 or 492 or 493 or 496 or 497	3
Electives	5
Total	120

¹ The supportive skills requirement may also be met by one of the following: (a) completing three years of one language in high school with a grade of C or better; or (b) earning 8 credit hours of 100-level course in one language by proficiency examination.

² Students must have a grade point average of 2.0 or better in these requirements for biological sciences.

³ Satisfies the 3-hour University Core Curriculum Group II Science requirement.

⁴ Satisfies the 3-hour University Core Curriculum Group I Science requirement.

⁵ Satisfies the 3-hour University Core Curriculum Mathematics requirement.

⁶ PHSL 310 satisfies the 2-hour University Core Curriculum Human Health requirement.

Ecology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
UCOL 101, MATH 141	3	4
CHEM 200, 201, 202; 210, 211, 212	5	5
BIOL 200A, 200B.....	4	4
Total	15	16
SECOND YEAR	FALL	SPRING
Social Science	3	3
PHYS 203A, 253A; BIOL 304.....	4	3
CS 201, ENGL 290.....	3	3
ZOOL 220, CMST 101.....	5	3
Humanities.....	-	3
Total	15	15

THIRD YEAR	FALL	SPRING
BIOL 305, 307	3	3
MICR 301, PLB 360.....	4	3
CHEM 340, 341; 350.....	5	3
Humanities, Multicultural	3	3
Fine Arts.....	-	3
Total	15	15
FOURTH YEAR	FALL	SPRING
PHSL 310, Electives	5	5
PLB 300; PLB 493A.....	4	3
Ecology Electives	3	2
Life Science Electives	3	4
Total	15	14

Biological Sciences Minor

A minor in Biological Sciences consists of a minimum of 21 hours and must include BIOL 200A,B (eight hours); any two of BIOL 304, 305, 306, 307 or 409 (six hours); at least four hours from MICR 301, PHSL 310, PLB 300 and ZOOL 220; at least three hours from course offerings in Microbiology, Physiology, Plant Biology or Zoology at the 400-level. A student with a major in one of the four life sciences may not take a minor in Biological Sciences. Program must approve all minors.

**Certificate Program in Histotechnology
See Histotechnology in this chapter.**

Courses (BIOL)

200A-4 Introductory Cell Biology, Genetics, and Evolution. [IAI Course: BIO 910] (Advanced University Core Curriculum Course) Basic concepts and principles of biology: chemistry of life; cell structure and function; energetics and biosynthesis; genetics and molecular biology; evolution. Three lectures and one 2-hour laboratory per week. Laboratory/Field trip fee: \$30. Restricted to majors in Animal Science, Biological Sciences, Chemistry, Forestry, Microbiology, Physiology, Plant Biology, Zoology, pre-dentistry, pre-medicine, pre-optometry, pre-physician assistant, pre-physical therapy, pre-podiatry, pre-veterinary medicine.

200B-4 Introductory Organismal Biology and Ecology. [IAI Course: BIO 910] (Advanced University Core Curriculum Course) Basic concepts and principles of biology: organismal diversity (plants, animals and microorganisms); plant form and function; animal form and function; and ecology. Three lectures and one 2-hour laboratory per week. Laboratory/Field trip fee: \$30. Restricted to majors in Animal Science, Biological Sciences, Chemistry, Forestry, Microbiology, Physiology, Plant Biology, Zoology, pre-dentistry, pre-medicine, pre-optometry, pre-physician assistant, pre-physical therapy, pre-podiatry, pre-veterinary medicine.

202-2 Human Genetics and Human Health. (University Core Curriculum) Acquaints the student with the role played by genetic information in human development and disease. Discussion topics will include genetics and human diversity, the interaction of genetic information and the environment, the concept of genetic disease, the mechanisms and ethics of gene

therapy, and the possibilities of manipulating the genetic material.

304-3 Evolution. An introductory survey of evolutionary biology emphasizing basic principles, including historical development of evolutionary theory, the genetic mechanisms of evolution, the processes of adaptation and diversification, and the origin and history of major groups of organisms. Prerequisite: BIOL 200A and BIOL 200B.

305-3 Principles of Genetics. Principles of genetics including Mendelism; chromosome behavior; genetic mapping; mutation and allelism; replication transcription, and translation; gene function and regulation; polygenic systems; population genetics and evolution; and genetic applications. Prerequisite: BIOL 200A,B and CHEM 140A or CHEM 200 and 201.

306-3 Cell Biology. The basic functions of the cell are considered. The biochemical basis and mechanisms of the cellular processes, the functions of the subcellular structures, and their ramifications will be explored in the context of plant and animal cells. Prerequisite: BIOL 200A,B and CHEM 140A or CHEM 200 and 201.

307-3 Principles of Ecology. Introduction to the study of interactions between organisms and their environment at the organismal, population, community, and ecosystem levels. Includes discussion of global ecology, biodiversity, and conservation. Prerequisite: MATH 108; BIOL 200A and 200B, or PLB 200; CHEM 140A, or 200 and 201 with grades of C or better.

409-3 Developmental Biology. Basic principles and processes of embryonic development including contemporary research on molecular, cellular and genetic mechanisms of differentiation and morphogenesis; selected plants and invertebrate and vertebrate animals will be considered. Prerequisite: BIOL 305 with a grade of C or better.

415-2 History of Biology. An historical overview of the development of biological knowledge. Prerequisites: BIOL 200A and BIOL 200B with grades of C or better.

485-1 Senior Seminar in Biomedical Science. Readings, writings, presentations, and discussions of current topics in biomedical science. One hour per week Not for graduate credit. Restricted to senior standing in Biological Sciences.

Business (College, Courses)

Courses (BUS)

259-1 to 6 Intern-Work Experience. Current practical experience in business or other work directly related to coursework in a College of Business program and/or to the student's educational objectives may be used as a basis for granting credit in the college. Credit is given when specific program credit cannot be granted and may only be used for free elective or general elective credit. Credit is sought by petition and must be approved by the dean before registration. Mandatory Pass/Fail. Restriction: students with at least twelve hours with a 2.5 grade point average. Special approval needed from the department.

288-1-30 Study Abroad-Business. Provides lower-division credit toward the undergraduate degree for study at accredited and approved foreign institutions. Final determination of credit is made on the student's completion of work. One to fifteen hours per semester; one to nine hours for summer. Prior approval of College of Business.

291-1 to 6 Individual Study. Supervised work that relates to the student's academic programs and career objectives. Enrollment provides access to resources of the entire college. Each student will work under the supervision of a sponsoring staff member. May only be used for free or general elective credit. Credit is sought by petition and must be approved by the dean before registration. Restriction: College of Business major with at least twelve hours and with a 2.5 grade point average. Special approval needed from the department.

302-2 Business Career Transitions. Designed to prepare business students to make a successful transition from the academic community to the business and professional world. Topics include career strategy, proactive job search campaign, types of challenges in the work world. Features alumni and guest speakers, videos, case studies, discussion seminars. To be taken in junior year. ENGL 291 strongly recommended. Restriction: College of Business majors, junior standing or higher; or departmental approval required.

388-1-36 Study Abroad-Business. Provides upper-division credit toward the undergraduate degree for study at accredited and approved foreign institutions. Final determination of credit is made on the student's completion of work. One to eighteen hours per semester; one to nine hours for summer. Prior approval of College of Business; restricted to junior standing.

Business and Administration

(Major (online only), Minor)

The Bachelor of Science degree program with a major in Business and Administration is an online degree program intended for those students residing outside the Carbondale community or who have work and/or family commitments that make traditional campus attendance impractical. The degree is intended to provide students with a broad exposure to critical business principles and a thorough understanding of functional units within an organization and the critical organizational decisions necessary in today's global business environment.

Students must meet the following conditions for acceptance into the program:

Completed 26 semester hours of transfer work with 2.0 GPA, or higher, *and*

Completed (or in process to complete prior to program start) transfer course work for UCC/IAI core or Associate in Arts or Associate Science, *and*

Completed (or in process to complete prior to program start) course equivalents for ACCT 220, ACCT 230, and ACCT/FIN/MGMT 208, CMST 101, ECON 240 and ECON 241, ENGL 101, ENGL 102, MATH 139, MATH 140, PSYC 102 (or SOC 108); or consent of the College of Business.

A C or better grade is required for all Business and Administration majors in all courses taken to satisfy the requirements for a major in Business and Administration.

Students enrolled in the online Business and Administration degree cannot be concurrently enrolled to complete a dual degree with any other College of Business degree.

The Capstone Option for Transfer Students

The Capstone Option is available to students who have earned an Associate in Applied Science (AAS) in approved business

area degree and who have a cumulative 2.0/4.0 GPA on all accredited coursework prior to the completion of the AAS, as calculated by SIU. The Capstone Option reduces the University Core Curriculum requirements from 41 to 30 hours, therefore reducing the time to degree completion. See Chapter 3 for more information on this option. Students who apply for Capstone will work with the College of Business Advisement Office for approval of the Capstone Option and will complete a personal contract for a degree completion plan.

Technology Fee and Differential Tuition

The College of Business assesses College of Business majors a technology fee of \$6.00 per credit hour for Fall and Spring semesters up to twelve semester hours and Summer up to six semester hours. The technology fee is being phased out and will be subsumed under the differential tuition surcharge (see item below). Consequently, students will be charged either the technology fee or the differential tuition surcharge but not both. Starting Fall 2008, the College of Business has implemented a differential tuition surcharge of 15% of applicable tuition for declared College of Business majors that are new students. The differential tuition surcharge will be assessed at the in-state tuition rate. If students are charged the differential tuition surcharge, the technology fee (in above item) will not be assessed. Starting Fall 2008, the College of Business has implemented a “minor program fee” for other than College of Business majors that is equal to 15% of 15 credit hours of applicable tuition for declared College of Business minors. This fee is applicable for new students.

Bachelor of Science Degree in Business and Administration (online)

<i>University Core Curriculum Requirements</i>	41
<i>Professional Business Core Prerequisites</i>	16-22
Accounting (ACCT 220, 230)	6
Business Statistics (ACCT/FIN/MGMT 208)	3
Economics (ECON 241, 240)	(3)+3
Mathematics (MATH 139 and 140)	(3)+4
<i>Requirements for online Major in Business and Administration</i> (FIN 270, 330, 331, 350; MGMT 202, 304, 318, 341, 345, 350, 380, 385, 446, 481; MKTG 304, 305, 336, 363, 435, 463).....	60
<i>Total</i>	120

Business and Administration Suggested Curricular Guide (fall entry)

THIRD YEAR	FALL	SPRING	SUMMER
MKTG 304	3	-	-
MKTG 305	3	-	-
FIN 270	3	-	-
MGMT 202.....	3	-	-
MGMT 345.....	-	3	-
MGMT 380.....	-	3	-
MKTG 336	-	3	-
MKTG 435	-	3	-
MGMT 304.....	-	-	3
MGMT 318.....	-	-	3
<i>Total</i>	12	12	6

FOURTH YEAR	FALL	SPRING	SUMMER
FIN 330.....	3	-	-
FIN 331.....	3	-	-
MKTG 363	3	-	-
MKTG 463	3	-	-
MGMT 341.....	-	3	-
MGMT 385.....	-	3	-
MGMT 350.....	-	3	-
FIN 350.....	-	3	-
MGMT 446.....	-	-	3
MGMT 481.....	-	-	3
<i>Total</i>	12	12	6

Business and Administration Minor

A minor in Business and Administration consists of a minimum of 15 semester hours, including Accounting 220, 230, Finance 330, Management 304 and Marketing 304. All prerequisites for these classes must also be satisfied. At least nine of the fifteen semester hours must be taken at Southern Illinois University Carbondale. An advisor within the College of Business must be consulted before selecting this field as a minor.

A minor from the College of Business requires students to earn a minimum grade of C in each of the courses taken to satisfy the requirements for their minor, and students must earn a minimum 2.0 grade point average for those minor courses. A minor in Business and Administration is restricted to majors outside the College of Business.

Business Economics (Major)

The Business Economics major offered through the College of Business emphasizes the application of economic concepts and the use of critical analysis to the solution of economic and managerial problems.

This undergraduate program is an excellent general preparation for future managerial and staff assignments in a variety of business and public organizations. The program also prepares students for graduate study in economics as well as for the Master of Business Administration (MBA) degree.

Those students who desire professional careers as business and managerial economists are advised to plan to complete one to four years of postgraduate study.

A major in Business Economics requires students to earn a minimum grade of C in each of the courses taken to satisfy the requirements for the Business Economics major*(as described below), and students must earn a minimum 2.0 grade point average for those major courses.

The Capstone Option for Transfer Students

The Capstone Option is available to students who have earned an Associate in Applied Science (AAS) in approved business area degree and who have a cumulative 2.0/4.0 GPA on all accredited coursework prior to the completion of the AAS, as calculated by SIU. The Capstone Option reduces the University Core Curriculum requirements from 41 to 30 hours, therefore reducing the time to degree completion. See Chapter 3 for more information on this option. Students who apply for Capstone will work with the College of Business Advisement Office for

approval of the Capstone Option and will complete a personal contract for a degree completion plan.

Technology Fee and Differential Tuition

The College of Business assesses College of Business majors a technology fee of \$6.00 per credit hour for Fall and Spring semesters up to twelve semester hours and Summer up to six semester hours. The technology fee is being phased out and will be subsumed under the differential tuition surcharge (see item below). Consequently, students will be charged either the technology fee or the differential tuition surcharge but not both.

Starting Fall 2008, the College of Business has implemented a differential tuition surcharge of 15% of applicable tuition for declared College of Business majors that are new students. The differential tuition surcharge will be assessed at the in-state tuition rate. If students are charged the differential tuition surcharge, the technology fee (in above item) will not be assessed. Starting Fall 2008, the College of Business has implemented a “minor program fee” for other than College of Business majors that is equal to 15% of 15 credit hours of applicable tuition for declared College of Business minors. This fee is applicable for new students.

Bachelor of Science Degree in Business Economics, College of Business

University Core Curriculum Requirements41
Professional Business Core (See Chapter 4) 45
*Requirements for Major in Business Economics** 21
 *Minimum grade of C required for all classes in major area.
 Economics 340, 3416
 Finance 361 and 462 or 4636
 Three courses from the following list, two of which must be in economics: 9
 Economics 310, 315, 329, 330, 350, 416, 429, 443, 463, 465,
 Accounting 321, 331, 471, Finance 331, 464, Management 352, Marketing 390, 435
*Approved Electives*¹.....13
Total 120

Business Economics Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101, UCC Fine Arts	3	3
ENGL 101, 102.....	3	3
UCC Science	3	3
PSYC 102/SOC 108, UCC Human Health	3	2
MATH 108 ¹ , 140.....	3	4
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
ACCT 220, 230	3	3
ECON 241, 240.....	3	3
MATH 139, ACCT/FIN/MGMT 208	3	3
UCC Humanities, FIN 270 ²	3	3
CMST 101, ENGL 291	3	3
<i>Total</i>	15	15

THIRD YEAR	FALL	SPRING
MGMT 304, 345.....	3	3
ECON 340, 341.....	3	3
FIN 330, 361.....	3	3
MKTG 304, BUS 302	3	2
UCC Humanities, UCC Integrative Studies.....	3	3
Approved Elective ¹	-	2
<i>Total</i>	15	16

FOURTH YEAR	FALL	SPRING
MGMT 318, 481.....	3	3
ECON ³	3	3
Major Elective ³ , FIN 462/463	3	3
Approved Elective ¹	3	2
300-400 CoB prefix elective, Approved Elective ¹	3	3
<i>Total</i>	15	14

¹120 semester hours are required for graduation. Approved electives should be selected in consultation with academic advisor to meet this requirement.

²The combination of Finance 280 (Business Law I) and Finance 380 (Business Law II) may be substituted for Finance 270 and is highly recommended for Accounting majors.

³Major option or Major specialization.

Chemistry and Biochemistry

(Department, Major, Minor [Chemistry, Forensic Science], Courses, Faculty)

Chemistry is an excellent foundation for any scientific, professional or business career, including but not limited to agricultural chemistry, analytical chemistry, biochemistry, chemical engineering, dentistry, ecology and environmental chemistry, forensic science, geochemistry, management and marketing, materials science, medicine, optometry and ophthalmology, patent law, pharmacology, physical chemistry, plastics and polymer chemistry, renewable energy, synthetic organic chemistry, toxicology or veterinary science. Undergraduate research experiences are readily available under the supervision of a faculty advisor. Students are encouraged to meet with an undergraduate advisor to design a curriculum focused on their career goals.

All Chemistry majors begin in the Comprehensive Chemistry specialization, which provides a rigorous program with advanced study in analytical, organic and physical chemistry for the professional chemist. After the freshman year, all students pursuing a Bachelor of Science degree in the College of Science have the option to continue in Comprehensive Chemistry or move into a more specialized specialization, which builds upon the foundation course work in analytical, biochemistry, inorganic, organic and physical chemistry.

Pre-professional students and those interested in biological chemistry may pursue the Biochemistry specialization with additional advanced courses in other life sciences. The Environmental Chemistry specialization complements advanced study in analytical and organic chemistry with in depth study of environmental chemistry and related fields of engineering,

forestry, geology, plant biology and soil science. The Forensic Chemistry specialization gives students the opportunity to study the science required for investigative research in a crime lab. Although not required for graduate study or employment as a chemist, students are encouraged to pursue certification from the American Chemical Society, 1155 Sixteenth St. NW, Washington, D.C.

Future business leaders can earn a Bachelor of Arts degree in the College of Science. The Business specialization allows students to pursue a minor degree in Business and Administration and is ideal preparation for a career in the production, management, marketing and technology transfer aspects of the chemistry industry. Additional course work is recommended to prepare for a Masters in Business Administration.

All science majors require proficiency in mathematics, which is prerequisite for upper level course work in chemistry. Students are encouraged to enroll in the highest level of mathematics appropriate to their background within the first semester. All students are expected to show proficiency in chemistry prerequisites that are chemistry courses with a grade of C or better, or obtain consent of the instructor for enrollment in the subsequent chemistry course. For chemistry majors, a grade of C or better is needed in every Chemistry Introductory course and in every Chemistry Foundation course to be eligible for graduation. A minimum grade point average of 2.0 in chemistry course work is needed in order for a student to receive a degree in chemistry. A student cannot repeat a course or its equivalent in which a grade of B or better was earned without the consent of the department.

Students wishing more detailed information should visit our website at <http://www.chem.siu.edu> or contact an undergraduate advisor at the Department of Chemistry and Biochemistry, Neckers Hall, Rm. 224 - Mail Code 4409, Southern Illinois University Carbondale, Carbondale, IL 62901.

Bachelor of Science Degree in Chemistry, College of Science

*University Core Curriculum Requirements*¹ 41

College of Science Academic Requirements 6

Biological Sciences—six hours (not UCC courses)^{1,2}

Mathematics – completed with the Chemistry major

Physical Sciences – completed with the Chemistry major

Supportive Skills: a minimum of six hours from two subject areas: Computer Science 201 or 202; English 290, 291, or 391; and Mathematics 282 or 483.

Requirements for Major in Chemistry 60-63¹

Chemistry Introductory 200, 201¹, 202, 210, 211, 212

Chemistry Foundation 330, 340 with 341, 350² with 351, 360 with 361, 411 with 410

Mathematics 150^{1,3}, 250 and either 221, 251, 305 or 483⁴

Physics 205A,B; 255A,B

Specialization⁵ (a minimum of twelve hours at the 300- to 400-level in four different In-Depth courses that build on the Chemistry Foundation courses)

Comprehensive Chemistry Specialization (default)16

For students desiring a strong background in Chemistry with In-Depth courses in analytical, organic and physical chemistry.

Required: Chemistry 434, 442 with 443, 460 with 463; and

an additional three hours from among Chemistry 431, 439, 444, 451A,B², 452, 456, 468 and 479.

Biochemistry Specialization16

For students with an interest in the biological and medical aspects of chemistry and for pre-professional students.

Required: Chemistry 442 with 443, 452 with 453; and at least six hours at the 300- to 400-level in two courses from among Biology 305, 306; Chemistry 434, 444, 451A,B², 456, 460 with 463; Microbiology 301, 302, 425, 460; Physiology 310¹, 401A,B, 410A,B, 420A,B, 430; Plant Biology 320, 419, 427; Zoology 409 and 418. One of the selected courses must not be from Chemistry.

Environmental Chemistry Specialization15

For students interested in green chemistry and the chemistry of atmospheric science, geology, hydrology, environmental engineering, industrial ecology and toxicology. Students are encouraged to also pursue an Environmental Studies minor.

Required: Chemistry 431, 434, 442 with 443; Mathematics 483; and additional three hours at 300- to 400-level from: Civil Engineering 310, 418; Forestry 452 with 452L; Geology 418, 421; Mechanical Engineering 410, 416; Microbiology 423, 425; Crop, Soil & Environmental Management 442, 446, 447 with 448; Plant Biology 427; and Zoology 411 and 432.

Forensic Chemistry Specialization15

For students interested in chemistry applied to solving problems encountered in crime labs. Students are encouraged to also pursue a Forensic Science minor.

Required: Chemistry 434, 439, 442 with 443; Mathematics 483; Philosophy 104 or 340; and an additional three hours at 300- to 400-level from among: Biology 305; Geology 310, 417; Microbiology 301, 302, 454, 460; Physiology 310, 401, 420; Zoology 409 and 421. Philosophy 104 or 340 also meets the University Core Curriculum requirements.

Research Experience (optional): Chemistry 396 may involve research on problems of interest to the State Crime Lab or a formal internship at the State Crime Lab. The latter is subject to availability and approval of the State Crime Lab.

American Chemical Society Certification 3

Certification by the ACS requires a minimum of 300 contact hours of undergraduate research over at least two semesters, including two credit hours of Chemistry 396 or 496H; attending undergraduate seminar, Chemistry 490; and completion of a comprehensive research report under the direction of a faculty advisor. A student can receive ACS Certification with any of the above specializations.

Chemistry Honors 6

Participation in Chemistry Honors requires completion of the ACS Certificate with 300 contact hours of undergraduate research, including two credit hours of Chemistry 496H; attending undergraduate seminar, Chemistry 490H; and completion of an honors thesis, Chemistry 499H or University Honors 499, under the direction of a faculty advisor. A faculty advisor approved proposal for an honors research project should be submitted one year prior to the expected completion of an honors thesis. A student can earn Chemistry Honors with any of the above specializations.

Electives 10-13

Total 120

¹A total of nine hours of biological science, mathematics, and physical science course work are accounted for in the 41-hour University Core Curriculum requirement. An additional two hours of human health are accounted for if students choose Physiology 310 as part of the *Biochemistry Specialization*.

²A total of three hours of biological sciences are completed with biological chemistry or biochemistry. Chemistry 451A may substitute for Chemistry 350, if a student continues with Chemistry 451B.

³Prerequisite is Mathematics 111 or 108 and 109. The elective hours are decreased by three to six hours for students who place into a course lower than calculus.

⁴Three hours of supportive skills are accounted for in the College of Science requirement and elective hours may increase by two hours if students choose Mathematics 483.

⁵Students must complete all of the additional courses listed under the specialization as well as any prerequisites not listed here for all additional courses. These courses may substitute for electives and may require more than 120 total credit hours if not chosen wisely and with guidance from advisors.

Comprehensive Chemistry Specialization Sample Curricular Guide for Chemistry B.S. with ACS Certification and Mathematics Minor

FIRST YEAR	FALL	SPRING
CHEM 200/201/202, 210/211/212	5	5
BIOL 200A, 200B	4	4
MATH 109, 150	3	4
UCOL 101S, ENGL 101	3	3
CI 199	1	-
<i>Total</i>	16	16
SECOND YEAR	FALL	SPRING
CHEM 330, 350/351	5	5
CHEM 340/341, 442/443	5	5
MATH 250, 221	4	3
ENGL 102, PHIL 105	3	3
<i>Total</i>	17	16
THIRD YEAR	FALL	SPRING
CHEM 360/361, 460/463	4	4
MATH 305	3	-
PHYS 205A,B, 255A,B	4	4
UCC Human Health, Humanities	2	3
CMST 101, ENGL 290	3	3
<i>Total</i>	16	14
FOURTH YEAR	FALL	SPRING
CHEM 434, 411/410	4	5
CHEM 444, MATH 483	3	4
CHEM 490, 396	2	1
UCC Fine Arts, Multicultural	3	6
UCC Social Science	3	-
<i>Total</i>	15	16

Biochemistry Specialization Sample Curricular Guide for Chemistry B.S. for Pre-Professionals with ACS Certificate

FIRST YEAR	FALL	SPRING
CHEM 200/201/202, 210/211/212	5	5

BIOL 200A, B	4	4
MATH 109, 150	3	4
UCOL 101S, ENGL 101	3	3
CI 199	1	-

Total 16 16

SECOND YEAR

	FALL	SPRING
CHEM 330, 350/351	5	5
CHEM 340/341, 442/443	5	5
MATH 250, PHSL 301	4	4
ENGL 102, PHIL 105	3	3

Total 17 17

THIRD YEAR

	FALL	SPRING
CHEM 360, 361	4	-
CHEM 452, 453	3	2
BIOL 305, PHSL 310	-	8
PHYS 205A,B, 255A,B	4	4
CMST 101, ENGL 290	3	3
AH 105, SCI 201	3	-

Total 17 17

FOURTH YEAR

	FALL	SPRING
MATH 483, CHEM 411/410	4	5
CHEM 490, 396 Research	2	1
MICR 301, SOC 108	4	3
UCC Fine Arts, Multicultural	3	3
PSYC 102, UCC Humanities	3	3

Total 16 15

Bachelor of Arts Degree in Chemistry, College of Science

*University Core Curriculum Requirements*¹ 41

College of Science Academic Requirements 6

Biological Sciences—six hours (not UCC Courses)^{1,2}

Mathematics – completed with the Chemistry major

Physical Sciences – completed with the Chemistry major

Supportive Skills: a minimum of six hours from two

subject areas: Computer Science 201 or 202; English

290, 291, or 391; and Mathematics 282 or 483.

*Requirements for Major in Chemistry*¹ 62

Chemistry Introductory 200¹, 201¹, 202, 210, 211, 212

Chemistry Foundation 330, 340 with 341, 350² with 351, 360,

with 361, 411 with 410

Mathematics 150^{1,3} 250

Physics⁴ 205A,B and 255A,B

Specialization⁵ (extra-departmental course requirements)

*Business Specialization*¹ 18

For students pursuing a career in chemistry with an interest

in the business aspects such as management, marketing,

and production. Students may pursue a minor in Business

and Administration or prepare for the Masters in Business

Administration degree program.

Required: An additional three hours in chemistry at the

400-level, chosen from among Chemistry 431, 434, 442, 452,

and 460; and all course work in the College of Business: Ac-

counting 220, 230; Economics 240¹; Finance 330; Manage-

ment 304 or 318; and Marketing 304. Either Psychology 102 or Sociology 108 is recommended for the University Core Curriculum requirements for social science.

Recommended course work to prepare for M.B.A.: Business 302; Economics 241; Finance 270 and Management 318.

<i>Electives</i>	11
<i>Total</i> ⁶	120

¹A total of nine hours of biological science, mathematics, and physical science course work are accounted for in the 41-hour University Core Curriculum requirement. An additional three hours of social science are accounted for if students take Economics 240 in the *Business Specialization*.

²A total of three hours of biological sciences are completed with Biological Chemistry or Biochemistry. Chemistry 451A may substitute for Chemistry 350 if a student continues with Chemistry 451B.

³Prerequisite is Mathematics 111 or 108 and 109. The elective hours are decreased by three to six hours for students who place into a course lower than calculus.

⁴Prerequisite is Mathematics 150. Students may take Physics 203A,B and 253A,B to meet requirements for the Bachelor of Arts Degree.

⁵Students must complete all of the additional courses listed under the specialization as well as any prerequisites not listed here for all additional courses. These courses may substitute for electives and may require more than 120 total credit hours if not chosen wisely and with guidance from advisors.

Business Specialization Sample Curricular Guide for Chemistry B.A. with Business and Administration Minor

FIRST YEAR	FALL	SPRING
CHEM 200/201/202, 210/211/212	5	5
BIOL 200A, 200B	4	4
MATH 109, 150	3	4
UCOL 101S, ENGL 101	3	3
CI 199	1	-
<i>Total</i>	16	16
SECOND YEAR	FALL	SPRING
CHEM 330, 350/351	5	5
CHEM 340/341	5	-
MATH 250, ACCT 220	4	3
ENGL 102, PHIL 105	3	3
PSYC 102	-	3
<i>Total</i>	17	14
THIRD YEAR	FALL	SPRING
ACCT 230, FIN 330	3	3
CHEM 360, 361	4	-
ECON 240, 241	3	3
PHYS 205A,B, 255A,B	4	4
UCC Human Health, CMST 101	2	3
ENGL 290	-	3
<i>Total</i>	16	16
FOURTH YEAR	FALL	SPRING
BUS 302, MATH 483	5	-
CHEM 434, 411/410	4	5

MKGT 304, MGMT 304	3	3
UCC Fine Arts, Multicultural	3	3
UCC Humanities	-	3
<i>Total</i>	15	14

Chemistry Minor

The minor in chemistry requires a minimum of 20 semester hours of chemistry in formal course work including 200, 201, 210, 211 and three elective courses at 300-level or above. At least one of the elective courses must include a lab component. All elective courses must be taken at SIU. A grade of C or better is needed in all elective courses to be eligible for a minor in chemistry. Microbiology majors may take Microbiology 425 in place of Chemistry 350 to meet the requirements for a minor in chemistry.

Forensic Science Minor

Required courses for the Forensic Science Minor amount to 15 hours, including 9 hours of required courses and 6 hours of electives (with no more than 4 of the minimum 6 hours of electives from a single discipline/department).

Required Courses: 9 hours: ANTH 231, CCJ 201, CHEM 173.
Electives: (note, some have prerequisites) 6 hours: AH 313; ANTH 240A, 440B, 441D, 455A, 455H, 465 (Internship in Forensics - must be arranged individually); BIOL 305; CCJ 290, 310, 330, 408; CHEM 439; PHIL 104, 340; PHSL 301; PLB 300; POLS 334; PSYC 305, 431, 440; SOC 372.

Forensic Chemistry Specialization Sample Curricular Guide for Chemistry B.S. with ACS Certificate and Forensic Science Minor

FIRST YEAR	FALL	SPRING
CHEM 200/201/202, 210/211/212	5	5
BIOL 200A,B	4	4
MATH 109, 150	3	4
UCOL 101S, ENGL 101	3	3
CI 199	1	-
<i>Total</i>	16	16
SECOND YEAR	FALL	SPRING
CHEM 173	3	-
CHEM 330, 350/351	5	5
CHEM 340/341, 442/443	5	5
MATH 250	4	-
ENGL 102, PHIL 105	-	6
<i>Total</i>	17	16
THIRD YEAR	FALL	SPRING
CHEM 360, 361, BIOL 305	4	3
CHEM 434, 439	4	3
PHYS 205A,B, 255A,B	4	4
UCC Human Health, PHIL 104	2	3
CMST 101, ENGL 290	3	3
<i>Total</i>	17	16
FOURTH YEAR	FALL	SPRING
CCJ 201, ANTH 231	3	3

MATH 483, CHEM 411/410.....	4	5
CHEM 490, 396 Research.....	2	1
UCC Fine Arts, Multicultural.....	3	3
UCC Social Science.....	3	3
<hr/>		
Total	15	15

American Chemical Society Certificate

The American Chemical Society (ACS) Certificate program prepares students for a career in the chemical industry or for further studies in graduate school. The certificate indicates that a student has completed the rigorous academic requirements for a degree in chemistry and has actively participated in undergraduate research under the direction of a faculty research advisor. Students should contact a faculty research advisor at least one year prior to graduation to apply for an undergraduate research position in their laboratory. Students will complete 300 hours of undergraduate research including two credit hours of Chemistry 396 or 496H; attend undergraduate seminar, Chemistry 490; and complete a comprehensive research report for submission to the department. An application to receive an ACS Certificate must be submitted at least one month prior to graduation with verification by a faculty research advisor of completion of all requirements.

Chemistry Honors

All freshman chemistry majors are strongly encouraged to enroll in Chemistry 200H and to participate in the University Honors Program. The Chemistry Honors track includes completion of an ACS Certificate and an honors thesis under the supervision of a faculty research advisor. Applications for Chemistry Honors should be submitted at least one year prior to graduation and must include an honors research project proposal with a letter of support from a faculty research advisor. Acceptance and participation in an honors research project requires a 3.25 grade point average in all chemistry coursework. Students will complete 300 hours of undergraduate research including two credit hours of Chemistry 496H; attend undergraduate seminar, Chemistry 490H; complete an honors thesis, Chemistry 499H; and present their thesis work as a seminar or poster presentation. The honors thesis and all chemistry honors courses may be included in the pursuit of an Honors Degree offered by the University Honors Program, which requires submission of an honors thesis project proposal to the Honors Program Director before the end of the junior year after approval from a faculty research advisor. The Honors Thesis course, University Honors 499, may substitute for Chemistry 499 and requires submission of an honors thesis to the Honors Program Office and OpenSIUC.

Multiple Specializations in Chemistry

Students meeting the requirements for a Bachelor of Science degree in Chemistry may earn multiple specializations. All requirements for each specialization must be satisfied.

Transfer Credit

Credit for a course in chemistry successfully completed at another accredited institution will be accepted to meet major or minor requirements in chemistry at SIU, subject to the following conditions:

1. The course number must bear a departmental prefix clear-

ly indicating the course is a chemistry (or biochemistry) course.

2. The course must have covered substantially the same material as a course currently offered at SIU to meet major requirements.
3. Any course used to meet major or minor requirements in chemistry must be explicitly approved by the Department of Chemistry and Biochemistry.

Courses (CHEM)

106-3 Chemistry and Society. (University Core Curriculum) [IAI Course: P1 903L] Exploration of the many implications that chemistry has upon modern society. Topics include air and water quality, global warming, acid rain, fossil, solar and nuclear fuels, nutrition and drugs. Three lectures per week except that every other week a three-hour lab is substituted for one of the lectures that week. Lab fee: \$48.

140A-4 Chemistry. (Advanced University Core Curriculum) [IAI Course: P1 902L] A two-semester course of general, organic and biological chemistry designed to meet the needs of nursing, dental hygiene, physical therapy, other allied health programs, agriculture, forestry and other majors with comparable requirements. This course does not satisfy prerequisite requirements for other courses and is not applicable to a major in chemistry. CHEM 140A can serve as a preparation for CHEM 200 for students without a year of high school chemistry or for those who feel their background is inadequate. Three lectures and one three-hour laboratory per week. Pre- or Co-requisite: MATH 108, 109, 110, 111, 125, 139, 140, 141 or 150. CHEM 140A satisfies University Core Curriculum Science Group I requirement in lieu of 106. Lab fee: \$48.

140B-4 Chemistry. A two-semester course of general, organic and biological chemistry designed to meet the needs of nursing, dental hygiene, physical therapy, other allied health programs, agriculture, forestry and other majors with comparable requirements. This course does not satisfy prerequisites for other courses and is not applicable to a major in chemistry. Three lectures and one three-hour laboratory per week. Prerequisite: CHEM 140A. Pre- or Co-requisite: MATH 108, 109, 110, 111, 125, 139, 140, 141 or 150. Lab fee: \$48.

173-3 Introduction to Forensic Science. This course is designed to provide an introduction to forensic science and criminalistics and the techniques used in the modern forensic laboratory for the analysis of common types of physical evidence encountered at crime scenes. Topics include the recognition, identification, and evaluation of physical evidence such as DNA, hairs, fibers, drugs, blood, glass, soil, firearms, fingerprints, and documents. Three lectures per week. No prerequisite.

180-2 The Chemistry of Beer and Brewing. The course covers the science and chemistry of beer and brewing. The history of beer and brewing will be introduced to follow the evolution of beer as a food and beverage, including how beer has impacted society and how brewing has been affected by society. The chemistry of the four basic ingredients of beer (water, malt, hops, and yeast) will be explored, as well as the chemistry of the brewing process. The various styles of beer will be introduced and discussed with respect to how the styles can be achieved

based on the chemistry of the ingredients and process. Home brewing and commercial brewing will be compared. The course does not presume a background in chemistry and various chemical concepts will be introduced on an as needed basis.

181-1 The Chemistry of Beer and Brewing Laboratory. The laboratory complement to CHEM 180, The Chemistry of Beer and Brewing. The laboratory will cover various aspects of beer and brewing in a hands-on experiential environment. A major component will be guided tasting sessions of the various style categories of beer. Students will participate in brewing beer from base ingredients using various brewing techniques. Experiments conveying basic biology, chemistry and physical science concepts will be conducted. In addition, spectroscopic and chromatographic methods will be used to analyze flavor and ingredient components in beer. Special tours may also be arranged in regional breweries and hop yards. Students must be of legal drinking age prior to the first laboratory meeting. Special approval needed from the instructor. Lab fee: \$90.

200-3 Introduction to Chemical Principles. (Advanced University Core Curriculum course) [IAI Course: CHM 911] [IAI Course: P1 902] First-semester chemistry for students in science, pre-professional, engineering or technology programs. Atomic structure, molecular structure, bonding, solutions, stoichiometry, gases, liquids and solids. Three lectures per week. Students are required to attend a weekly one hour supervised computer workshop. Prerequisite: one year of high school chemistry or CHEM 140A or ACT Science score of at least 22; Prerequisite or Co-requisite: MATH 108, 109, 111, 140 or 150; Concurrent enrollment in CHEM 201 and CHEM 202. With 201 satisfies University Core Curriculum Science Group I requirement in lieu of 106.

200H-3 Chemistry of Atoms and Molecules. First semester of the accelerated chemistry course for chemistry majors and advanced students in science. Atoms, quantum theory, atomic structure, chemical bonds, molecular structure, and chemical reactions. Three lectures per week. Students are required to attend a weekly one hour supervised computer workshop. Prerequisite: declared Chemistry major or ACT Science score of at least 25; Prerequisite or Co-requisite: MATH 108, 109, 111 or 150. Concurrent enrollment in CHEM 201 and CHEM 202H. With 201 satisfies University Core Curriculum Science Group I requirement in lieu of 106.

201-1 General Chemistry Laboratory I. (Advanced University Core Curriculum course) [IAI Course: P1 902L] Synthesis and exploration of the properties of compounds and elements. One three-hour laboratory per week. Prerequisite: completion of or concurrent enrollment in Chemistry 200. If Chemistry 200 is dropped, the laboratory course must also be dropped. With Chemistry 200 satisfies University Core Curriculum Science Group I requirement in lieu of 106. Lab fee: \$48.

202-1 Introductory Chemistry Workshop. Supervised computer workshop meets one hour weekly for students in Introduction to Chemical Principles. Concurrent enrollment in CHEM 200.

202H-1 Atoms and Molecules Workshop. Supervised computer workshop meets one hour weekly for students in Chemistry of Atoms and Molecules. Concurrent enrollment in CHEM 200H.

210-3 General and Inorganic Chemistry. Second semester

chemistry for science, engineering or pre-professional majors. Rates of reaction, chemical equilibrium, acid-base equilibria, pH electrochemistry, transition metals, properties of inorganic compounds, nuclear chemistry and organic chemistry. Three lectures per week. Students are required to attend a weekly one hour supervised computer workshop. Prerequisite: MATH 108, 109, 111, 140 or 150; C or better in CHEM 200, 201. Concurrent enrollment in CHEM 212.

210H-3 Chemistry of Matter. Second semester of the accelerated chemistry course for chemistry majors and advanced students in science. Chemical properties of matter, kinetics, equilibrium, solution chemistry, thermodynamics, electrochemistry, nuclear chemistry and transition metals. Three lectures per week. Students are required to attend a weekly one hour supervised computer workshop. Prerequisite: MATH 108, 109, 111 or 150; C or better in CHEM 200H or declared Chemistry major and A grade in CHEM 200; Concurrent enrollment in CHEM 211 and CHEM 212H.

211-1 General Chemistry Laboratory II. Continued synthesis and exploration of properties of compounds and elements. Prerequisite: C or better in CHEM 200, 201; completion of or concurrent enrollment in CHEM 210. If CHEM 210 is dropped, CHEM 211 must also be dropped. Lab fee: \$48.

212-1 General Chemistry Workshop. Supervised computer workshop meets one hour weekly for students in General and Inorganic Chemistry. Concurrent enrollment in CHEM 210.

212H-1 Matter Workshop. Supervised computer workshop meets one hour weekly for students in Chemistry of Matter. Concurrent enrollment in CHEM 210H.

296-1 to 2 Introduction to Research. Introduction to research under the direction and supervision of a faculty advisor. Safety training is required. Special approval needed from the instructor.

330-5 Quantitative Analysis. A one-semester course in analytical chemistry that emphasizes quantitation by wet-chemical methods and modern instrumentation. Topics include statistics, sampling, gravimetry, multiple chemical equilibria, titrimetry, potentiometry, voltammetry, spectrophotometry and chromatography. Three lectures and two laboratories per week. Ability to solve algebraic equations and use of logarithms essential. Prerequisite: MATH 109, 111, 150 or 250; C or better in CHEM 210, 211. Lab fee: \$48.

339-3 Introduction to Organic Chemistry. An introduction to the chemistry of carbon-based compounds. Intended to introduce students to functional groups; their structure properties and reactivity. For students requiring only one semester of organic chemistry. Three lectures per week. Prerequisite: C or better in CHEM 210, 211. Recommended: concurrent enrollment in CHEM 341.

340-3 Organic Chemistry I The first part of a two semester introduction to organic chemistry. This course will introduce basic nomenclature, bonding, stereochemistry, reactivity and the spectroscopic methods common to organic chemistry. Three lectures per week. Prerequisite: C or better in CHEM 210, 211.

341-2 Organic Chemistry Laboratory I. An introductory lab course based upon a problem-solving approach to organic chemistry. Students will identify and derivatize unknowns using modern organic techniques. One one-hour lecture and one four-hour laboratory per week. Prerequisite: C or better in CHEM

210, 211; 339 or 340 taken concurrently. Lab fee: \$48.

350-3 Introduction to Biological Chemistry. Fundamental concepts in Biological Chemistry include biomolecular structure, enzyme catalysis, metabolism and gene expression. Three lectures per week. Prerequisite: C or better in CHEM 210 and 339 or 340; C or better in one semester biological sciences course (not University Core Curriculum course). Offered spring semester only.

351-2 Biochemistry Laboratory. A one semester biochemistry laboratory covering techniques and laboratory procedures; isolation, purification and characterization of amino acids, peptides, proteins, nucleic acids, lipids and cofactors; spectroscopic and chromatographic analysis of biomolecules; study of protein-ligand interactions; enzyme kinetics. One one-hour lecture and one four-hour laboratory per week. Prerequisites: CHEM 210, 211, 339 or 340, 341. Prerequisite or co-requisite: CHEM 350 or 451B. Offered spring semester. Lab fee: \$48.

360-3 Classical Physical Chemistry. An introduction to chemical, statistical thermodynamics and kinetics. Prerequisite: Mathematics 250; C or better in CHEM 210, 330 or concurrent enrollment. Mathematics 221 or 305 is recommended as prerequisite or concurrent enrollment. Offered fall semester only.

361-1 Physical Chemistry Laboratory I. Experiments relating to topics covered in 360. Prerequisite: CHEM 360 or concurrent enrollment. One three-hour laboratory per week. Offered fall semester only. Lab fee: \$48.

386A-1 Problem Solving Workshop. A two semester workshop sequence for chemistry majors. One two-hour workshop per week per semester. Introduction to problem solving strategies with examples and practice problems. Prerequisite: Chemistry 200. Restricted to chemistry major.

386B-1 Problem Solving Workshop. A two semester workshop sequence for chemistry majors. One two-hour workshop per week per semester. Advanced problem solving with general applications. Prerequisite: CHEM 386A.

396-1 to 2 Undergraduate Research. Research under the direction and supervision of a faculty advisor culminating in a written report. Safety training is required. Prerequisite: one semester of chemistry with laboratory experience. Special approval needed from the instructor.

410-2 Inorganic Synthesis and Characterization Laboratory. Introduction to synthesis techniques and characterization methods of inorganic compounds. One four-hour lab per week. Not for graduate credit. Prerequisite: completion of or concurrent enrollment in CHEM 411. Offered spring semester only. Lab fee: \$48.

411-3 Intermediate Inorganic Chemistry. Fundamentals of inorganic chemistry, covering bonding and structure, coordination compounds and the chemistry of some familiar and less familiar elements. Three lectures per week. Prerequisite: CHEM 360. Offered spring semester only.

431-3 Environmental Chemistry. Chemical principles applied to the environment and environmental problems. Chemical kinetics, thermodynamic and equilibrium concepts as they relate to the atmosphere, water and soil will be discussed to include current problems of pollutants, pollutant evaluation and pollutant remediation. Discussion of methods for the chemical analysis of environmental samples will also be included. Pre-

requisite: C or better in CHEM 330 and 340.

434-2 to 4 Instrumental Analytical Chemistry. Theory and practice of instrumental measurements, including emission and absorption spectroscopic, capillary electrophoretic and chromatographic methods. Two lectures and two three-hour laboratories per week for four credits. Enrollment for two credit hours is restricted to graduate students in the Department of Chemistry and Biochemistry who are advised to take instrumental analysis. Prerequisite: C or better in CHEM 330. Offered fall semester only. Laboratory fee: \$48.

439-3 Forensic Chemistry. A one-semester course in the analysis of forensics samples. Topics include sample collection and preservation, chain of custody, data validation and reports, and analytical methods which may include (as time permits) chromatography, mass spectroscopy, fluorescence and absorbance spectroscopy, fingerprint identification, and scanning electron and light microscopy. One lecture and one six-hour laboratory meeting per week. Prerequisite: C or better in CHEM 330 and 434. Offered spring semester only. Lab fee: \$48.

442-3 Organic Chemistry II. This is a continuation of 340 emphasizing topics that were not covered in the first semester. Topics will include the chemistry of aromatic compounds, dienes and other carbon-carbon bond forming reactions. Advanced topics such as polymers and biomolecules may also be covered. Three lectures per week. Prerequisite: C or better in CHEM 340, 341; concurrent enrollment in 443 is recommended. Offered spring semester only.

443-2 Organic Chemistry Laboratory II. A second organic laboratory course based upon a synthetic approach. Students will learn modern synthetic organic chemistry techniques including modern spectroscopic techniques. One one-hour lecture and one four-hour laboratory per week. Prerequisite: C or better in CHEM 340, 341, 442, or concurrent enrollment in 442. Offered spring semester only. Lab fee: \$48.

444-3 Intermediate Organic Chemistry. A transitional course between introductory and graduate level chemistry. The chemistry of carbon compounds based upon a mechanistic approach will be discussed. Three lectures per week. Prerequisite: C or better in CHEM 340 and 442. Offered fall semester only.

451A-3 Biochemistry. (Same as BCHM 451A and MBMB 451A) First half of the 451 A,B two semester course. Must be taken in A,B sequence. Three lectures per week. Introduction to biomolecules, biochemical techniques, expression of genetic information, basic thermodynamics, ligand binding, aqueous solutions, protein structure, spectroscopy. Prerequisites: CHEM 340 and CHEM 342 or 442, or equivalents.

451B-3 Biochemistry. (Same as MBMB 451B and BCHM 451B) Second half of 451A,B two semester course. Must be taken in A,B sequence. Basic kinetics, enzyme kinetics, enzyme inhibitors, regulation of enzymes, oxidation-reduction, high energy bonds, transport across membranes, intermediary metabolism, hormonal control of metabolism. Prerequisites: MBMB 451A or BCHM 451A or CHEM 451A or equivalent.

452-3 Advanced Biological Chemistry. Advanced study of biological chemistry including the structure-function relationship in proteins, the mechanism of enzyme reactions and the biochemical basis of gene expression, signal transduction, nerve impulses, molecular motors and other physiological processes. For graduate students, this course may be taken to meet defi-

iciencies in biochemical knowledge, but will not meet the formal coursework requirements for the master or doctoral level degrees. Prerequisite: C or better in CHEM 340, 341, 350.

453-2 Advanced Biochemistry Laboratory. A one semester advanced biochemistry laboratory covering techniques and laboratory procedures for the isolation, purification and characterization of biomolecules. Two three-hour laboratories per week. Prerequisites: C or better in CHEM 350 and CHEM 351. Lab fee: \$48.

456-3 Biophysical Chemistry. (Same as MBMB 456 and BCHM 456) A one-semester course in Biophysical Chemistry intended for biochemists and molecular biologists. Emphasis will be on solution thermodynamics, kinetics and spectroscopy applied to biological systems. Prerequisites: CHEM 340 and CHEM 342 or 442, MATH 141 or 150, MBMB 451A or BCHM 451A or CHEM 451A, or equivalents.

460-3 Quantum Mechanics and Spectroscopy. An introduction to quantum mechanics and spectroscopy. Prerequisite: Mathematics 250; C or better in CHEM 360. Mathematics 221 or 305 is recommended as prerequisite or concurrent enrollment. Offered spring semester only.

463-1 Physical Chemistry Laboratory II. Experiments relating to topics covered in 460. Prerequisite: C or better in CHEM 460 or concurrent enrollment. One three-hour laboratory per week. Offered spring semester only. Lab fee: \$48.

468-3 Application of Symmetry to Chemistry. The concepts of symmetry elements, groups and character tables will be taught. Symmetry will be applied to molecules in order to simplify and characterize their wave functions and vibrational frequencies. Prerequisite: C or better in CHEM 460. Offered spring semester in odd years only.

479-3 Principles of Materials Chemistry. Introduction to fundamental concepts of materials chemistry. Synthesis, characterization, processing and applications of different materials including solids, polymers, ceramics and molecularly designed materials. Prerequisite: CHEM 360, 411 or concurrent enrollment. Offered fall semester in odd years only.

489-1 to 3 Special Topics in Chemistry. Special approval needed from the instructor and chair.

490-1 Undergraduate Seminar. Current topics in chemistry covered through literature review, presentations, reports of ongoing research and discussions. Prerequisite/Co-requisite: CHEM 296, CHEM 396 or CHEM 496. Special approval needed from the instructor.

490H-1 Honors Seminar. Current topics in chemistry covered through literature review, presentations, reports of ongoing research and discussions. Pre/Co-requisite: CHEM 496H. Special approval needed from the instructor.

496H-1 to 6 Honors Research. Independent research under the direction of a faculty advisor culminating in a written report. Safety training is required. Prerequisite: C or better in CHEM 330. Special approval needed from the instructor and a minimum 3.0 grade point average in all chemistry course work.

499H-3 Honors Thesis. Preparation of a well-written honors thesis under the supervision of a faculty advisor based on an honors research project. The written thesis will be submitted to the faculty advisor and the department. A public presentation of the honors thesis research is required as a seminar or poster presentation. A proposal for honors research must be submitted

to the department one year prior to completion of the honors thesis. Pre/Co-requisite: CHEM 496H.

Chemistry and Biochemistry Faculty

Bausch, Mark J., Associate Professor, Ph.D., Northwestern University, 1984.

Du, Zhihua, Assistant Professor, Ph.D., University of Texas, 1997.

Gagnon, Keith T., Assistant Professor, Ph.D., North Carolina State University, 2007.

Gao, Yong, Associate Professor, Ph.D., University of Alberta, 1998.

Ge, Qingfeng, Professor, Ph.D., Tiangin University, 1991.

Goodson, Boyd, Associate Professor, Ph.D., University of California, Berkeley, 1999.

Hinckley, Conrad C., Professor, *Emeritus*, Ph.D., University of Texas, 1964.

Kinsel, Gary, Professor and *Chair*, Ph.D., University of Colorado-Boulder, 1989.

Kohli, Punit, Associate Professor, Michigan State University 2000.

Koropchak, John A., Professor, *Emeritus*, Ph.D., University of Georgia, 1980.

Koster, David F., Professor, *Emeritus*, Ph.D., Texas A & M University, 1965.

Moran, Sean, Assistant Professor, Ph.D., Columbia University, 2008.

McCarroll, Matthew, Associate Professor, Ph.D., University of Idaho, 1998.

Plunkett, Kyle, Assistant Professor, Ph. D., Univeristy of Illinois, 2005.

Scott, Colleen, Assistant Professor, Ph.D., University of Pittsburgh. 2005.

Smith, Gerard V., Professor, *Emeritus*, Ph.D., University of Arkansas, 1959.

Tolley, Luke, Associate Professor, Ph.D., University of North Carolina at Chapel Hill, 2001.

Trimble, Russell F., Professor, *Emeritus*, Ph.D., Massachusetts Institute of Technology, 1951.

Tyrrell, James, Professor, *Emeritus*, Ph.D., University of Glasgow, 1963.

Wang, Lichang, Professor, Ph.D., University of Copenhagen, 1993.

Chinese

(See Languages, Cultures, and International Studies)

Cinema and Photography

(Department, Major, Minors, Courses, Faculty)

The major in cinema and photography provides undergraduate students with experience and background in the history, theory, and practice of analog and digital photographic and cinematic communication and expression. The program is structured to make available a foundation for fine arts, professional, and educational careers in cinema and photography and their digital media extensions; to explore the social, critical, and ideological implications of still and motion pictures; and to provide opportunities for study of and experimentation with both still and motion pictures as media for communication and personal expression. Creation and exploration are stressed in programs of study that involve analog and digital techniques and approaches.

The major has two specializations, a Cinema Specialization and a Photography Specialization. Within these specializations, through carefully advised selection of courses, students achieve integrated areas of emphasis under one of the following general headings: cinema production, cinema studies, fine arts photography, or professional (applied) photography. See suggested curricular guides and course descriptions.

Students are urged to declare the major and select the specialization as soon as possible. In all cases, grades below *C* in any Cinema and Photography courses will not be accepted for fulfilling requirements in the major. Without exception, Cinema and Photography courses in which students have received grades of *D*, *F*, *AU*, or *INC* cannot be used to satisfy prerequisite requirements for other Cinema and Photography (CP) courses. A grade of *B* (3.00) or better is required in some courses to fulfill prerequisite credit for subsequent courses. See course descriptions for prerequisite requirements.

Courses in Cinema and Photography may have limited enrollments, especially advanced courses. Not all courses are offered each semester. Admission to certain Cinema and Photography and Mass Communication and Media Arts courses is restricted, and consent of department or permission of instructor must be obtained prior to registration. Consent of department to register for some courses may be based upon grade point average, performance in the program, and submission of creative portfolio, scholarly papers, and/or written proposals for work to be accomplished. Students are encouraged to plan well in advance to ensure meeting course prerequisites and to fulfill all requirements of the major.

Student enrollment in Cinema and Photography may be cancelled for those who do not attend all class meetings during the first week of classes.

Students may design their own programs of study within the requirements for either of the two specializations. For the Cinema Specialization, students will enroll in: Cinema and Photography (CP) 101, 102, 260, and 276; two upper-division tracks totaling 12 credits, as well as 12 credit hours of upper-division CP cinema courses. These courses must include six credits of cinema studies (history/theory/criticism), 3 credits for the 300 level (CP 370 or other approved courses) and 3 credits for the 400 level (CP 470 or other approved courses). No more than six credit hours from a combination of CP 491, 492, 494, 495, and

497A or B may count toward the 24 upper division credit hours in the Cinema Specialization.

For the Photography Specialization, students will enroll in: CP 210, 230, 260, 330, and 332; as well as CP 404 or 431; CP 432 or 498; as well as 12 credits of additional 400-level photography courses. No more than six credit hours from a combination of CP 491, 492, 494, 495, and 497 may count toward the 18, 400-level credit hours in the Photography Specialization. Please look under the School of Journalism for the course of study for the photojournalism specialization.

All students in the two specializations are required to complete a University-approved minor of at least 15 credits. With the advice of the department advisor and/or the department chair, students are encouraged to match their minor field with their academic interests, within or outside of their major.

There is no requirement for a thesis in the Cinema Specialization; instead students choose from a set of 400-level intensive advanced courses. In the Photography Specialization, students end their undergraduate experience with an emphasis either in commercial or fine art photography. For commercial photography, students take CP 431 and CP 432. For fine art photography, the course sequence is CP 404 and then CP 498. All photography students then show their final work at a public exhibition.

Students must purchase materials for some Cinema and Photography production courses. In film and video production courses, students provide recording materials, film stock, processing, printing and/or telecine transfer, other lab services, and editing supplies including a FireWire drive, and they must have access to a light meter of their own for all film production courses. In still photography production courses, students provide their own film, photographic paper, certain specialized chemicals, a DSLR camera and an external hard drive. In the photography specialization, a laptop computer is required, on which the appropriate photography editing software will run. Some photography students have found that owning additional items of equipment is advantageous. Digital imaging courses require students to provide storage media and pay fees for materials for digital printing in departmental facilities. An equipment usage fee is charged for each film and video production course. A laboratory fee is charged for each still photography production course. A screening fee is charged in each course that depends on presentation of course content on slides, CD-ROMs, film, videos and/or DVDs.

Of the 35 credit hours required in the major in Cinema and Photography, 23 credit hours must be completed at SIU. Of the 120 total hours required for a degree, at least 42 credit hours must be completed at the 300 and 400 level. A maximum of 54 credit hours of Cinema and Photography coursework may be used to complete the Bachelor of Arts degree requirements. For the Cinema and Photography major, a minimum of 35 credit hours are required; up to 19 additional credit hours in CP coursework may be used toward electives. Electives are defined as coursework outside the University Core Curriculum requirements and the requirements of the chosen specialization in the Cinema and Photography major.

All students in the Cinema and Photography major must complete three credit hours from either the School of Journalism (JRNL) or the Department of Radio, Television and Digital

Media (RTD) with a grade of C or better. Courses being used to fulfill a University Core Curriculum requirement may not also fulfill this requirement.

Three-Year Curriculum Plan

The Department of Cinema and Photography offers a three-year graduation plan option for students entering the program as freshman. Students who attempt to pursue this plan will successfully complete 40 credit hours per academic year. For more information, please contact the Cinema and Photography academic advisor.

Bachelor of Arts Degree in Cinema and Photography, College of Mass Communication and Media Arts

CINEMA SPECIALIZATION

University Core Curriculum Requirements 41
Requirements for the Cinema Specialization in the Cinema and Photography Major (3)+35
 Cinema Core Courses: CP (101), 102, 260, 276(3)+11
 Cinema track courses numbered CP 300 to 49912
 CP upper-division electives (no more than two may be at the 300 level)12
 Cinema specialization students must take three credits 300-level and three credits 400-level in cinema studies (history/theory/criticism) courses.
 No more than six credit hours from a combination of CP 491, 492, 494, 495, and 497 may count toward the 21 credit hours in the Cinema Specialization.
 Journalism (JRNL) or Radio, Television & Digital Media (RTD) course.....3
University Approved Minor 15
Electives..... 26
 A maximum of 54 credit hours of CP coursework may be used to complete Bachelor of Arts degree requirements. A minimum of 35 credit hours is required for the Cinema Specialization and up to 18 additional credit hours in CP coursework may be used toward electives.
Total 120

Lower-Division Portfolio Review

After completing the four courses of the Foundational curriculum, each Cinema specialization student will apply for upper-division status in the Cinema specialization of the Department of Cinema and Photography by presenting their work from these classes in a five minute presentation to a panel of departmental faculty members on the last Friday of classes at the end of each semester. Promotion to upper-division status is at the sole discretion of the faculty members. Students will be assigned a priority number that will be used for the purposes of registration into desired classes. Students who do not successfully pass the portfolio review may re-apply at the end of a subsequent semester, either by retaking foundational courses or by working on improving the portfolio under the direction of the Chair or a designated faculty member.

Cinema Specialization Upper-Division Track Curriculum

Students are required to choose two tracks from the following menu (12 credits).

1. **New Media.** CP 361: History of New Media, CP 440: New Media Production.
2. **Documentary.** CP 357: History and Theory of International Documentary, CP 457: Documentary Production.
3. **Experimental Cinema.** CP 353: History of Experimental Film, CP 453: Experimental Production.
4. **Screenwriting.** CP 352: Writing the Short Film, CP 452: Screenwriting.
5. **Narrative Cinema.** CP 350: Short Cinema Studies, CP 450: Narrative Film Production.
6. **Film Studies.** CP 370: Topics in Cinema Studies, CP 470A: Advanced Topics in Cinema Studies.

Junior to Senior Portfolio Progress Check

After completing the courses in their two tracks, students are required to present a DVD reel of clips of their work (film, video, new media, a portfolio consisting of screenwriting or academic studies work) to a panel of departmental faculty members on the last Friday of classes of the semester in which they complete their second track. The purpose of this portfolio check is for the students to get formal, professional critique of their work outside of regular classes, in preparation for internship, graduate school, and job applications.

Students are required to choose four elective courses, no more than two of which can be from the 300-level (12 credits).

Individual 300-level courses in the tracks may count toward CP upper-division electives if the student has not elected to pursue that track.

Four-Year Plan Cinema Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
CP 101,102	3	4
ENGL 101,102.....	3	3
UCOL 101.....	3	-
CMST 101.....	-	3
MATH 101	3	-
Core Disciplinary Studies.....	3	6
<i>Total</i>	15	16
SECOND YEAR	FALL	SPRING
CP 260, 276.....	3	4
Core Disciplinary Studies.....	6	5
Core Integrative Studies.....	3	-
Electives	3	7
<i>Total</i>	15	16
THIRD YEAR	FALL	SPRING
Cinema Track Courses	6	6
JRNL or RTD	-	3
Electives	9	5
<i>Total</i>	15	14
FOURTH YEAR	FALL	SPRING
CP 300/400 level electives	6	6
Electives	9	8
<i>Total</i>	15	14

Three-Year Plan Cinema Specialization Suggested Curricular Guide

FIRST YEAR	SUMMER	FALL	SPRING
CP 101,102, 276.....	3	4	4
ENGL 101,102, CP 260.....	3	3	3
UCOL 101, CMST 101.....	-	3	3
MATH 101.....	-	3	-
Core Disciplinary Studies.....	-	3	5
<i>Total</i>	6	16	15
SECOND YEAR	SUMMER	FALL	SPRING
Cinema Track Courses.....	-	6	6
Core Disciplinary Courses.....	9	3	-
Core Integrative Studies.....	-	-	3
Electives.....	-	6	8
<i>Total</i>	9	15	17
THIRD YEAR	SUMMER	FALL	SPRING
CP 300/400 level electives.....	-	6	6
JRNL or RTD.....	-	-	3
Electives.....	9	9	9
<i>Total</i>	9	15	18

Bachelor of Arts Degree in Cinema and Photography, College of Mass Communication and Media Arts

PHOTOGRAPHY SPECIALIZATION

<i>University Core Curriculum Requirements</i>	41
<i>Requirements for the Photography Specialization in the Cinema and Photography Major</i>	35
Photography Core Courses: CP 210, 230, 260, 330, 332 ..	17
Photography courses numbered 400 and above.....	18
CP 404 or 431.....	3
CP 432 or 498.....	3
Additional 400-level photography courses.....	12
No more than six credit hours from a combination of CP 491, 492, 494, 495, and 497A,B may count toward the 15 credit hours of CP 400-level courses in the Photography Specialization.	
Journalism or Radio, Television and Digital Media course.....	3
<i>University Approved Minor</i>	15
<i>Electives</i>	26
A maximum of 54 credit hours of CP coursework may be used to complete Bachelor of Arts degree requirements. A minimum of 35 credit hours of CP coursework is required for the Photography Specialization and up to 19 additional credit hours in CP coursework may be used toward electives.	
<i>Total</i>	120

Four-Year Plan Photography Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
CP 230.....	-	3
ENGL 101,102.....	3	3
UCOL 101.....	3	-
CMST 101.....	-	3
MATH 101.....	3	-

Core Disciplinary Studies.....	6	6
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
CP 210, 260.....	3	3
CP 330, 332.....	4	4
Core Disciplinary Studies.....	6	5
Core Integrative Studies.....	3	-
Electives.....	-	3
<i>Total</i>	16	15
THIRD YEAR	FALL	SPRING
CP 404 or CP 400-level.....	-	3
CP 400-level.....	3	3
JRNL or RTD course.....	3	-
Electives.....	9	9
<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
CP 431 or CP 400-level.....	3	3
CP 432 or 498.....	-	3
Electives.....	12	8
<i>Total</i>	15	14

Three-Year Plan Photography Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SUMMER
CP 230, 330.....	3	4	-
ENGL 101,102.....	3	3	-
UCOL 101, CMST 101.....	3	3	-
MATH 101.....	3	-	-
Core Disciplinary Studies.....	3	8	6
<i>Total</i>	15	18	6
SECOND YEAR	FALL	SPRING	SUMMER
CP 210, 260.....	3	3	-
CP 332, CP 400-level.....	4	3	3
Core Disciplinary Studies.....	3	3	-
Core Integrative Studies.....	3	-	-
JRNL or RTD course.....	-	3	-
Electives.....	2	6	6
<i>Total</i>	15	18	9
THIRD YEAR	FALL	SPRING	SUMMER
CP 400-level electives.....	6	3	-
CP 432 or 498.....	-	3	-
Electives.....	9	12	-
<i>Total</i>	15	18	6

Cinema Minor

The minor in Cinema offers students a foundation in the history, theory and critical analysis of cinema and the hands-on production of films. Students who wish to minor in Cinema must complete a total of 19 credit hours of Cinema coursework including: CP 101-3 Film History and Analysis and CP 102-4 Introduction to Sound and Image Production both with grades

of *B* or better, and complete CP 260-3 Understanding Visual Media and 9 additional credit hours of Cinema coursework with grades of *C* or better. CP 491, 494, 495, and 497A,B may not count toward the minor. A minimum of 9 credit hours toward the minor in Cinema must be completed at SIU Carbondale.

Photography Minor

Students who wish to minor in Photography must successfully complete at least 16 semester hours. The student must complete CP 210: History of Photography, CP 230: Photography I, and CP 330: Photography II, and complete at least six credit hours of 300 or 400 level photography courses in order to obtain a minor. All courses for the minor in photography must be completed with a grade of *C* or higher.

Animation Minor

A total of 20 credit hours are required for the minor. The student must complete CP 102-4 Intro to Sound and Image Production (with a grade of *B* or better), CP 260-3 Understanding Visual Media, CP 301-4 Basic Drawing from Pencil to Pixels, CP 464-3 Understanding Animation: History, Theory & Technology and six credit hours of 300- or 400-level designated elective courses selected from : CP 454, 473 and animation topics such as Experimental Animation, Flash Animation, and Stop-Motion Narrative Animation, offered under CP 470A, 470B, CP 472 or approved related courses. All courses for the Minor in Animation must be completed with a grade of *C* or higher, with the exception of CP 102, which must be completed with a grade of *B* or better.

Visual and Screen Cultures Minor

The minor in Visual and Screen Cultures allows students to specialize in the study of cinema and other visual media, with emphasis on the history, theory, and criticism of these art forms. Students who wish to minor in Visual and Screen Cultures must successfully complete at least 15 semester hours. The student must complete CP 101: Film History and Analysis, CP 210: History of Photography or CP 361: History of New Media, CP 260: Understanding Visual Media, one 3 credit cinema studies elective at the 300-level and one 3 credit cinema studies elective at the 400-level in order to obtain a minor. All courses for the minor must be completed with a grade of *C* or higher. Courses for the minor may not be double-counted with a major in Cinema and Photography. An SIU GPA of 2.5 is required to add and to remain in the minor.

Courses (CP)

Students provide photographic materials for all photography production courses, including film, photographic paper, certain specialized chemicals, fully adjustable roll film or view camera and transportable digital media when required. There is a fee for laboratory materials for each photography production course. In motion picture production courses, students provide their own film stock, processing, recording materials, and editing supplies. There is an equipment use fee for each film production course. In courses, which include analysis and screening of slides and films, a screening fee will be assessed. Students may be required to purchase texts for various courses.

101-3 Film History and Analysis. (University Core Curricu-

lum) An introduction to world history of cinema from its origins to the present, featuring important and influential films of various types and genres from many countries. Basic formal and technical aspects of the medium and means of analysis are also introduced. Students purchase texts. It is also the required foundation course for the Cinema Specialization in the Cinema and Photography major. Screening fee: \$30.

101H-3 Honors Film History and Analysis. (University Core Curriculum) (University Honors Program) An introduction to world history of cinema from its origins to the present, featuring important and influential films of various types and genres from many countries. Basic formal and technical aspects of the medium and means of analysis are also introduced. Students purchase texts. It is also the required foundation course for the Cinema Specialization in the Cinema and Photography major. Screening fee: \$30. Restricted to University Honors Program students.

102-4 Introduction to Sound and Image Production. This course will provide conceptual and hands-on experience researching, writing and producing independent cinema with a focus on critical arts practice. Emphasis will be placed on independent production from invention of the project idea to post-production. Assignments and course content focus on a wide range of creative image- and sound-making guided by theoretical, aesthetic and cinematic principles. Students will be introduced to basic production and editing skills as well as produce assignments that reflect a breath of production practice, including: 1) basic still image and sound, 2) narrative, 3) documentary, 4) experimental. A combination of lecture, discussion, critique and production, this course will give students a solid foundation from which they can begin to develop their own artistic voice. Students must have access to a personal portable hard drive. Varying costs may be incurred for media output. Equipment fee: \$60.

120-3 Making Media: Digital Photo & Video Tools. Intro to basic digital photo and video media tools including basic camera functions, Apple i-life software, image capture, transfer, and basic editing. Students produce a final photo or video project published via DVD or the Web. Students use SIUC Mac labs or personal computers for hands-on assignments outside of class. Students must have a simple digital camera or camera phone capable of still image and short video capture. Lab fee: \$35.

210-3 History of Still Photography. A survey of the important images, ideas, people & processes that make up the history of still photography. Covers photographic pre-history through our contemporary age. Prerequisite: ENGL 102. Screening fee: \$30.

230-3 Photography I. Lecture & lab which integrates photo appreciation with the digital image production. Provides a hands-on experience of capturing, managing and editing of the digital image. Lectures focus on the major cultural uses & language of photography. Lab meetings will focus on camera operations, and digital editing workflow. Students will supply personal digital still-camera recording devices, laptop computer, Adobe Lightroom software. Lab fee: \$35.

257-1 to 6 Work Experience. Used to recognize work experience related to the student's educational objective. One to six hours of credit may be applied toward graduation requirements following departmental evaluation and approval. Mandatory

Pass/Fail. Special approval needed from the department.

260-3 Understanding Visual Media. This course introduces aesthetic and critical concepts for understanding and analyzing photography, film and other visual media. It establishes the formal vocabulary for discussing and looking critically at visual media and some of the most important ways in which the power of and meanings we make of these media have been theorized and related to larger cultural, social, economic, and technological contexts. Prerequisite: ENGL 102. Restricted to sophomore standing. Screening Fee: \$30.

270A-3 to 12 Topics in Cinema & Photography. Various beginning level topics courses Cinema, Photography or Intermedia Arts. A)History/Theory/Criticism. May be repeated up to 12 credits as topics vary.

270B-3 to 12 Topics in Cinema & Photography. Various beginning level topics courses Cinema, Photography or Intermedia Arts. B)Production. May be repeated up to 12 credits as topics vary.

270C-3 to 12 Topics in Cinema & Photography. Various beginning level topics courses Cinema, Photography or Intermedia Arts. C)Scriptwriting. May be repeated up to 12 credits as topics vary.

270D 3 to 12 Topics in Cinema & Photography. Various beginning level topics courses Cinema, Photography or Intermedia Arts. D)Interdisciplinary. May be repeated up to 12 credits as topics vary.

276-4 Film Production. Study & practice of creative principles & techniques of film production. Using an HD/SLR camera, students make a short, 4-minute film, beginning with pre-production activities, camera & lighting tests, sound recording tests, storyboards, filming schedules, etc. Each student must direct & operate the camera for her/his own film. During production, filming of projects, students are encouraged to crew on each other's films for experience in sound recording & various production assistance roles. Films, finished to HD video are edited, post-production, using specified digital editing systems available in the College. Students purchase texts, HD/SLR camera, digital camera card(s), incident light meter, portable hard drive(s), & any incidental materials. Prerequisite: CP 101 & 102 both with B or better. Restricted to sophomore or higher standing, Cinema & Photography major or consent of department. Equipment use fee: \$60.

277-3,3 Introductory Narrative Crew Production. Student initiated production of a short narrative film based on original or adapted script. Each student will perform a particular crew role in consultation with the film's producers. Roles include: assistant director, production manager, still photographer, assistant camera, location sound crew, script supervisor, gaffer, grips, production assistants, etc. Activities include pre- and post-production, production management, research on crew roles, analysis of films and photography relevant to the topic, style, and genre of the proposed project, equipment demonstrations. Faculty review and approval of student film proposal required before course will be offered. Special approval needed from the department.

291-1 to 6 Independent Educational Experience in Cinema or Photography. Individual research or projects in Cinema or Photography at the beginning or intermediate level. Special approval needed from the instructor.

301-4 Basic Drawing: from Pencil to Pixels. Possessing the ability to translate visually rich ideas into accurate drawings is vital during the pre-production stage of media-making. Students will learn the principles of design and apply basic drawing strategies with pencil for subsequent digital media application. With the aid of both analog and digital tools, students will produce a portfolio of digital sketches, storyboards, and other useful prototypes to showcase a solid understanding of modeling, perspective and contour drawing.

330-4 Photography II. Intermediate course using DSLR (digital single lens reflex) cameras to learn camera controls and principles of RAW digital capture through to printing. Visual design principles, digital file management, and editing will also be learned. The technical processes will be emphasized along with photographic vision. Students will have hands-on experience with Adobe Lightroom & Photoshop in the Macintosh computer labs. Prerequisite: CP 230 with C or better. Student must provide DSLR camera, laptop computer with Adobe Lightroom and Photoshop software. Lab Fee: \$35.

332-4 Photography III. Intermediate level course that introduces students to analog film and print processes in photography. The course will include the technical and aesthetic fundamentals of traditional photographic practice. Students will gain experience with a range of black and white and color analog materials in both camera and darkroom applications. Prerequisites: CP 260 & CP 330 both with grades of C or better and pass faculty portfolio review, or consent of department. Restricted to Photography majors, other students by consent of department. Lab fee: \$35.

349-3 The Cinema. The cinema as a communicative and expressive media. Study of film types illustrated by screenings of selected films. May be repeated as topics vary. Screening fee: \$30.

350-3 Short Cinema Studies. A study of short format narrative (including the short story, the short poem, and the one-act play) as a method for approaching the history and criticism of the short film. Students will learn the methods of film and literary studies, and write papers and deliver oral presentations about those methods. Prerequisites: CP 260, or consent of department. Screening Fee: \$30.

352-3 Writing the Short Film. This course examines the short narrative fiction film and script through lectures, screenings, discussions, writing exercises and assignments in a workshop environment. By the end of the course, students will have written one or more short scripts appropriate for use in a production class. Prerequisite: CP 260 with C or better. Screening fee: \$30.

353-3 History of Experimental Film. Study of experimentation in film from the early 20th century to the present, beginning with the International avant-garde of the 1910-1920s and focusing on non-commercial and radical use of the medium, including abstract, cameraless, animated, trance, underground, and structural films and expanded cinema, among other trends, as well as an introduction to experimentation in video. Prerequisite: CP 260, or consent of department. Screening fee: \$30.

354I-3 Mass Media Culture and American Studies. (University Core Curriculum) A study of the relationship between American Studies and American audio-visual culture. Sample topics include: the development of the 20th century American city with emphasis on the importance of mass media to that

process; the American landscape in cinema; the American West. Students will learn the methods of American and cinema studies, and write papers and deliver oral presentations about those methods. No prerequisites. Screening fee: \$30.

357-3 History and Theory of International Documentary. This course will investigate the history, theory, and aesthetics of non-fiction cinema and media culture. Developments in international non-fiction cinema will be discussed in relation to technology, history, politics of visual culture, and the continuous questioning of our ability to understand and change reality that has been at the heart of the documentary impulse and continuously radicalized with newer media technologies. Prerequisite: CP 260. Screening fee: \$30.

358I-3 Introduction to Peace Studies. (University Core Curriculum) (Same as HIST 358I) Introduces students to Peace Studies as an interdisciplinary field, focusing on the history, theory, and practice of alternatives to violence. Considers the structural and systemic reasons for violence and war; the history of peace movements; the role of media in escalating violence and providing solutions. Lecture-discussion format with presentations by speakers from a variety of disciplines. No prerequisites.

361-3 History of New Media. This course is an overview of the work and ideas of artists who have explored new interactive and interdisciplinary forms, as well as engineers and mathematicians who have developed information technologies and influential scientific and philosophical ideologies that have influenced the arts. Seminal artistic movements and genres will be explored, such as: the Futurists, Bauhaus, Happenings, video art, etc. Prerequisite: CP 260, or instructor approval. Screening Fee: \$30.

370-3 to 6 Topics in Cinema Studies. Topics course in cinema studies: history, theory, criticism. Sample topics: Film Authors, Film Genres, Film Movements, National Cinemas, American Film and Politics, Women and Cinema, Art and Cinema. Prerequisite: CP 260, or consent of department. Screening fee: \$30.

380-3 Producing Independent Cinema. This course will explore the inner workings of contemporary independent filmmaking practice. This course is designed to provide students with knowledge of all aspects of independent film production from development and financing to production and distribution. In addition to broadening your knowledge of independent cinema, this class will help to prepare you to enter a number of career pathways in the indie film business.

402-3 Sensitometry. An intermediate course that investigates technical and visual applications of the photographic process. The course includes the study of light sensitive materials, zone system, density parameters, practical chemistry and the creation of an archival photographic print. While color, motion picture and digital materials are noted, black and white image making is the emphasis of the course. Prerequisite: CP 332 with C or better.

404-3 Lighting for Photography. Basic concepts and essential principles of lighting technique will be thoroughly explained and investigated. Fundamental challenges in lighting arrangements and aesthetic considerations of both studio and location applications will be explored. Students will use a required text and provide photographic materials. Prerequisite:

CP 330 or concurrent enrollment. Special approval needed from the department. Lab fee: \$35.

415-3 Photographic Criticism and Practice. Introduction to photographic criticism and its application in photographic practice. Through readings, writings and practical exercises, students will gain a broad-based knowledge of critical approaches to the photographic image. Prerequisite: CP 210 and 260 both with grades of C or better. Screening fee: \$30.

421-6 (3,3) Experimental Photographic Techniques. Experimental approaches to the creation of photographic images. Specific course content may include experimental techniques utilizing the camera, the darkroom and a wide range of additional media. Students provide materials and may purchase texts. Prerequisite: CP 332. Special approval needed from the department. Lab fee: \$35.

431-3 Applied Photography I. An introduction to professional photographic camera and lighting technique, applied theory and business responsibilities. Students will explore a range of commercial, editorial, industrial and fine art topics that will include architecture, portrait, product and fashion. Self-promotional elements: Web portfolios, publications of all types and gallery exhibitions will be introduced. Prerequisite: CP 330 with grade of C or better and pass faculty portfolio review or consent of the instructor. Lab fee: \$35.

432-3 Applied Photography II. A second, advanced phase of applied photographic investigation based on the introduction outlined in CP 431. Students pursue their selected area(s) of photographic specialization and create a complete portfolio. Students will receive critical feedback from professionals during off-campus trips to photographic facilities in St. Louis and Chicago. Prerequisite: CP 431. Lab fee: \$35.

436-3,3 Documentary Photography. Exploration of techniques, history and contemporary context of documentary photography. Each student will produce an in-depth documentary photographic project. 436 may be organized as a general documentary course or have a unifying topic. Example topics include: small town, politics or the environment. Print and electronic distribution of projects will be discussed. Prerequisite: CP 330 or consent of the department. Lab fee: \$35.

440-3 New Media Production. The Internet is revolutionizing the way the world communicates. Students will investigate how the Internet works, as well as explore relationships among design, technology, and user experience while developing web sites, information architectures, interface behaviors, and navigation systems. Topics include: XHTML/CSS, Javascript, open source software, as well as incorporating sound, video, and images into web pages. Prerequisite: CP 260 with C or better, or instructor approval. Equipment Fee: \$60.

450-3 Narrative Film Production. Narrative filmmaking, by individuals or groups, from pre-production to completion of filming, ready for post-production. Study/practice all facets of pre-production/production phases. Techniques of synchronous sound filming. Prior completion of CP 475 required for projects in HD video. Access provided to 16mm and HD cameras and lighting and sound recording equipment. Students are responsible for purchase of all materials and outside services. Prerequisite: CP 260, 276 and pass portfolio review. Equipment Use Fee: \$60.

452-3 Screenwriting. A study of screenplay structure for fea-

ture-length, classically-structured scripts. Includes treatments, scene-by-scene outlines, character development, and script formatting. Students are required to create original script material. Prerequisite: CP 352 with C or better. Screening fee: \$30.

453-3 to 6 Experimental Production. An introductory course aimed at students who wish to explore and expand the artistic and creative possibilities of their work. Students will engage in exercises that focus on developing conceptual creativity as well as technical skill. May be repeated as topics differ. Sample topics include: Optical Printing, Handmade Film, Collage, Digital Compositing, Experimental Animation. Prerequisite: CP 353 or consent of instructor. Equipment usage fee: \$60.

454-3 Approaches for the Animation Stand. This studio production course provides the opportunity to use the traditional film animation stand, modified for use with an HD digital camera and software, to explore 2-D animation approaches, concepts, and techniques, which may include but not be limited to developmental, line, cell, cut out, rear lit, etc. Students purchase texts, art supplies, digital camera card(s), portable hard drive(s), and any additional incidentals. Prerequisite: CP 276 with C or better, or consent of department. Equipment use fee: \$30.

457-3 Documentary Production. This course will provide conceptual and hands-on experience for researching, writing and producing documentary video. This course will emphasize conceptual processes from invention of the documentary idea to post-production. Students will apply contemporary methods of criticism to the production process with particular emphasis on revision and audience. Prerequisite: CP 357 with C or better. Equipment usage fee: \$60.

460-3 (3,3) Survey of Film History. Intensive study of particular periods of cinema history, including technological developments, national and international movements, aesthetic traditions, economic and political determinations, and concerns of film historiography. May be taken twice, if topic differs. Prerequisite: CP 260 with C or better. Screening fee: \$30.

464-3 Understanding Animation: History, Theory & Technology. This course is an introduction to the history of animation, its practitioners and its technological developments. The course introduces students to the aesthetics of the animated image and their relation to animation's unique ability to communicate. Additionally, the course discusses some of the major theoretical constructs surrounding the study of animation. Prerequisite: CP 260 with a grade of C or better or consent of instructor.

466-3 to 6 (3,3) Film Styles and Genres. Intensive study of a specific body of films grouped by similarities in style, genre, period, or cultural origin. Emphasis on historical, theoretical, and critical issues. Topics vary. Sample topics: Science Fiction Film; Film Noir, French New Wave; Third World Cinema; Surrealism in Film. May be taken twice, if topic differs. Students purchase texts. Prerequisite: CP 260 with C or better or consent of department. Screening fee: \$30.

467-3 to 6 (3,3) Film Authors. Intensive study of the work of one or more film authors (directors, screenwriters, etc.). Emphasis is on historical, theoretical, and critical issues. Topics vary. Sample topics: the films of Alfred Hitchcock; the films of Jean Renoir; the films of Andrei Tarkovsky. May be taken twice, if the topic differs. Student purchase texts. Prerequisite:

CP 260 with C or better or consent of department. Screening fee: \$30.

469-3 Queer Visual Culture. (Same as WGSS 440) Course discusses aspects of the aesthetics, history, theory and politics of media representations of gender and sexuality. Cultural texts from one or a combination of media forms, genres, historical periods, and platforms, will inform the historical and theoretical consideration of media representations of gender and sexual variation with a special interest on their bearings upon the present moment. May be repeated, if topics vary.

470A-3 to 12 (3,3,3,3) Advanced Topics Cinema Studies. An advanced topics course in cinema history, theory, and criticism. Sample topics: visualizing the body, feminist film theory, surveillance and the cinema. May be repeated if topics differ. No more than twelve (12) credit hours combined from 470 Advanced Topics courses counted in the undergraduate Cinema and Photography degree. Prerequisite: CP 260 with C or better or consent of department. Screening fee: \$30.

470B-3 -12 (3,3,3,3) Advanced Topics Film Production. An advanced topics course in film production. Sample topics: location lighting, production management, film sound workshop. May be repeated if topics differ. No more than twelve (12) credit hours combined from 470 Advanced Topics courses counted in the undergraduate Cinema and Photography degree. Prerequisite: CP 276 with C or better or consent of department. Screening fee: \$60.

470C-3-12 (3,3,3,3) Advanced Topics Photography. A photography production course with specialty topics which may include: narrative tableau, meta-photography, large format, etc. May be repeated, if topics differ. No more than 12 credit hrs combined from 470 Adv. Topics courses counted in the first 33 credits of the Photography Specialization in the CP major. No more than 6 credit hrs of 470 Adv. topics courses counted for graduate credit. Prerequisite: CP 332 or consent of department. Lab fee: \$35.

470D-3-12 (3,3,3,3) Advanced Topics Interdisciplinary Studies. Advanced interdisciplinary studies in cinema, photography or new media. Sample topics: visual perception, ethics of image making, 3-D filmmaking. May be repeated if topics differ. No more than twelve (12) credit hours combined from 470 Advanced Topics courses counted in the undergraduate Cinema and Photography degree. Restricted to junior standing or higher or consent of department. Screening fee: \$30.

470E-3-12 (3,3,3,3) Topics in the History of Photography. Focused study on special topics in the history of photography. Sample topics: The Mythic American Image; The History of Color Photography; African American Photographers; The Appropriated Image; The History of the Image in Social Documentary. Prerequisite: CP 210 with C or better. May be repeated as topics vary. Screening fee: \$30.

470H-3 to 12 (3,3,3,3) Honors Advanced Topics Cinema Studies. (University Honors Program) An advanced topics course in cinema history, theory, and criticism. Sample topics: film criticism, whiteness and masculinity, surveillance and the cinema. May be repeated if topics differ. No more than 12 credit hours combined from 470 Advanced Topics courses counted in the undergraduate Cinema and Photography degree. Prerequisite: CP 260 with C or better or consent of department. Screening fee: \$30.

470W-12 (3,3,3,3) Advanced Topics Screenwriting. An advanced topics course in screenwriting. Sample topics: experimental script to screen, adaptation, comedy, autobiography. May be repeated if topics differ. No more than twelve (12) credit hours combined from 470 Advanced Topics courses counted in the undergraduate Cinema and Photography degree. Prerequisite: CP 451 with C or better or consent of department. Screening fee: \$30.

471-3 Film Directing. The course explores ideas, methods and theories of narrative film directing with emphases on two areas: directing filming-scene construction, coverage, staging, blocking and camera perspective; directing acting-audition, casting, rehearsal, and performing for camera. Students work in groups on a series of focused directing, acting and filming projects. Prerequisites: CP 276, with a minimum grade of B. Restricted to senior standing. Fee: \$60.

472-6 (3,3) Problems Creative Production: Cinema. Intensive examination and problem solving, through readings, screenings, and filmmaking, of a cinematic genre, style, or technical challenge. Theory is combined with practice. Individual and group projects. Sample problems: cinematography, digital filmmaking, 35mm filmmaking, film as performance, optical printing. May be repeated once if topic differs. Prerequisite: CP 276 or consent of department. Restricted to junior standing. Equipment usage fee: \$60.

473-3 to 6 Advanced Experimental Strategies. An intensive production course for students who want to expand their creative possibilities and develop depth in their conceptual understanding of experimental processes and strategies in film, video or new media. May be repeated as topics differ. Sample topics include: Live Art/Generative Art, Advanced Film Arts, Poetic Autobiography, 3-D filmmaking, Experimental Animation. Prerequisite: CP 453 or CP 442 or consent of instructor. Equipment usage fee: \$60.

474-3 Optical Printing. A creative, frame-by-frame study and practice of 16mm filmmaking. Use of 16mm optical printer to complete projects, techniques include: fades, dissolves, freeze frames, step printing, multi-frame presentations, frame magnification, Super 8 enlargement to 16mm, matt construction. Students process 16mm and Super-8 film. Prerequisite: CP 276 with C or better. Equipment use fee: \$60.

475-3 High Definition Digital Cinematography. The course explores the new visual expression possibilities of High Definition digital medium as compared with traditional film. Aiming to understand the evolving digital motion imaging technology, the course focuses on its aesthetic and technical applications in the art of cinematography in areas of image construction, exposure control, lighting and color manipulation, and post-production workflow. Prerequisite: CP 276. Restricted to senior standing. Fee: \$60.

491-1 to 9 Individual Study in Cinema, Photography or New Media. Advanced individually directed research in film, photography or new media: history, theory, or aesthetics. No more than six hours of 491, 492, 494, 495 and 497 combined may count toward the first 30 hours in the Cinema and Photography major. Not for graduate credit. Special approval needed from the instructor.

492-1-3 Practicum. Practical experience in the presentation of photographic theory and procedures. No more than six hours

of 491, 492, 494, 495 and 497 combined may count toward the first 30 hours in the Cinema and Photography major. Not for graduate credit. Special approval needed from the department. Mandatory Pass/Fail.

494-1-12 Internship Program. Cinema & Photography students are placed in summer internships in various cities to gain experience and insight into their chosen fields. Each enrollment is limited to a maximum of 6 credit hours. No more than six hours of 491, 492, 494, 495 and 497 combined may count toward the first 30 hours in the Cinema and Photography major. Not for graduate credit. Special approval needed from the department.

495-1 to 12 Internship. Credit for internship with professional film or photographic units. Each enrollment is limited to a maximum of six credit hours. No more than nine hours of CP 491, 494, 495 or 497 combined may count toward the Cinema & Photography major requirements. Mandatory Pass/Fail grading. Not for graduate credit. Special approval needed from the department.

496-3 Advanced Post Production. Post production on a 10-12 minute film/video in any genre. Students must have all dailies prior to enrollment. Study of editing practice and aesthetics of picture and sound editing, design, ADR, Foley, and mixing through hands-on editing, reading, screenings, and critique. The department retains a copy of the final project. Editing facilities are provided. Prerequisite: CP 276 or consent of instructor. Equipment usage fee: \$60.

497A-1-9 Independent Projects in Cinema. Individual supervised motion picture production project by an individual student or group of students. No more than six hours of 491, 492, 494, 495 or 497 combined may count toward the first 30 credit hours required for the Cinema & Photography major. Not for graduate credit. Special approval needed from the instructor. Equipment use fee: \$60.

497B-1-9 Independent Projects in Photography. Individually directed projects in still photography. No more than six hours of 491, 492, 494, 495 or 497 combined may count toward the first 30 credit hours required for the Cinema & Photography major. Not for graduate credit. Special approval needed from the instructor. Lab fee: \$35.

498-3 Photography Portfolio. Preparation of a portfolio directed at a specific arena of professional practice or in preparation for application to graduate study. Completion of the course requires public exhibition of portfolio. The course will include a series of seminar style presentations imparting important career skills (self-marketing and business practices). Required for all photography students not taking CP 432. To be taken during the last year in residence. Prerequisites: CP 332 and CP 404 or CP 431 with grades of C or better and pass faculty portfolio review. Fee: \$35.

499P-4 Senior Thesis-Production (Formerly 499A) Individually supervised senior thesis production under a cinema faculty member. Opportunities for enrollment are limited. Normally taken during last term in residence. The department will retain a copy of the thesis, usually on video or DVD. Not for graduate credit. Prerequisite: CP 276 with C or better, any two 400-level courses numbered 489 or lower, a GPA in cinema and photography courses of 2.75 or higher. Restricted to senior standing. Special approval needed from the instructor. Course fee: \$60.00.

499S-4 Senior Thesis-Studies. (Formerly 499B) Completion of a critical or research paper as thesis work under the supervision of a cinema faculty member. Opportunities for enrollment are limited. Normally taken during last term in residence. The department will retain a copy of the thesis. Not for graduate credit. Prerequisite: any two courses from 449, 461, 462, 463, 466, or 467, a GPA in cinema and photography courses of 2.75 or higher. Restricted to senior standing. Special approval needed from the instructor.

499W-4 Senior Thesis-Screenwriting. Writing of a screenplay as a thesis work under the supervision of a cinema faculty member. Opportunities for enrollment are limited. Normally taken during last term in residence. The department will retain a copy of the thesis. Not for graduate credit. Prerequisite: CP 452, one course from 449, 461, 462, 463, 466 or 467, a GPA in cinema and photography courses of 2.75 or higher. Restricted to senior standing. Special approval needed from the instructor.

Cinema and Photography Faculty

Aguayo, Angela J., Assistant Professor, Ph.D., University of Texas, Austin, 2005.

Boruszkowski, Lilly A., Associate Professor, *Emerita*, M.F.A., Northwestern University, 1980.

Bursell, Cade, Associate Professor, M.F.A. San Francisco State University, 2003.

Chase, Jennida, Assistant Professor, M.F.A., Virginia Commonwealth University, 2009.

Cocking, Loren D., Assistant Professor, *Emeritus*, M.A., Ohio State University, 1969.

Covell, Michael D., Assistant Professor, *Emeritus*, M.F.A., Ohio University, 1975.

Gilmore, David A., Associate Professor, *Emeritus*, M.F.A., Ohio University, 1969.

Kapur, Jyotsna, Professor and *Interim Chair*, Ph.D., Northwestern University, 1998.

Kolb, Gary P., Professor, *Emeritus*, M.F.A., Ohio University, 1977.

Logan, Fern, Associate Professor, *Emerita*, M.F.A., School of the Art Institute of Chicago, 1993.

Martinez, Antonio, Associate Professor, M.F.A., East Carolina University, 2005.

Metz, Walter C., Professor, Ph.D., University of Texas, Austin, 1996.

Overturf, Daniel V., Professor, M.F.A., Southern Illinois University Carbondale, 1983.

Roddy, Jan P., Associate Professor, *Emerita*, M.F.A., University of Illinois, 1987.

Rowley, R. William, Associate Professor, M.F.A., University of Iowa, 1974.

Smith, Alison, Visiting Assistant Professor, M.F.A., University of Georgia, Athens, 2010.

Spahr, Robert, Assistant Professor, M.F.A., Parsons School of Design, 1991.

Swedlund, Charles A., Professor, *Emeritus*, M.S., Illinois Institute of Technology, 1961.

Tudor, Deborah, Associate Professor and *Associate Dean*, Ph.D., Northwestern University, 1992.

Vratil, Dru, Associate Professor, M.F.A., University of Iowa, 1998.

Zhou, Hong, Associate Professor, M.F.A., York University, Toronto, Canada, 2000.

Civil and Environmental Engineering

(Department, Major, Courses, Faculty)

The Department of Civil and Environmental Engineering provides educational opportunities that will prepare students for effective and productive careers in Civil Engineering and other related professions. Continued professional growth, discovery, innovation and development of technologies, and service to the community are characteristics of this area of study.

The primary mission of the Department is to prepare students for careers that will span forty years or more. Most Civil and Environmental Engineers will be employed by public agencies at all levels of government, by various industries, and by a variety of large and small consulting firms. Virtually all of this practice relates in some way to the health, safety, and welfare of the general public. Those involved in this field will need to possess the ability to conceptualize, plan, design, and construct new and innovative works and systems. Technical knowledge of great sophistication will be needed, as well as an understanding of the interrelated social, political, and environmental issues that will be key elements in the decision making process.

Preparing Engineers for this role requires a broad liberal education program as well as one of technical depth and breadth. The undergraduate core curriculum is broad-based and includes courses in mathematics, science, communication, and social science. The Civil Engineering curriculum begins with fundamental engineering skills and ends with a two-semester capstone design experience. Students are required to take courses in environmental engineering, geotechnical engineering, hydraulic engineering, structural engineering, and surveying.

The educational goal of the undergraduate civil engineering program is to provide a quality civil engineering education that will prepare our graduates to become practicing professionals able to meet the technological challenges of the 21st century. To this end we strive to instill in our graduates the knowledge, skills, attitudes, and ethical and social values necessary to be successful civil engineering practitioners. Also, we seek to provide the necessary academic background for successful graduate study in engineering or other fields. To meet this goal, we have defined the following objectives that describe what our graduates are expected to attain within 3 to 5 years after graduation.

1. Apply technical knowledge and skills to formulate solutions to real-world problems that are fundamental to civil engineering analysis and design.
2. Successfully pursue advanced degrees or professional development activities that support life-long learning and professional licensure.
3. Act in a professional and ethical manner, and consider resource sustainability, public safety, health and welfare in their professional work.
4. Effectively contribute to multidisciplinary teams.

The program is designed to provide the students with the broad educational background essential to civil engineering practice

with emphases in the areas of environmental engineering, geotechnical engineering, hydraulic engineering, and structural engineering. Students may choose to specialize in the area of Environmental Engineering.

The Department of Civil and Environmental Engineering offers a program leading to a Bachelor of Science degree in Civil Engineering. Students may choose to earn a Bachelor of Science degree in Civil Engineering with specialization in Environmental Engineering.

The undergraduate program in civil engineering is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>.

Technical Enhancement Program

The objective of the Technical Enhancement Program (TEP) is to encourage students to enhance their technical and soft skills, thus improving their marketability upon graduation. This program is available to freshmen only. Students must fulfill the requirements of the program in order to receive a certificate of completion from the Department. The Department of Civil and Environmental Engineering has developed this program in collaboration with its Professional Advisory Board. For additional details and how to participate, please contact the Department or visit the Department website at <http://engineering.siu.edu/civil/>.

Bachelor of Science Degree in Civil Engineering, College of Engineering Civil Engineering Major

<i>University Core Curriculum Requirements</i>	41 ¹
Foundation Skills	15
UCOL 101	3
English 101, 102	6
Mathematics 150	3 ¹
Communication Studies 101	3
Disciplinary Studies	23
Fine Arts	3
Human Health (Biology 202 or an approved substitute) ..	2
Humanities	6 ^{2,3}
Science (substitute Physics and Chemistry in major)	6 ¹
Social Science	6 ^{2,3}
Integrative Studies	3
Multicultural	3
<i>Requirements for Major in Civil Engineering</i>	(9) + 88
Basic Sciences	(6) + 9
CHEM 200, 201, 210	(3) + 4
PHYS 205A,B, 255A,B	(3) + 5
Mathematics	(3) + 14
MATH 150, 250, 251, 305	(3) + 11
ENGR 351	3
Required Engineering Courses:	14
ENGR 250, 261, 350A, 361 ⁴ , 370A	14
Required CE Courses:	39
CE 210, 263, 310, 320, 330, 340, 418, 421, 442, 444, 474, 495A,B	39
Technical Elective ⁵ :	12
<i>Total</i>	129

¹Courses required for the major will apply toward nine hours of University Core Curriculum, making a total of 41 in that area.

²Department requirements for University Core Curriculum are more re-

strictive than those of the University as a whole. Students should consult advisor for approved courses.

³Transfer students holding an associate degree in a baccalaureate-oriented program must have a sequence of courses in social science or humanities. See departmental advisor for an approved course. Students transferring from other programs or institutions will be required to (a) complete a course sequence in the humanities or social sciences and (b) meet the University Core Curriculum requirements for engineering students.

⁴Students are allowed to take ECON 240 in lieu of ENGR 361. Since ECON 240 is a part of the University Core, this substitution will reduce the total credit hours for the degree to 127.

⁵Approved technical electives: CE 331 and CE 400-level courses.

Civil Engineering Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
Core Human Health, ENGR 250.....	2	3
Core Humanities	3	-
ENGL 101,102.....	3	3
MATH 150, 250	4	4
PHYS 205A, 255A	-	4
UCOL 101, CHEM 200, 201	3	4
<i>Total</i>	15	18
SECOND YEAR	FALL	SPRING
Core Humanities	-	3
MATH 251, 305	3	3
CHEM 210, CMST 101	3	3
PHYS 205B, 255B	4	-
CE 210, 310	3	3
ENGR 261, CE 263	3	3
ENGR 350A	-	3
<i>Total</i>	16	18
THIRD YEAR	FALL	SPRING
Core Social Science	3	3
ENGR 351, CE 444/442	3	3
ENGR 361*, CE 474	2	3
CE 320, 330	3	3
CE 340, ENGR 370A, CE 418	6	3
<i>Total</i>	17	15
FOURTH YEAR	FALL	SPRING
Core Fine Arts	-	3
Core Integrative Studies.....	3	-
CE 442/444, Tech Electives	9	6
CE 495A,B	3	3
CE 421	-	3
<i>Total</i>	15	15

*May substitute ECON 240. This will count as a social science elective.

Civil Engineering Transfer Students Suggested Curricular Guide¹

THIRD YEAR	FALL	SPRING
ENGR 350A, ENGR 370A, CE 310	6	3
ENGR 351, CE 444/442	3	3
ENGR 361*, CE 340	2	3

CE 263, 330	3	3
CE 210, 320	3	3
<i>Total</i>	17	15

FOURTH YEAR	FALL	SPRING
CE 418, 421	3	3
CE 442/444, 474	6	-
Tech Electives	3	9
CE 495A,B	3	3
<i>Total</i>	15	15

*May substitute ECON 240.

¹This assumes that the transfer student satisfied the university core curriculum requirements and has had all of the Mathematics, Chemistry and Physics required for the Civil Engineering curriculum. Furthermore, this assumes that the transfer student has had the equivalent of ENGR 250, and ENGR 261. Community College transfer students should make special note of the requirement that a minimum of 60 semester hours must be completed at a senior institution.

Bachelor of Science Degree in Civil Engineering, College of Engineering Civil Engineering Major-Environmental Engineering Specialization

<i>University Core Curriculum Requirements</i>	41 ¹
Foundation Skills	15
UCOL 101	3
English 101, 102	6
Mathematics 150	3 ¹
Communication Studies 101	3
Disciplinary Studies	23
Fine Arts	3
Human Health (Biology 202 or an approved substitute) ..	2
Humanities	6 ^{2,3}
Science (substitute Physics and Chemistry in major)	6 ¹
Social Science	6 ^{2,3}
Integrative Studies	3
Multicultural	3
<i>Requirements for Major in Civil Engineering</i>	(9) + 88
Basic Sciences	(6) + 9
CHEM 200, 201, 210	(3) + 4
PHYS 205A,B, 255A,B	(3) + 5
Mathematics	(3) + 14
MATH 150, 250, 251, 305	(3) + 11
ENGR 351	3
Required Engineering Courses:	14
ENGR 250, 261, 350A, 361, 370A	14
Required CE Courses:	39
CE 210, 263, 310, 320, 330, 340, 418, 421, 442, 444, 474, 495A,B	39
Technical Elective ⁵ :	12
<i>Total</i>	129

¹Courses required for the major will apply toward nine hours of University Core Curriculum, making a total of 41 in that area.

²Department requirements for University Core Curriculum are more restrictive than those of the University as a whole. Students should consult advisor for approved courses.

³Transfer students holding an associate degree in a baccalaureate-oriented program must have a sequence of courses in social science or humanities. See departmental advisor for an approved course. Students transferring from other programs or institutions will be required to (a) complete a

course sequence in the humanities or social sciences and (b) meet the University Core Curriculum requirements for engineering students.

⁴Students are allowed to take ECON 240 in lieu of ENGR 361. Since ECON 240 is a part of the University Core, this substitution will reduce the total credit hours for the degree to 127.

⁵Approved technical electives: CE 410, 412, 413, 419, 422, 471, 472, 473, and ME 416.

Courses (CE)

Safety glasses, a hand-held scientific calculator, and textbooks are required of all civil engineering students.

210-3 Environmental Biology for Engineers. An overview of major topics in biological science with an emphasis on plant biology, microbiology and ecology fundamental to the study of civil and environmental engineering systems. Prerequisite: Completion of/concurrent enrollment in CHEM 200.

263-3 Basic Surveying. An introductory course designed to introduce the principles, theory and equipment of surveying. Development of survey field practices on the earth's surface and subsurface and related computations. Prerequisite: MATH 111 with a grade of C or better.

310-3 Environmental Engineering. Basic engineering aspects of water, land and air pollution and control. Problems, sources and effects of pollution. Major state and federal regulations relating to environmental issues. Prerequisite: CHEM 210, MATH 250 with a grade of C or better, CE 210 for CE Majors. Lab fee: \$30.

320-3 Soil Mechanics. Physical and mechanical properties of soils, soil classification, flow through soils, effective stresses, geostatic stress and stresses due to applied loads, one-dimensional consolidation, introduction to shear strength soil compaction. Prerequisite: ENGR 350A. Lab fee: \$30.

330-3 Civil Engineering Materials. Introduction of cements and aggregates; production and evaluation of concrete structures; mechanical properties of steels and timber, mixing and evaluation of pavement materials; testing of asphalt and masonry. Prerequisite: ENGR 350A. Lab fee: \$30.

331-3 Transportation Engineering. Introduction to geometric design, earth work, drainage and traffic. Basic design principles for each area and their application to typical problems. Prerequisite: completion of or concurrent enrollment in CE 330.

340-3 Structures. Loads. Types of structures. Structural materials. Safety. Analysis of statically determinate beams, trusses, and frames under static loads. Influence lines. Moving loads, Cables, Arches, Space trusses, Deflection of beams, trusses, and frames. Moment distribution for beams. Prerequisite: ENGR 350A,B.

392-1 to 6 Civil Engineering Cooperative Education. Supervised work experience in industry, government or professional organization. Students work with on-site supervisor and faculty adviser. Reports are required from the student and the employer. Hours do not count toward degree requirements. Mandatory Pass/Fail. Restricted to sophomore standing.

410-3 Solid Waste Engineering. Engineering aspects of solid waste prevention, treatment, recycling and disposal. Design of recycling programs, solid waste treatment and disposal facilities. State and federal regulations. Problems, sources, and effects of solid waste. Design projects required. Prerequisite: CE 310.

412-3 Contaminant Flow, Transport and Remediation

in Groundwater. Mathematics of flow and mass transport in the saturated and vadose zones; retardation and attenuation of dissolved solutes; flow of nonaqueous phase liquids; review of groundwater remediation technologies; review of flow and transport models. Prerequisite: CE 310 and 320, or consent of instructor for non CE majors.

413-3 Collection Systems Design. Design of waste water and storm water collection systems including installation of buried pipes. Determination of design loads and flows, system layout and pipe size. Prerequisite: CE 310 and ENGR 370A.

418-3 Water and Wastewater Treatment. A study of the theory and design of water and wastewater treatment systems, including physical, chemical, and biological processes. Topics include sedimentation, biological treatment, hardness removal, filtration, chlorination and residuals management. Prerequisite: CE 310, ENGR 370A and completion of/concurrent enrollment in ENGR 351.

419-3 Advanced Water and Wastewater Treatment. Advanced concepts in the analysis and design of water and wastewater treatment plants. Topics include advanced physical, chemical, and biological processes. Emphasis is on the treatment and disposal of sludges, design of facilities, advanced treatment principles, and toxics removal. Prerequisite: CE 418.

421-3 Foundation Design. Application of soil mechanics to the design of the foundations of structures; subsurface exploration; bearing capacity and settlement analysis of shallow foundations; lateral earth pressures and design of retaining walls; capacity and settlement of pile foundations for vertical axial loads. Prerequisite: CE 320.

422-3 Environmental Geotechnology. Geotechnical aspects of land disposal of solid waste and remediation, solute transport in saturated soils, waste characterization and soil-waste interaction, engineering properties of municipal wastes, construction quality control of liners, slope stability and settlement considerations, use of geosynthetics and geotextiles, cap design, gas generation, migration and management. Prerequisite: CE 310, 320.

423-3 Geotechnical Engineering in Professional Practice. Application of principles of geotechnical engineering in a real-world setting; planning, managing and executing geotechnical projects; developing proposals and geotechnical project reports; interpreting and using recommendations developed by geotechnical engineers; total quality management, professional liability and risk management. Prerequisite: CE 320, 421 or concurrent enrollment or consent of instructor.

426-3 Seepage and Slope Stability Analysis. Seepage through soils; numerical and physical modeling of two-dimensional flow; basic mechanisms of slope stability analysis; analytical methods in analyzing slopes; slope stabilization. Prerequisite: CE 320.

431-3 Pavement Design. Design of highway pavements including subgrades, subbases, and bases; soil stabilization; stresses in pavements; design of flexible and rigid pavements; cost analysis and pavement selection; and pavement evaluation and rehabilitation. Prerequisite: CE 320 and 330.

432-3 Computer Aided Design and Drawing (CADD) for Civil Engineers. A study of civil engineering drawings and their relationship to engineering design in the CADD environment. Emphasis is on the skills associated with developing

and understanding technical drawings, including construction plans and related documents, for engineering design. Computer based design and drawing techniques and related software. Includes 3 hours lab per week. Prerequisite: Completion of or concurrent enrollment in CE 263.

440-3 Statically Indeterminate Structures. Analysis of trusses, beams, and frames. Approximate methods. Method of consistent deformations. Three-moment theorem. Slope deflection. Moment distribution. Column analogy. Plastic analysis. Matrix methods. Prerequisite: CE 340.

441-3 Matrix Methods of Structural Analysis. Flexibility method and stiffness method applied to framed structures. Introduction to finite elements. Prerequisite: CE 340.

442-3 Structural Steel Design. An introduction to structural steel design with an emphasis on buildings. Design of structural members and typical welded and bolted connections in accordance with the specifications of the Steel Construction Manual of the American Institute of Steel Construction (AISC). Design project and report required. Prerequisite: CE 340.

444-3 Reinforced Concrete Design. Behavior and strength design of reinforced concrete beams, slabs, compression members, and footings. Prerequisite: CE 340.

445-3 Fundamental Theory of Earthquake Engineering. The nature and mechanics of earthquakes. Plate tectonics, types of faulting, recording and measuring ground motion. Analysis of free and forced vibration of a single degree of freedom system. Steady state and transient response. Impulse response function. Dynamic amplification and resonance. Response to ground motion. Response spectrum analysis. Prerequisite: CE 320, 340, or consent of instructor.

446-3 Prestressed Concrete Design. Fundamental concepts of analysis and design. Materials. Flexure, shear, and torsions. Deflections. Prestress losses. Composite beams. Indeterminate structures. Slabs. Bridges. Prerequisite: CE 444 or concurrent enrollment or consent of the instructor.

447-3 Seismic Design of Structures. Basic seismology, earthquake characteristics and effects of earthquakes on structures, vibration and diaphragm theories, seismic provisions of the International Building Code, general structural design and seismic resistant concrete and steel structures. Prerequisite: CE 442 or CE 444, concurrent enrollment or consent of instructor.

448-3 Structural Design of Highway Bridges. Structural design of highway bridges in accordance with the specifications of the American Association of State Highway and Transportation Officials (AASHTO); superstructure includes concrete decks, steel girders, prestressed and post-tensioned concrete girders; substructure includes abutments, wingwalls, piers, and footings. Prerequisite: CE 442 or 444 or concurrent enrollment, or consent of instructor.

471-3 Groundwater Hydrology. Analysis of groundwater flow and the transport of pollution by subsurface flow; applications to the design of production wells and remediation of polluted areas; finite difference methods for subsurface analyses. Prerequisite: ENGR 370A or consent of instructor.

472-3 Open Channel Hydraulics. Open channel flow, energy and momentum, design of channels, gradually varied flow computations, practical problems, spatially varied flow, rapidly varied flow, unsteady flow, flood routing, method of characteris-

tics. Prerequisite: CE 474 or consent of instructor.

473-3 Hydrologic Analysis and Design. Hydrological cycle, stream-flow analysis, hydrograph generation, frequency analysis, flood routing, watershed analysis, urban hydrology, flood plain analysis. Application of hydrology to the design of small dams, spillways, drainage systems. Prerequisite: ENGR 370A.

474-3 Hydraulic Engineering Design. Study of pipe flow, network systems, pump selection, open channel flow, uniform flow, critical flow, gradually varied flow, rapidly varied flow, design of transitions, water surface profiles. Prerequisite: ENGR 370A.

492A-1 to 4 Special Problems in Civil Engineering. Selected engineering topics or problems in structural engineering. Four hours maximum credit. Not for graduate credit. Special approval needed from the instructor.

492B-1 to 4 Special Problems in Civil Engineering. Selected engineering topics or problems in hydraulic engineering. Four hours maximum credit. Not for graduate credit. Special approval needed from the instructor.

492C-1 to 4 Special Problems in Civil Engineering. Selected engineering topics or problems in environmental engineering. Four hours maximum credit. Not for graduate credit. Special approval needed from the instructor.

492D-1 to 4 Special Problems in Civil Engineering. Selected engineering topics or problems in applied mechanics. Four hours maximum credit. Not for graduate credit. Special approval needed from the instructor.

492E-1 to 4 Special Problems in Civil Engineering. Selected engineering topics or problems in geotechnical engineering. Four hours maximum credit. Not for graduate credit. Special approval needed from the instructor.

492F-1 to 4 Special Problems in Civil Engineering. Selected engineering topics or problems in computational mechanics. Four hours maximum credit. Not for graduate credit. Special approval needed from the instructor.

492G-1 to 4 Special Problems in Civil Engineering. Selected engineering topics or problems in surveying engineering. Four hours maximum credit. Not for graduate credit. Special approval needed from the instructor.

495A-3 Civil Engineering Design. Engineering ethics and professionalism. Project development skills, feasibility and cost-estimation, project management, auto-cad applications in civil engineering. Selection of projects, formation of design teams, development of a design proposal. Written and oral presentations of the design proposal. Not for graduate credit. Prerequisite: Physics 205B and Physics 255B with a grade of C or better, Completion of/concurrent enrollment in CE 320, 330, 418, 442 or 444, and 474.

495B-3 Civil Engineering Design. A capstone design experience using a team approach for the preliminary and final design of a civil engineering project. Documentation of all stages of the design project. Written and oral presentation of the final design. Not for graduate credit. Prerequisite: CE 495A, completion of/concurrent enrollment in CE 421 and 442 or 444.

Civil and Environmental Engineering Faculty

Bravo, Rolando, Associate Professor, Ph.D., University of Houston, 1990.

Butson, Gary J., Associate Professor, *Emeritus*, Ph.D., University of Illinois at Urbana-Champaign, 1981.

Chevalier, Lizette R., Professor and *Associate Dean for Undergraduate Education and Outreach*, Ph.D., Michigan State University, 1994.

Cook, Echol E., Professor, *Emeritus*, Ph.D., Oklahoma State University, 1970.

Davis, Philip K., Professor, *Emeritus*, Ph.D., University of Michigan, 1963.

DeVantier, Bruce A., Associate Professor, Ph.D., University of California at Davis, 1983.

Eichfeld, William F., Assistant Professor, M.S., University of Wisconsin at Madison, 1973.

Evers, James L., Associate Professor, *Emeritus*, Ph.D., University of Alabama, 1969.

Frank, Roy R., Jr., Assistant Professor, *Emeritus*, M.S., Southern Illinois University Carbondale, 1983.

Hsiao, J. Kent, Associate Professor, Ph.D., University of Utah, Salt Lake City, 2000.

Kassimali, Aslam, Professor and *Distinguished Teacher*, Ph.D., University of Missouri at Columbia, 1976.

Kolay, Prabir K., Assistant Professor, Ph.D., Indian Institute of Technology, Bombay, 2001.

Kumar, Sanjeev, Professor and *Chair and Distinguished Teacher*, Ph.D., University of Missouri at Rolla, 1996.

Liang, Yanna, Associate Professor, Ph.D., Utah State University, 2006.

Nowacki, C. Raymond, Associate Professor, *Emeritus*, Ph.D., University of Illinois at Urbana-Champaign, 1965.

Puri, Vijay K., Professor, Ph.D., University of Missouri at Rolla, 1984.

Ray, Bill T., Associate Professor, *Emeritus*, Ph.D., University of Missouri at Rolla, 1984.

Rubayi, Najim, Professor, *Emeritus*, Ph.D., University of Wisconsin, 1966.

Sami, Sedat, Professor, *Emeritus*, Ph.D., University of Iowa, 1966.

Tezcan, Jale, Associate Professor, Ph.D., Rice University, 2005.

Warwick, John J., Professor and *Dean*, Ph.D., The Pennsylvania State University, 1983.

Yen, Shing-Chung, Professor, *Emeritus*, Ph.D., Virginia Polytechnic Institute and State University, 1984.

Classics

(See Languages, Cultures, and International Studies)

Climate and Water Resources

(SEE GEOGRAPHY AND ENVIRONMENTAL RESOURCES)

Coaching

(SEE KINESIOLOGY)

Commercial Recreation

(SEE RECREATION)

Commodity Prices

(SEE AGRIBUSINESS ECONOMICS)

Communication Disorders and Sciences (Major, Courses)

The major in Communication Disorders and Sciences is part of the Rehabilitation Institute.

The program in Communication Disorders and Sciences has as its objective the training of qualified personnel to aid people who have speech, language, or hearing impairment. The undergraduate curriculum is broad in scope and gives the student the necessary preprofessional background for the clinical-research program offered at the master's level. Both the state of Illinois and national certification require the master's degree. Students who complete the graduate program at the master's level and have certification are qualified for positions in public or private clinics, schools, hospitals, or rehabilitation agencies. In addition, the broad scope of the undergraduate program provides a solid foundation for many graduate professional programs in rehabilitation, such as rehabilitation counseling, behavioral analysis and therapy, and rehabilitation administration.

Communication Disorders and Sciences are dedicated to preparing students for leadership roles in the profession. Students are expected to develop programs that will enhance their individual strengths in light of their professional goals. The undergraduate program permits students to develop significant concentration areas outside of the department while laying the foundation for graduate education.

The undergraduate program is designed to provide the student with sufficient information and experience to determine the advisability of pursuing a graduate degree in Communication Disorders and Sciences. Students choosing not to continue in the profession will find themselves well prepared to enter the job market with a broadly based education or to pursue graduate work in allied rehabilitation professions.

All students are encouraged to plan programs of study to meet the academic and practicum requirements for the Certificate of Clinical Competence of the American Speech-Language-Hearing Association, (10801 Rockville Pike, Rockville MD., 20852-3279) or the Standard Special Certificate in Speech and Language Impaired of the State of Illinois, or both. Programmatic planning at the undergraduate level will facilitate completion of certification requirements of American Speech-Language-Hearing Association and State of Illinois in conjunction with the master's degree program.

Bachelor of Science Degree in Communication Disorders and Sciences, College of Education and Human Services

COMMUNICATION DISORDERS AND SCIENCES — PREPROFESSIONAL PROGRAM

University Core Curriculum Requirements	41
To include: ENGL 101, 102; CMST 101; MATH 110 or 101; PHYS 101 or CHEM 106; PLB 115 or ZOOL 115; PHIL 308I; HIST 110; AD 101, HIST 201, MUS 103 or THEA 101; HIST 101A ¹ ,B, PHIL 103A,B; ENGL 121 or 204; POLS 114; PSYC 102; ANTH 202, HIST 202 or SOC 215; HED 101 or KIN 101.	
Major Requirements	49
EPSY 402 or MATH 282	3

PSYC 102, 211, 301	10
SOC 108	3
CDS 105, 300, 301, 302, 303, 314, 410, 420, 422, 492, 493	33
Professional Education Requirements	30
EDUC 301, 302, 303, 308, 311, 313, 314, 319, 401 (A-C)	
Total	120

¹One course required to meet non-western civilization/third world culture requirement.

Students pursuing an Illinois Type-10 Teaching Certificate must include the following:

Mathematics and Science coursework to total 12 semester hours (including one laboratory course).

Humanities and Fine Arts coursework to total 15 semester hours.

A minimum of 3 semester hours in English literature.

And the following courses: EDUC 301, 302, 303, 308, 311, 313, 314, 319, 402A-C.

A student in the College of Education and Human Services who plans to be a public school speech and language clinician in Illinois, thereby needing to meet the requirements for the Standard Special Certificate - Certificate in Speech and Language Impaired, should follow the program of course requirements listed above. To meet the University Core Curriculum Requirements for certification, the following UCC courses listed above must be taken. In addition, the requirements for the Teacher Education Program must be completed as part of the electives by advisement. Recommendation for admission to the Teacher Education Program for the speech-language impaired requires a minimum grade point average of 2.75 on a 4.0 scale. The student teaching requirement may not be undertaken at the undergraduate level. Students interested in the Teacher Education Program should contact the academic advisor for Communication Disorders and Sciences in the College of Education and Human Services for appropriate University Core Curriculum and Teacher Education coursework. See also Teacher Education Program.

Communication Disorders and Sciences Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101,102.....	3	3
MATH, CMST 101	3	3
Fine Arts, Humanities	3	3
Health, Biology.....	2-3	3
UCOL 101, PSYC 102	3	3
<i>Total</i>	14-15	15
SECOND YEAR	FALL	SPRING
Humanities, SOC 108	3	3
PHYS 101/CHEM 106, PSYC 211.....	3	4
Multicultural, Elective.....	3	3
Elective, Elective.....	3	3
PSYC 301, Elective	3	3
<i>Total</i>	15	16

THIRD YEAR	FALL	SPRING
CDS 105, 302	3	3
CDS 300, 303	3	3
CDS 301, Elective	3	3
CDS 314, Elective	3	3
Elective, EPSY 402/MATH 282	3	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
CDS 420, 410	3	3
Elective, CDS 422	3	3
Elective, CDS 492	3	3
Elective, CDS 493	3	3
Elective, Elective.....	3	3
<i>Total</i>	15	15

Courses (CDS)

100-0 to 1 Speech Clinic: Therapy. For students with speech and hearing deviations who need individual help. Special approval needed from the instructor.

104-3 Training the Speaking Voice. For those students who desire to improve their voice and articulation.

105-3 Introduction to Communication Disorders. A general survey course devoted to a discussion of the various problems considered to be speech and hearing disorders with special emphasis on basic etiological classification schemes and their incidence in the current population. Opportunities for directed observation.

300-3 Phonetics. Instruction in the use of phonetic symbols to record the speech sounds of midland American English, with emphasis on ear training, and a description of place and manner of production of these sounds.

301-3 Introduction to Speech-Language and Hearing Science. An introduction to the science of general speech including the history of research in the field and significant experimental trends. Open to all students.

302-3 Voice and Articulation. A general introduction to the phonological development in children on a normative basis. In addition to introducing the student to the classical studies in articulatory development, this course provides a general exposure to the implications of classical phonetic theory, coarticulatory theory and distinctive features theory as a framework for therapy and research. Physioacoustic parameters of voice quality variables evidenced in verbal communication are also studied. Lectures and demonstrations emphasize basic information necessary to study for the treatment of voice disorders.

303-3 Language Development. Presentation of developmental language components including theoretical considerations and terminology related to traditional structural and transformational grammars. The effects of dialect and English as a second language will be expounded. Language research and analysis is related to the developmental processes.

307-3 Introduction to Organics. An introduction to the organic bases of communication disorders. An emphasis will be placed on the foundations of development and teratological events and influences which result in specific communication disorders, and overview of those disorders, and their implica-

tions for the individual. Observations as directed. Prerequisite: CDS 314 or consent of instructor.

314-3 Anatomy and Physiology of the Speech and Hearing Mechanism. Structure and function of the speech and hearing mechanism.

328-3 Communication Disorders and Sciences and the Classroom Teacher. Basic information on communication disorders through exploring etiology, diagnostic, and treatment of school age children with common speech, language and hearing disorders. This course will also provide information on collaboration, and integration of speech-language programs into the school curriculum.

385-3 Computer Technology in Communication and Fine Arts. An introduction to the basic terminology, concepts and techniques being used in the various areas of education and rehabilitation. A foundation course to prepare students for the impact of computer technology in the professional lives of those who work in the occupational settings represented within the college.

408-3 Communicative Disorders: Craniofacial Anomalies. Development of cleft palate and related anomalies that cause communication disorders. Assessment and intervention of the communication disorders related to these impairments. Prerequisite: Coursework on the normal structure and function of the speech and hearing mechanism.

410-3 Multicultural Aspects of Communication Disorders. Students will explore different cultures and communication within these cultures. Emphasis will be placed on the relationship between cultural differences and communication disorders. Review of speech and language disorders in multicultural populations, as well as assessment and intervention strategies for use with this diverse group will be provided. Prerequisite: CDS 302, 303 or consent of instructor.

420-3 Introduction to Audiological Disorders and Evaluation. Bases of professional field of audiology (orientation, anatomy, and physiology of the auditory system), major disease processes influencing hearing and their manifestations, measurement of hearing loss. Prerequisite: CDS 301 and 314.

422-3 Communication Problems of the Hearing Impaired. Objectives and techniques for the teaching of lip reading, speech conservation, and auditory training. Prerequisite: CDS 302, 303, and 420 or equivalents. Special approval needed from the instructor.

450-3 Neuroanatomical Basis of Human Communication. Examination of the central nervous system (brain and spinal cord) as it relates to normal and disordered human communication. Presentation of basic neuroanatomy, common neuropathologies relevant to communication disorders, and strategies in neurogenic problem solving. Prerequisite: CDS 314 or consent of instructor.

460-3 Augmentative and Alternative Communication Systems. An introduction to alternative and augmentative communication systems for non-vocal clients. Discussions include: use of aided and unaided augmentative systems, assessment procedures and training. Prerequisite: CDS 301 or consent of instructor.

485-1 to 9 (1 to 3 per 700 section number) Special Topics in Communication Disorders and Sciences. Topical presentations of current information on special interests of the

faculty not otherwise covered in the curriculum. Designed to promote better understanding of recent developments related to disorders of verbal communication. Open to advanced undergraduate and graduate students. Special approval needed from the instructor.

491-1 to 9 (1 to 3 per semester) Individual Study. Activities involved shall be investigative, creative, or clinical in character. Must be arranged in advance with the instructor, with consent of the chair. Special approval needed from the chair.

492-3 Diagnostic Procedures in Communication Disorders. A course devoted to discussion of the role of the speech and hearing clinician as a differential diagnostician. Special emphasis is placed on correlating information obtained from the oral-peripheral examination, articulation and language evaluation, audiometric and case history information in constructing the initial evaluation report. Special approval needed from the instructor.

493-3 Basic Clinical Practice. Current information regarding diagnostic, treatment and documentation procedures in speech-language pathology will be presented through active observation in the clinical environment and classroom instruction. Special approval needed from the instructor.

Communication Studies

(Department, Major, Minor, Courses, Faculty)

The Department of Communication Studies, formerly the Department of Speech Communication, offers courses in the history, theory and application of communication. These courses reflect liberal arts, humanities and social science traditions as approaches to theory and application.

The department also sponsors co-curricular activities in debate, forensics, performance studies (oral interpretation), and public relations, all of which are open to non-majors.

English is the language of instruction in the Department of Communication Studies and proficiency in written and oral English is required of all students in Communication Studies. To meet the requirements for a major in the Department of Communication Studies a student must demonstrate the following basic skills: the ability to deliver effective oral public presentations; the ability to write clear, correct English prose; the ability to communicate effectively at the interpersonal level as well as in groups; and the ability to understand and apply communication theory and research.

These communication competencies may be demonstrated by completing the major program and any one of the specializations described below and by receiving no lower than a C grade in courses listed in the required core and as required in the student's chosen specialization. Under certain circumstances, a student may elect to demonstrate a competency by passing a proficiency examination administered by the Department of Communication Studies.

Bachelor of Science Degree in Communication Studies, College of Liberal Arts

Degrees awarded in Speech Communication through Spring 2015. Degrees awarded in Communication Studies beginning Summer 2015.

COMMUNICATION STUDIES MAJOR

University Core Curriculum Requirements 41
College of Liberal Arts Academic Requirements

(See Chapter 4) 6-11

Includes: one year of foreign language and two writing intensive courses chosen from those listed in the required curriculum specializations below.

Requirements for Major in Communication Studies 42-43

Required Core Courses 9

Communication theory: 230

Communication skills: 3 hours of public communication selected from 221, 325, 326 or 370; and 3 hours of interpersonal communication selected from 261, 262, 371 or 383.

Required Curriculum Specialization (see below) ...33-34

Electives and Minor27-31

Intercultural Communication Specialization 33

For students interested in communication topics and practices as they occur in social, cultural, and cross-cultural settings, verbal and nonverbal transaction and exchange at the interpersonal, group, organizational, and public levels, and the challenges of cultural diversity at home and abroad; domestic and international careers in business, industry, teaching, and government with a focus on intercultural understanding, consensus, and appreciation.

Required: 262, 301I (or 341), 361, 440, 441, 448; and fifteen hours selected from any other communication studies courses.

Electives: AFR 215, 330; ANTH 202, 301, 304, 370, 410I, 410L, 410N, 410O; HIST 361, 365; JRNL 306I; LING 200, 201, 415; MKTG 336, 435; POLS 352I,373; PSYC 307, 323; RTD 467; SOC 215, 423, 424, 435, 437.

Communication Studies-Intercultural Communication Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101, CMST 101	3	3
ENGL 101, ENGL 102.....	3	3
Humanities, Mathematics.....	3	3
Science, Fine Arts	3	3
Social Science	3	3
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
Elementary Foreign Language I, II	3	3
Human Health, Multicultural.....	2	3
Humanities, CMST 230	3	3
CMST 262	3	-
Science, Electives	3	7
<i>Total</i>	14	16
THIRD YEAR	FALL	SPRING
Public Communication Skills.....	3	-
Interpersonal Communication Skills.....	3	-
CMST 301I, 361	3	3
Communication Studies Electives	-	6
ENGL 290.....	3	-

Electives	3	6
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
CMST 448, 440	3	3
CMST 441	-	3
Communication Studies Electives	6	3
Electives	6	6
<i>Total</i>	15	15

Interpersonal Communication Specialization 33
 For students interested in topics of communication in interpersonal relationships, language in everyday interactions, group communication dynamics, and non-verbal and intercultural aspects of communication; and careers in communication skills training, interviewing, communication research, conflict management, and employee or client relations.
 Required: 261, 262, 301I (or 341), 361, 463; and 18 hours selected from any other communication studies courses.

Communication Studies-Interpersonal Communication Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101	3	-
ENGL 101, ENGL 102	3	3
CMST 101, Humanities	3	3
Mathematics	-	3
Science, Fine Arts	3	3
Social Science	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
Elementary Foreign Language I, II	3	3
Human Health, Science	2	3
Humanities, CMST 230	3	3
Multicultural, CMST 262	3	3
CMST 261, Electives	3	4
<i>Total</i>	14	16

THIRD YEAR	FALL	SPRING
CMST 361	3	-
CMST 301I	3	-
ENGL 290	3	-
Public Communication Skills	-	3
Interpersonal Communication Skills	3	-
Communication Studies Electives	-	6
Electives	3	6
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
CMST 463	3	-
Communication Studies Electives	6	6
Electives	6	9
<i>Total</i>	15	15

Organizational Communication Specialization 33

For students interested in a broad spectrum of communication topics in the context of the organization including, but not limited to, compliance-gaining, superior-subordinate interaction, communication audit methods, organizational networks, organizational climate and culture, conflict resolution, impact of new communication technology, and information flow.
 Required: 280, 281, 326, 341 (or 301I), 383, 480, 483; 12 hours selected from any other communication studies courses.

Communication Studies-Organizational Communication Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101	3	-
ENGL 101, ENGL 102	3	3
CMST 101, Humanities	3	3
Mathematics	-	3
Science, Fine Arts	3	3
Social Science	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
Elementary Foreign Language I, II	3	3
Human Health, Science	2	3
Humanities, CMST 230	3	3
Multicultural, CMST 281	3	3
CMST 280, Electives	3	4
<i>Total</i>	14	16

THIRD YEAR	FALL	SPRING
CMST 301I, 326	3	3
ENGL 290, CMST 383	3	3
Public Communication Skills	-	3
Interpersonal Communication Skills	3	-
Communication Studies Specialization Elective	3	-
Electives	3	6
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
CMST 480	3	-
CMST 483	-	3
Communication Studies Electives	6	3
Electives	6	9
<i>Total</i>	15	15

Performance Studies Specialization 34

For students interested in theatrical and everyday performance and the oral interpretation of literature, and in careers in performance, writing-as-performance, and public presentation from business to the arts.
 Required: 370, 371, 471, 472; 6 hours selected from 474, 475, 476; at least one hour selected from 390F or 490F; and 15 hours selected from any other communication studies courses.

Communication Studies-Performance Studies Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101.....	3	-
ENGL 101, ENGL 102.....	3	3
CMST 101, Humanities	3	3
Mathematics.....	-	3
Science, Fine Arts	3	3
Social Science	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
Elementary Foreign Language I, II.....	3	3
Humanities, Electives.....	3	4
Human Health	2	-
Science	-	3
CMST 201, 230	3	3
CMST 371, 370.....	3	3
<i>Total</i>	14	16

THIRD YEAR	FALL	SPRING
CMST 390F/490F.....	-	1
CMST 471/472.....	3	-
CMST 474/475/476.....	-	3
Public Communication Skills	3	-
Interpersonal Communication Skills.....	-	3
Communication Studies Electives	3	3
ENGL 290.....	3	-
Electives	3	5
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
Communication Studies Electives	3	3
CMST 474/475/476.....	3	-
CMST 471/472.....	3	-
Electives	6	12
<i>Total</i>	15	15

Persuasive Communication Specialization 33

For students interested in public and political discourse, argumentation, rhetoric, social influence and media, careers in law, politics, sales, corporate and public advocacy, and selected areas in business and mass media.

Required: 221, 325, 326, 411; six hours selected from 310, 382, 412, 421 (3,3), 451; and 15 hours selected from any other communication studies courses.

Communication Studies-Persuasive Communication Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101.....	3	-
ENGL 101, ENGL 102.....	3	3
CMST 101, Humanities	3	3

Mathematics.....	-	3
Science, Fine Arts	3	3
Social Science	3	3

Total 15 15

SECOND YEAR	FALL	SPRING
Elementary Foreign Language I, II.....	3	3
Human Health, Science	2	3
Humanities, Elective	3	4
Multicultural	3	-
CMST 221, 230.....	3	3
Interpersonal Communication Skills.....	-	3

Total 14 16

THIRD YEAR	FALL	SPRING
CMST 325, 326.....	3	3
Communication Studies Elective	-	3
Persuasive Communication Electives....	3	3
Public Communication Skills	3	-
Electives	6	6

Total 15 15

FOURTH YEAR	FALL	SPRING
Communication Studies Electives	3	9
Electives	9	6
CMST 411.....	3	-

Total 15 15

Public Relations Specialization 33

For students interested in public relations: the study of internal and/or external communication between an organization or client and its publics. Includes media relations, writing for mass media, research, case studies, and planning of communication campaigns.

Required: 280, 281, 326, 381, 382, 481, Journalism 310 and 335, Journalism 311 or 302, three hours of Communication Studies 390H or 494H, three hours from Journalism, Radio, Television, & Digital Media or Communication Studies 301I (or 341), 390H, 482, 490H, 493, and 494H.

Minor or cognate study in related areas: Fifteen hours in a single department or related field of study beyond the University Core Curriculum and required courses. A cognate study will only be allowed if another unit on campus does not offer a minor and the student wishes to focus in that area. Cognate study must be approved by a member of the Public Relations Faculty.

Electives 10-26

(Electives for majors specializing in Public Relations include 15 hours of coursework in a minor or cognate study in a related area.)

Total 120

Communication Studies-Public Relations Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101.....	3	-
ENGL 101, ENGL 102	3	3
CMST 101, Mathematics	3	3

Humanities.....	3	3
Fine Arts.....	-	3
Social Science	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
Elementary Foreign Language I, II	3	3
Human Health	-	2
Science	3	3
ENGL 300.....	3	-
CMST 230.....	3	-
CMST 281, 280.....	3	3
CMST 390H/494H	1	1
Electives	-	4
<i>Total</i>	16	16

THIRD YEAR	FALL	SPRING
Multicultural.....	3	-
CMST 381, JRNL 310.....	3	3
CMST 382, JRNL 335.....	3	3
CMST 390H/494H, CMST 326	1	3
Public Relations Elective.....	3	-
Public Communication Skills	-	3
Minor	3	3
<i>Total</i>	16	15

FOURTH YEAR	FALL	SPRING
JRNL 302/311.....	3	-
CMST 481.....	3	-
Interpersonal Communication Skills.....	3	-
Minor	3	6
Electives	3	6
<i>Total</i>	15	12

Communications Studies Minor

A minor in Communication Studies consists of a minimum of fifteen hours (in addition to Communication Studies 101), which must include nine hours at the 300-or 400-level.

Courses (CMST)

100-3 Communication Studies Workshop. A workshop in debate, oral interpretation, or public speaking for secondary school seniors interested in intensive study in one or more of these areas. Special approval needed from the instructor.

101-3 Introduction to Oral Communication: Speech, Self and Society. (University Core Curriculum) [IAI Course: C2 900] This course provides theory and practical application relevant to students' development of basic oral communication competencies appropriate to a variety of contexts as situated in a culturally diverse world. Course Fee for Digital Materials: \$72.

102-1 Speaking with Confidence: Overcoming Communication Apprehension. Designed for students with high speech anxiety that are reluctant to enroll in Communication Studies 101 or are currently enrolled in 101. This course provides exercises and opportunities to significantly lessen and

control communication apprehension. Pass/Fail only.

201-3 Performing Culture. (University Core Curriculum) A critical examination of human communication - from everyday conversation to cultural formation - as performance. Lecture and discussion format with consideration of primary texts drawn from conversational transcripts, multicultural literature and popular culture.

221-3 Advanced Public Speaking. The components of effective speech with preparation and presentation of several types of speeches. Prerequisite: CMST 101 or consent of instructor.

230-3 Foundations of Communication. This course provides an expansive survey of communication concepts that foster awareness of self and others. Students will explore how understanding communication can help effectively navigate everyday interactions in personal and professional contexts. This course will enhance understandings of identity, relationships, social inequality, media representation, and organizational norms.

241-3 Communication Skills in the Global Workplace. This course provides practical application for intercultural theory beyond the classroom, within the context of globalization. Student will learn how intercultural communication can prepare him/her for life beyond college, including workplace diversity, career preparation, international business contexts and more. Assignments will culminate in a portfolio that will prepare students for their future in an increasingly globalized world.

261-3 Small Group Communication. Introduction to small group communication and the small group process. Special emphasis given to problem-solving discussion groups.

262-3 Interpersonal Communication. Theoretical approaches and contemporary research on patterns of interpersonal communication in romantic, friendship, family, and work relationships. Emphasis on developing skills for analyzing interpersonal processes through close description and interpretation. Satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement for Communication Studies majors.

280-3 Business and Professional Communication. A survey of communication theory pertaining to business and professional settings. Provides practice applicable to interviews, conference briefings, and presentation techniques. Prerequisite: CMST 101.

281-3 Introduction to Public Relations. [IAI Course: MC 913] Introduction to public relations theories, philosophies and principles for agency, business, governmental and not-for-profit organizations. Historical perspectives, current and future trends, professional associations and career opportunities explored.

301I-3 Communication Across Cultures. (University Core Curriculum) This course provides an introduction to communication between/among people from different cultures, focusing on the application of intercultural communication theory and research. Class assignments and exercises examine everyday encounters with individuals from different races, ethnicity, religions, gender, ages, sexual orientations and physical abilities. Credit cannot be earned in both CMST 301I and CMST 341.

310-3 Speechwriting. Advanced study and practice of the principles of composition, revision and delivery of effective public speeches. Satisfies the CoLA Writing-Across-the-Curriculum requirement for Communication Studies majors. Prerequisite:

CMST 221 or consent of instructor.

325-3 Argumentation and Debate. Through the study of argument, evidence, reasoning, and oral advocacy this course seeks to ensure competence in the ascertainment of truth by investigation and research and the establishment of truth through proof. The ultimate rationale for the course is the discovery and support of intelligent decisions. Prerequisite: CMST 101 or consent of instructor; CMST 221 recommended.

326-3 Persuasion. The means of influencing individuals and groups through communication. Emphasizes the shaping of others' values, beliefs, attitudes and behavior. Provides theoretical information about and practice in persuasive speaking for sources and targets of persuasion. Satisfies the CoLA Writing-Across-the-Curriculum requirement for Communication Studies majors.

341-3 Introduction to Intercultural Communication. (Same as LING 341) Examination of the elements and structure of intercultural and transracial communication in the United States. Designed to analyze and describe the interactions between social perception and expression as manifest in verbal and nonverbal behavior. Emphasis on the functional communication of minority groups. Prerequisite: CMST 101 or CMST 262 or consent of instructor. Credit cannot be earned in both CMST 301I and CMST 341.

342-3 Communication and Popular Culture. Students will explore the production, consumption, and dissemination of popular culture in the global marketplace. They will apply intercultural and cultural studies theories and concepts to popular culture texts such as film, television, music, advertising, gaming, second life, Facebook, and Twitter. The examination of popular culture will be centered around how popular culture influences understanding of identity/ies, identity differences, intercultural communication, and intercultural relationships. This course will enhance self-reflexivity, understanding, and knowledge concerning the implications of popular culture in our everyday lives and within intercultural interactions.

361-3 Nonverbal Communication. A survey of the nonverbal factors that influence the communicative interaction among persons. Review research findings and conduct projects germane to nonverbal communication. Readings, discussions, and research projects. Prerequisite: CMST 262 or consent of instructor.

362-3 Communication and Social Process. Introduction to the phenomenology of human communication and social process. Analysis and description of interpersonal communication in the development and operation of human communities. Special emphasis is given to the nature of persons, consciousness, and communication exchange in society.

370-3 Performance of Literature. Theory and practice in performance as a method for literary study, with emphasis on the student as performer. Prerequisite: CMST 201 or consent of instructor.

371-3 Storytelling and the Oral Tradition. Theory and practice in the art of storytelling with emphasis upon practical application, source materials, and historical and ethnic backgrounds.

381-3 Public Relations in Practice. Application of public relations theory and principles through training and practice in the development of public relations writing and production

skills including message construction and delivery, verbal, nonverbal, and visual production work and special events components. Satisfies the CoLA Writing-Across-the-Curriculum requirement for Communication Studies majors. Prerequisite: CMST 281 with a grade of C or better or consent of instructor.

382-3 Research Methods in Public Communication. An introductory survey of methods and techniques of audience analysis and public opinion research. Introduction to the design of research tools, sample selection, interviewing, and data analysis.

383-3 Interviewers and Interviewing. Planning, conducting, and analyzing interviews with emphasis on roles of interviewer and respondent in professional and organizational communication settings. Study of factors affecting accuracy, openness, and goal attainment in use of interview methods for evaluation and research. Individual and small group projects with selected aspects of interviewing.

390A-1 to 6 Applied Communication-Communication Pedagogy. Supervised individual and group performance in various communication arts. Emphasis on the practical application of communication skills communication pedagogy. May be repeated for credit up to a maximum of six hours total from 390, 490 and 491 toward degree requirements. Special approval needed from the instructor.

390B-1 to 6 Applied Communication-Debate. Supervised individual and group performance in various communication arts. Emphasis on the practical application of communication skills in debate. May be repeated for credit up to a maximum of six hours total from 390, 490 and 491 toward degree requirements. Special approval needed from the instructor.

390C-1 to 6 Applied Communication-Intercultural Communication. Supervised individual and group performance in various communication arts. Emphasis on the practical application of communication skills in intercultural communication. May be repeated for credit up to a maximum of six hours total from 390, 490 and 491 toward degree requirements. Special approval needed from the instructor.

390D-1 to 6 Applied Communication-Interpersonal Communication. Supervised individual and group performance in various communication arts. Emphasis on the practical application of communication skills in interpersonal communication. May be repeated for credit up to a maximum of six hours total from 390, 490 and 491 toward degree requirements. Special approval needed from the instructor.

390E-1 to 6 Applied Communication-Organizational Communication. Supervised individual and group performance in various communication arts. Emphasis on the practical application of communication skills in organizational communication. May be repeated for credit up to a maximum of six hours total from 390, 490 and 491 toward degree requirements. Special approval needed from the instructor.

390F-1 to 6 Applied Communication-Performance Studies. Supervised individual and group performance in various communication arts. Emphasis on the practical application of communication skills in performance studies. May be repeated for credit up to a maximum of six hours total from 390, 490 and 491 toward degree requirements. Special approval needed from the instructor.

390G-1 to 6 Applied Communication-Persuasive Com-

munication. Supervised individual and group performance in various communication arts. Emphasis on the practical application of communication skills in persuasive communication. May be repeated for credit up to a maximum of six hours total from 390, 490 and 491 toward degree requirements. Special approval needed from the instructor.

390H-1 to 6 Applied Communication-Public Relations. Supervised individual and group performance in various communication arts. Emphasis on the practical application of communication skills in public relations. May be repeated for credit up to a maximum of six hours total from 390, 490 and 491 toward degree requirements. Special approval needed from the instructor.

401-3 Communication Theories and Models. An advanced examination of the purposes and processes of constructing and using theories and models in communication research. Students critically analyze existing communication theories from both social scientific and interpretive paradigms in order to explicate and evaluate their implicit and explicit assumptions about human being, knowledge, and value. For graduate students and advanced undergraduates. Satisfies the CoLA Writing-Across-the-Curriculum requirement for communication studies majors. Prerequisite: CMST 230.

411-3 Rhetorical Criticism. Designed to develop the student's ability to criticize public discourse, including speeches, written works and the mass media. Satisfies the CoLA Writing-Across-the-Curriculum requirement for Communication Studies majors.

412-3 Environmental Rhetoric. An exploration of rhetorical structures and strategies in environmental policy, activism and public discourse. This course traces the significant contributions rhetoric and public debate have made in the struggle to protect environments from excessive industrial and commercial exploitation. A lecture, reading and discussion course.

413-3 Visual Rhetoric. An exploration of visual messages in public discourse and persuasive communication. This course offers tools for doing rhetorical criticism of visual messages, identifying similarities and differences between the analysis and production of verbal and visual persuasion. A lecture, readings, and discussion course.

415-6 (3,3) Topics in Gender, Sexuality & Communication. (Same as WGSS 415) An exploration of advanced theories and research in gender and sexuality from communication perspectives. Course may be repeated when topics vary. Special approval needed from the instructor.

416-3 Black Feminist Thought as Theory and Praxis. (Same as AFR 416 and WGSS 416) Explore the roots, contemporary manifestations, and current embodiments of Black feminist thought. Explore the works of Black women to engage in critical thinking and thoughtful dialogue that positions the valuable knowledge, experiences and perspectives of women of color at the center of inquiry while simultaneously discovering spaces for multicultural alliances. Prerequisite: CMST 301I or CMST 341 or consent of instructor.

421-3 to 9 (3,3,3) Studies in Public Address. Critical studies of speakers and issues relevant to social and political movements dominant in national and international affairs. A lecture, reading and discussion course. Students may repeat enrollment

to a total of nine hours.

435-3 to 6 (3,3) Topics in Performance Studies. An exploration of advanced theories and techniques for conducting sessions in performance studies. Topics vary and are announced in advance. Students may repeat enrollment in the course, since the topics change. Lecture, discussion, class projects, school visitations.

440-3 Language, Culture, and Communication. Study of language in use in social interactions in various cultural and communicative contexts. Topics include components of language, language change and diversity, speech acts, conversational structure, dialects, gender and language, bilingual and multilingual cultures, child language acquisition, and language use in institutional contexts. Prerequisite: CMST 301I or CMST 341, or consent of instructor.

441-3 Advanced Intercultural Communication: Theory and Practice. Advanced study of intercultural communication in domestic and global intercultural contexts. Course incorporates intercultural communication research with specific focus on application theory in professional contexts and in service of public advocacy and/or social justice. Prerequisite: CMST 301I (or CMST 341) or consent of instructor.

442-3 Psychology of Human Communication. Nature, development, and functions of verbal and nonverbal behavior; application of psychology theories and research to the communication process in individuals and groups. Emphasis on the systemic nature of communicative behavior.

443-3 General Semantics. Formulations from the works of Alfred Korzybski and from neo-Korzybskian interpreters are presented. General semantics is discussed as an interdisciplinary approach to knowledge. Relationships are made to contemporary problems in human affairs.

444-3 Studies in Language Acquisition. Research in and theories of the development of verbal and nonverbal language with attention to the maturational process. Includes investigation of social, phonological, syntactical, and semantic correlates of communication development. Appropriate for advanced students interested in working with or conducting research involving children.

445-3 Conversational Performance. Analysis of performance acts within everyday interaction: stories, jokes, laughter, teasing, etc. Application of theories of play, metacommunication and framing. Re-performance of recorded, transcribed conversations as method of exploring aesthetic dimensions of communication. Prerequisite: 9 hours of Communication Studies courses or consent of instructor.

446-3 Sociology of Language Discourse and Signs. Introduction to sociological semiotics, especially structuralism and post-structuralism. Reference to French theorists such as Barthes, Baudrillard, Bourdieu, Certeau, Deleuze and Guattari, Greimas, Group Mu, Lacan, Lyotard, and Perelman. Emphasis on the practice of discourse, language, and signs as a model for research in the human science of communicology.

447-3 Communicating Race and Ethnicity. (Same as AFR 447) Via intercultural theories and methods, this course explores histories, relationships, interactions and recent events by positioning racial and ethnic perspectives at the center of inquiry. The course critically examines the complexities of race,

racism and ethnicity by focusing on how people communicate across racial and ethnic differences in different contexts. Prerequisite: CMST 301I or CMST 341, or consent of instructor.

448-3 Intercultural Training. Introduction to communication theories and practices informing the training of individuals and groups anticipating extensive interactions with persons from differing cultural communities. The course provides content and learning opportunities aimed toward the design, development, and evaluation of effective, ethical culture-specific and culture-general intercultural training programs. Prerequisite: CMST 341 or CMST 301I or consent of instructor.

451-3 Political Communication. (Same as POLS 418) A critical review of theory and research which relate to the influence of communication variables on political values, attitudes, and behavior.

452-3 Interpersonal Communication and the Mass Media. A review, synthesis, and analysis of communication theory and research which deals with the process, interactive nature of interpersonal, and mass channels of communication. Prerequisite: CMST 401 or consent of instructor.

460-3 Small Group Communication: Theory and Research. A critical examination of small group theory and research in communication studies. Emphasis is given to the development of principles of effective communication and decision-making in the small, task-oriented groups. Prerequisite: CMST 261 or consent of instructor.

461-3 Laboratory in Interpersonal Communication I. Interpersonal communication is studied as human encounter. The philosophy and theoretical bases of existential phenomenological approaches to human communication are discussed. Projects are evolved by small groups that contribute to the understanding of human communication.

462-3 Laboratory in Interpersonal Communications II. Various theories of social and cultural change are explored. The role of interpersonal communication in the development of human consciousness is explicated. Projects are evolved by small groups that examine values and priorities of human nature and cultural nature.

463-3 Interpersonal Conflict. Study of sources, patterns, and outcomes of conflict in interpersonal relationships. Emphasis on interactive, systems-level analysis of naturally-occurring conflict episodes. Practice in managing conflicts, reframing, negotiation, and mediation. Prerequisite: CMST 262 or consent of instructor.

464-3 Compassionate Communication. Study and practical training in Nonviolent Communication and similar approaches to more effective inter- and intrapersonal communication. Using real-life experiences from political encounters and interpersonal conflicts to inner dialogue, this class offers a way to deepen peaceful connection and understanding with ourselves and others through honesty, empathy, and being "fully present" in the moment. Special approval needed from the instructor.

465-3 Philosophy of Communication. An introduction to philosophical approaches to the study of communicative interaction. Topics include the relation of meaning and conceptual structures to bodily experience and the interpretative nature of communicative interaction.

471-3 Prose Fiction in Performance. Study of prose fiction through analysis and individual performance. Satisfies the

CoLA Writing-Across-the-Curriculum requirement for communication studies majors. Prerequisite: CMST 370 or consent of instructor.

472-3 Poetry in Performance. The study of poetic form through analysis and performance. Prerequisite: CMST 201, CMST 370 or consent of instructor.

473-3 Performance Ethnography. An exploration of culture, ritual, narrative, community and personal identity as performance. Readings, field work and assignments focus on performance ethnography, communicative dimensions of performance and performance epistemology. Prerequisite: six hours of performance studies or consent of instructor.

474-3 Staging Literature. Theory and practice of staging literary texts with emphasis on adaptation and directing. Prerequisite: CMST 370 or CMST 371 or consent of instructor.

475-3 to 6 (3,3) Production Texts and Contexts. Advanced study related to theoretical and practical issues in performance staging with special emphasis on textual production, scripting, social contexts and performance practices. May be repeated for a total of six hours. Prerequisite: 6 hours of performance studies courses or consent of instructor.

476-3 Writing as Performance. An examination of the practical and theoretical links between composition and performance. Lectures, reading and assignments focus on performance as a means and an end to creative writing. Satisfies the CoLA Writing-Across-the-Curriculum requirement for Communication Studies majors.

480-3 Dynamics of Organizational Communication. Introduction to interrelationships of communicative behaviors and attitudes with organizational policies, structures, outcomes. Uses case studies and role-plays to teach principles. Individual research into selected aspects of organizational communication.

481-3 Public Relations Cases and Campaigns. Advanced course in public relations case analysis and campaign planning. Students critique public relations campaigns created by various profit, nonprofit and agency organizations. Students also design and implement public relations campaigns from problem identification through evaluation stages. Satisfies the CoLA Writing-Across-the-Curriculum requirement for Communication Studies majors. Prerequisite: CMST 381 and 382 with a grade of C or better or consent of instructor.

482-3 Public Relations in Sports and Recreation. Explores the role of public relations within sports and recreation organizations and the relationship between these industries and the media. Students will plan and conduct a fund-raising event, attend athletic competitions, and learn about careers in the sports and recreation fields.

483-3 Studies in Organizational Communication. Study of communication systems and behaviors within organizations. Consideration of relevance of communication to management operations, employee morale, networks, superior-subordinate relations, production, and organizational climates. Individual research into selected aspects of organizational communication. Prerequisite: CMST 480 or consent of instructor.

490A-1 to 6 Communication Practicum-Communication Pedagogy. A supervised experience using communication skills. Emphasis on the development of performance skills in communication pedagogy. May be repeated for credit. Undergraduates limited to a maximum of six hours total from 390,

490, and 491 and graduate students to three to be counted toward degree requirements. Prerequisite: twelve hours of Communication Studies. Special approval needed from the instructor.

490B-1 to 6 Communication Practicum-Debate. A supervised experience using communication skills. Emphasis on the development of performance skills in debate. May be repeated for credit. Undergraduates limited to a maximum of six hours total from 390, 490, and 491 and graduate students to three to be counted toward degree requirements. Prerequisite: twelve hours of Communication Studies. Special approval needed from the instructor.

490C-1 to 6 Communication Practicum-Intercultural Communication. A supervised experience using communication skills. Emphasis on the development of performance skills in intercultural communication. May be repeated for credit. Undergraduates limited to a maximum of six hours total from 390, 490, and 491 and graduate students to three to be counted toward degree requirements. Prerequisite: twelve hours of Communication Studies. Special approval needed from the instructor.

490D-1 to 6 Communication Practicum-Interpersonal Communication. A supervised experience using communication skills. Emphasis on the development of performance skills in interpersonal communication. May be repeated for credit. Undergraduates limited to a maximum of six hours total from 390, 490, and 491 and graduate students to three to be counted toward degree requirements. Prerequisite: twelve hours of Communication Studies. Special approval needed from the instructor.

490E-1 to 6 Communication Practicum-Organizational Communication. A supervised experience using communication skills. Emphasis on the development of performance skills in organizational communication. May be repeated for credit. Undergraduates limited to a maximum of six hours total from 390, 490, and 491 and graduate students to three to be counted toward degree requirements. Prerequisite: twelve hours of Communication Studies. Special approval needed from the instructor.

490F-1 to 6 Communication Practicum-Performance Studies. A supervised experience using communication skills. Emphasis on the development of performance skills in performance studies. May be repeated for credit. Undergraduates limited to a maximum of six hours total from 390, 490, and 491 and graduate students to three to be counted toward degree requirements. Prerequisite: twelve hours of Communication Studies. Special approval needed from the instructor.

490G-1 to 6 Communication Practicum-Persuasive Communication. A supervised experience using communication skills. Emphasis on the development of performance skills in persuasive communication. May be repeated for credit. Undergraduates limited to a maximum of six hours total from 390, 490, and 491 and graduate students to three to be counted toward degree requirements. Prerequisite: twelve hours of Communication Studies. Special approval needed from the instructor.

490H-1 to 6 Communication Practicum-Public Relations. A supervised experience using communication skills. Emphasis on the development of performance skills in public relations.

May be repeated for credit. Undergraduates limited to a maximum of six hours total from 390, 490, and 491 and graduate students to three to be counted toward degree requirements. Prerequisite: twelve hours of Communication Studies. Special approval needed from the instructor.

491-3 Independent Study in Communication. Readings, creative projects, or writing projects focusing on a theoretical study of communication. The independent study should normally be completed in one semester under the tutorial supervision of a faculty sponsor. A maximum of six hours from Communication Studies 390, 490 and 491 may be counted toward degree requirements. Not for graduate credit. Prerequisite: twelve hours of Communication Studies. Special approval needed from the instructor.

492-2 to 8 Workshop in Performance Studies. Summer offering concentrating in specialized areas of performance studies. Prerequisite: CMST 201 and CMST 370 or consent of instructor.

493-3 to 9 (3,3,3) Special Topics in Communication. An exploration of selected current topics in communication arts and studies. Topics vary and are announced in advance; both students and faculty suggest ideas. Students may repeat enrollment in the course, as the topic varies.

494A-1 to 6 Internship-Communication Pedagogy. A supervised experience in a professional or career setting. Maximum of six hours to be counted toward degree requirements. Not for graduate credit. Mandatory Pass/Fail. Special approval needed from the instructor.

494B-1 to 6 Internship-Debate. A supervised experience in a professional or career setting. Maximum of six hours to be counted toward degree requirements. Not for graduate credit. Mandatory Pass/Fail. Special approval needed from the instructor.

494C-1 to 6 Internship-Intercultural Communication. A supervised experience in a professional or career setting. Maximum of six hours to be counted toward degree requirements. Not for graduate credit. Mandatory Pass/Fail. Special approval needed from the instructor.

494D-1 to 6 Internship-Interpersonal Communication. A supervised experience in a professional or career setting. Maximum of six hours to be counted toward degree requirements. Not for graduate credit. Mandatory Pass/Fail. Special approval needed from the instructor.

494E-1 to 6 Internship-Organizational Communication. A supervised experience in a professional or career setting. Maximum of six hours to be counted toward degree requirements. Not for graduate credit. Mandatory Pass/Fail. Special approval needed from the instructor.

494F-1 to 6 Internship-Performance Studies. A supervised experience in a professional or career setting. Maximum of six hours to be counted toward degree requirements. Not for graduate credit. Mandatory Pass/Fail. Special approval needed from the instructor.

494G-1 to 6 Internship-Persuasive Communication. A supervised experience in a professional or career setting. Maximum of six hours to be counted toward degree requirements. Not for graduate credit. Mandatory Pass/Fail. Special approval needed from the instructor.

494H-1 to 6 Internship-Public Relations. A supervised ex-

perience in a professional or career setting. Maximum of six hours to be counted toward degree requirements. Not for graduate credit. Mandatory Pass/Fail. Special approval needed from the instructor.

Communication Studies Faculty

Bardhan, Nilanjana R., Professor, Ph.D., Ohio University, 1998.

Crow, Bryan, Associate Professor, Ph.D., University of Iowa, 1982.

Daughton, Suzanne M., Associate Professor, Ph.D., University of Texas at Austin, 1991.

Gingrich-Philbrook, Craig, Associate Professor, Ph.D., Southern Illinois University Carbondale, 1994.

Graham, Todd, *Director of Debate*, Ph.D., Arizona State University, 2000.

Gray, Jonathan, Associate Professor, Ph.D., Louisiana State University, 1999.

Griffin, Rachel, Associate Professor, Ph.D., University of Denver, 2008.

Hinchcliff-Pelias, Mary, Associate Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1982.

Houston, William Josh, Senior Lecturer, M.A., Western Illinois University, 1998.

Kleinau, Marion L., Professor, *Emerita*, Ph.D., University of Wisconsin, 1961.

Kleinau, Marvin D., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1977.

Langsdorf, Lenore, Professor, *Emerita*, Ph.D., SUNY at Stony Brook, 1977.

Lanigan, Richard L., Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1969.

McClearey, Denise, Senior Lecturer, M.A., Southern Illinois University Edwardsville, 1991.

Pace, Thomas J., Professor, *Emeritus*, Ph.D., University of Denver, 1957.

Pelias, Ronald J., Professor, *Emeritus*, Ph.D., University of Illinois, 1979.

Pensoneau-Conway, Sandra L., Assistant Professor, Ph.D., Southern Illinois University Carbondale, 2006.

Pineau, Elyse, Associate Professor, Ph.D., Northwestern University, 1990.

Smith, William D., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1964.

Stucky, Nathan, Professor and *Chair*, Ph.D., University of Texas at Austin, 1988.

Toyosaki, Satoshi, Associate Professor, Ph.D., Southern Illinois University Carbondale, 2005.

Walker, Rebecca, Assistant Professor, Ph.D., Louisiana State University, 2011.

Wiley, Raymond D., Assistant Professor, *Emeritus*, M.S., Southern Illinois University, 1965.

Community Recreation (SEE RECREATION)

Computer Engineering (Major)

(SEE ELECTRICAL AND COMPUTER ENGINEERING)

The Bachelor of Science degree program in Computer Engineering provides the students with a strong background in the basic Electrical and Computer Engineering sciences. Students have the option to choose among several advanced courses in the theory and applications of digital circuits and systems, computer architecture and design, computer networks and digital design automation.

Employment opportunities exist within a range of organizations, such as computer, semiconductor, aviation, electronics, microelectronics, broadcasting, telecommunications, defense and automotive companies, manufacturing and electric power companies, state and federal agencies and laboratories. Employment opportunities cover the spectrum of engineering activities, ranging from research and development, to systems analysis, automation, manufacturing, customer service and support, marketing and sales.

The undergraduate program in computer engineering is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>.

Computer Science

(Department, Major, Courses, Faculty)

Computers are a very prominent part of modern business and society. Many of the most important and exciting technological developments today involve computers and computer systems. The expanding role of computer-based systems has caused a high demand for computer professionals, a situation that is expected to continue well into the future.

Computer science is an extremely exciting, challenging and rewarding area of study. It incorporates an excellent combination of theoretical and intellectual content on the one hand, and practical application and societal importance on the other. By some standards, it is the strongest discipline in academia today, and has been for the past three decades.

Computer science is a broad and multidisciplinary field. Its general focus is on the design, analysis and use of computer hardware and software. As an academic discipline, it does not focus on just one technology, programming language, or computer architecture. Rather, it seeks to ground the student in fundamental concepts that are applicable to many environments.

Our curriculum prepares graduates for positions in the computer industry, as well as for advanced studies and research. We offer an undergraduate major leading to the Bachelor of Science and Bachelor of Arts degrees, an undergraduate minor, and graduate programs leading to the Master of Science degree and Doctor of Philosophy degree in computer science.

The bachelor's degree programs in computer science provide students with the technical background necessary to use, design, analyze and implement computer software and systems. All students must complete the required University Core Curriculum and satisfy the College of Science requirements. Computer science majors are required to take a core set of courses dealing with programming, data structures and algorithms, computer organization, operating systems, social issues of computing, and a senior project.

Along with taking the core courses, computer science majors may choose from a broad selection of computer-based courses in order to complete their departmental requirements. This broad selection of courses covers all principal areas of computer science: languages, networks, databases, architecture, graphics, software engineering, artificial intelligence, bioinformatics, web development, computer security, robotics and parallel computing. The curriculum for the Bachelor of Science degree is more traditional and somewhat more flexible than that for the Bachelor of Arts degree. It prepares students for a wide range of technical careers as software developers, systems administrators, database administrators, network administrators, etc. It also prepares students for entry into graduate degree programs in computer science. The Bachelor of Arts degree program is more specifically oriented toward the interdisciplinary aspect of computer science in which students select a secondary concentration such as: business, engineering, science, education, liberal arts, or mass communication. One possible secondary concentration in the area of business applications is designed to enable students to pursue a fifth year of studies leading to an MBA degree.

Our department also offers a minor in computer science. Students can choose from a variety of specializations. Service courses are also available for students who wish to acquire some computer literacy but are not pursuing a career as a computer professional. Computer science majors can enrich their computer science degree with a secondary concentration, minor, or double major in areas such as mathematics, engineering, business, communications, etc.

Students interested in computer science will be advised with respect to computer science courses by the department so they may profitably pursue their academic and professional interests.

The department enforces the following retention policy: a computer science major will not be permitted to enter any of the courses 220, 306, 311, 320, 330 and 335, unless that student has achieved a grade point average of at least 2.00 for all required precedent computer science courses. Any exceptions to this policy will require the written approval of the department.

Permission to enroll in departmental courses is subject to the restriction that a student who receives a grade of F or WF two times in the same course cannot take the course again. An exception to this policy may be granted by written approval of the department, but such exceptions will be rare.

The department also enforces the following restriction on students repeating its courses: a student cannot repeat a course or its equivalent, in which a grade of B or better was earned, without the consent of the department.

Bachelor of Science Degree in Computer Science, College of Science

*University Core Curriculum Requirements*¹ 41
College of Science Academic Requirements 9
 Biological Sciences (6 hours completed in major)¹ 3
 Mathematics (completed with computer science major)
 Physical Sciences (completed with computer science major)
 Supportive Skills6
 CS 290 and CS 480

Requirements for Major in Computer Science^{2,4} 69
 Computer Science Core⁴ 31
 Computer Science 202, 215, 220, 221, 306, 311, 320, 330, 335, each with a grade of C or better
 Computer Science Electives^{4,5,6,7}21
 To build on the Core and to provide breadth and depth, seven 400-level computer science courses must be chosen⁷
 Senior Project 498 and 499..... 5
 Mathematics 150^{1,3}, 250, 221 8
 Laboratory Science Sequence¹ 5
 Physics 205A,B and 255A,B or Chemistry 200, 201, 202 and 210, 211, 212

Total 120

¹A total of nine hours of biological science, mathematics and laboratory science coursework are accounted for in the 41-hour Core Curriculum requirement.

²The supportive skills are also required for a major.

³Prerequisite is Mathematics 111 or Mathematics 108 and 109. The elective hours are reduced by 3-6 hours for students who place into a course lower than calculus.

⁴At least half of the computer science credit hours must be taken at SIU.

⁵300, 301, and 393 cannot be used to fulfill the elective requirement. Use of 391 requires department approval.

⁶Use of 490, 491, 492, or 493 requires departmental approval. At most one of 447, 449, 471, 472, 475, and 476 can be used as an elective.

⁷Up to two of the seven 400-level courses could be replaced by 300-level computer science courses.

Bachelor of Science in Computer Science Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
MATH 111 ¹ , 150.....	4	4
PHIL 105, CS 215	3	4
CMST 101.....	-	3
PHSL 201, CS 202.....	3	4
UCOL 101.....	3	-
<i>Total</i>	16	18
SECOND YEAR	FALL	SPRING
CS 220, 311.....	4	3
CS 221.....	4	-
CS 290, UCC Soc Sci.....	3	3
MATH 250, 221	4	3
PHYS 205A, 255A	-	4
UCC Humanities, CS 306.....	3	3
<i>Total</i>	18	16
THIRD YEAR	FALL	SPRING
CS 330, 335	3	3
CS 320.....	3	-
CS 480	-	3
PHYS 205B, 255B.....	4	-
PLB 200 or ZOOL 118.....	-	4
UCC Fine Arts.....	-	3
UCC Social Science, CS 4XX	3	3
<i>Total</i>	13	16

FOURTH YEAR	FALL	SPRING
CS 498, 499.....	2	3
CS 4XX, 4XX.....	3	3
CS 4XX, 4XX.....	3	3
CS 4XX, 4XX.....	3	3
UCC Multicultural.....	3	-

Total 14 12

¹Students who place into calculus may substitute an elective for Mathematics 111.

Bachelor of Arts Degree in Computer Science, College of Science

<i>University Core Curriculum Requirements</i> ¹	41
<i>College of Science Academic Requirements</i>	12
Biological Sciences (6 hours completed in major, not UCC courses) ¹	3
Mathematics - completed with computer science major	
Physical Sciences (3 hours in major).....	3
Supportive Skills.....	6
CS 280 and CS 290	
<i>Requirements for Major in Computer Science</i> ²	65
Computer Science Core ³	28
Computer Science 201, 202, 215, 220, 221, 304/305 ⁶ , 306, 330 each with a grade of C or better	
Computer Science Electives ^{3, 4, 5}	18
To build on the Core and to provide breadth and depth, two additional 300-level and four 400-level computer science courses must be chosen.	
Mathematics 111 ¹	1
Secondary Concentration ^{7,8}	18
Eighteen credit hours approved by the Department of Computer Science in one of the following areas: business, engineering, science, education, liberal arts, or mass communication. Pre-med, pre-law or a minor in any of the above areas may fully or partially satisfy this requirement depending on credit hours.	
<i>Electives</i>	2
<i>Total</i>	120

¹A total of twelve hours of biological science, economics, mathematics, and laboratory science coursework are accounted for in the 41-hour Core Curriculum requirement. Mathematics 111 could be replaced by Mathematics 108 and 109, or by Mathematics 150.

²The supportive skills are also required for a major.

³At least half of the computer science credit hours must be taken at SIU.

⁴300, 301, and 393 cannot be used to fulfill the elective requirement. Use of 391 requires department approval.

⁵Use of 490, 491, 492, or 493 requires departmental approval. At most one of 447, 449, 471, 472, 475, and 476 can be used as an elective.

⁶Either 304 or 305.

⁷**MBA Foundation:** Mathematics 150 (instead of Mathematics 111), Accounting 220, Finance 270 and 330, Management 304 or 318, Marketing 304, and Economics 240¹ and 241. Management 304 allows a student to earn a minor in Business Administration.

Management 318 is required for entry into the Master in Business Administration degree program.

⁸Six credit hours must be at 300-level or above.

Bachelor of Arts in Computer Science Suggested Curricular Guide (with MBA Foundation)

FIRST YEAR	FALL	SPRING
CS 201, 215.....	3	4
ENGL 101, 102	3	3
MATH 111 ¹	4	-
PHIL 105, CS 202	3	4
CMST 101.....	-	3
UCOL 101.....	3	-

Total 16 14

SECOND YEAR	FALL	SPRING
MATH 150 ² , UCC Fine Arts	4	3
CS 220, 3XX.....	4	3
CS 221.....	4	-
ECON 240, 241	3	3
CS 290	-	3
PHYS 203A, 253A	-	4

Total 15 16

THIRD YEAR	FALL	SPRING
CS 304/305, 306	3	3
CS 3XX, ACCT XXX	3	3
CS 330, CS 4XX	3	3
CS 280	-	3
PLB 200 or ZOOL 118	-	4
PHYS 203B, UCC Social Science	6	-
UCC Humanities.....	3	-

Total 18 16

FOURTH YEAR	FALL	SPRING
PHSL 201	-	3
CS 4XX, 4XX	3	3
FIN 270, 330	3	3
MGMT 318/304 ³ , CS 4XX	3	3
MKTG 304	3	-
UCC Fine Arts, UCC Multicultural	3	3

Total 15 15

¹Students who place into calculus may substitute an elective for Mathematics 111.

²This is only required for students with secondary concentration in MBA.

³Management 304 allows a student to earn a minor in Business Administration. Management 318 is required for entry into the Master in Business Administration degree program.

Concentrations for BS and BA programs:

Computer science majors can use their electives to form an optional concentration in four different computer science areas: computer networks and security; database and systems; software engineering and application development; or artificial intelligence and robotics. Computer science majors must take three courses (out of their 400-level electives) from a particular topic to receive a concentration in that area. Concentrations will not appear on the diploma but will be stated on a certificate issued by the department. Computer science is a very dynamic field; therefore see www.cs.siu.edu for current concentration areas and their relevant courses.

Computer Science Minor

A minor consists of Computer Science 202, 215, 220 and at least nine hours of 300-level computer science coursework. At least nine of these hours must be taken at SIU.

Courses (CS)

105-3 Introduction to Application Software. This course is designed to provide a detailed exposure to various computer applications software including word processing, database management, spreadsheet, presentation, Web design software, and programming concepts. The course is designed to help students to better use the computer as a tool in their own fields and to help prepare students for Microsoft Office Specialist Certification examinations.

200B-3 Computer Concepts. [IAI Course: BUS 902] The course is designed to provide participants with a broad overview of computer concepts including key terminology and components of computer hardware, software, and operating systems. Topics will include, but are not limited to computer architecture, peripheral devices, networking components, system software, information system analysis, application software including word processing, database management, spreadsheet, and presentation software. Discussion will also include the Internet and Web page development.

201-3 Problem Solving with Computers. This course provides an introduction to problem solving using computers. It goes beyond basic computer literacy and application software experiences, but is less intensive than a first course devoted solely to programming. The course focuses on problem solving in the context of an introduction to computer programming and includes coverage of topics from computer literacy, word processing, spreadsheet and database packages. A preliminary treatment of the Internet and World Wide Web is also included.

202-4 Introduction to Computer Science. [IAI Course: CS 911] An introduction to computers and programming using a high-level structured language including a discussion of programming constructs and data representation. Primary emphasis will be given to problem solving, algorithm design, and program development. Three one-hour lectures and one two-hour lab per week. Prerequisite: Mathematics 111 or equivalent with a grade of C or better.

215-4 Discrete Mathematics. [IAI Course: M1 905] Introduction to topics relevant to the study of computer science including: number systems, sets, sequences, summations, logic and truth tables, proofs, functions, relations, matrix operations, combinations, permutations, counting techniques, discrete probability, algorithmic complexity, recurrence relations, Boolean algebra, simple combinational circuits, simplification techniques. Prerequisites: MATH 111 or equivalent with grade of C or better.

220-4 Programming with Data Structures. [IAI Course: CS 912] Advanced programming, data structures and algorithm design. Topics included advanced language features, data abstraction and object-oriented programming, recursion, stacks, queues, linked lists, trees and graphs, sorting and searching. The course meets for three lecture hours and two laboratory hours per week. Prerequisites: CS 202 and CS 215 each with a grade of C or better.

221-4 Introduction to Internet and Mobile Computing.

Introduction to components, architecture and infrastructure of systems and services to support internet computing and mobile platforms. Linux/Unix systems and server-side infrastructure: tools, commands and scripting. Client-side interfaces and application development (Android and web), IDEs, debugging, utilizing resources and services. This course will have a strong hands-on component. Prerequisite: CS 202 with a grade of C or better. Lab fee: \$100.

280-3 Computational Statistics I. This course provides a basic introduction to probability and statistics as well as related computational approaches. Topics include basic probability models, combinatorics, random variables, discrete and continuous probability distributions, statistical estimation and hypotheses testing, confidence intervals and linear regression. Some selected computational approaches for statistical problems such as simulation of random variables from probability distributions, the visualization of multivariate data, Monte Carlo integration and methods in inference will also be discussed. The R language will be used for programming assignments. Prerequisite: MATH 108 with a grade of C or better.

290-3 Communication Skills and Ethics for Computer Science. Effective writing, reading, presentation and oral communication skills for computer science professionals. Evaluation and analysis of technical material. Communicating with stakeholders and team members. Professional ethics and responsibilities in society and industry. Legal and sustainability impact. Discussions and assignments utilizing technical materials and case studies pertaining to history, research, practice and ethics in the discipline. Prerequisites: CS 201 or CS 202 with a grade of C or better or consent of the instructor.

300-3 Introduction to Linux. A gentle introduction to the Linux operating system. Computer programming experience is not required. Students will gain the knowledge and hands-on experience needed to install, configure, and use Linux. Emphasis will be placed on administration skills and security. Software for Linux will be surveyed, particularly to identify replacements for standard Windows applications. Prior experience with Windows or Macintosh operating systems is assumed.

301-3 Introduction to Visual Basic. This course is designed to introduce students to the fundamentals of programming in Visual Basic. The topics include, but are not limited to, design and development of the user interface, development of algorithms, and writing computer programs. The course will cover the history of programming languages, object oriented programming, data types, arrays, control structures, string manipulation and Web-based applications.

304-3 Advanced Object-Oriented Programming. Advanced features of object-oriented programming are covered in depth. The topics covered include, but are not limited to, the following: polymorphism, inheritance, overloading, generic programming, exception handling, file I/O, GUI development. A group project is an integral part of the course. Prerequisite: CS 220 with a grade of C or better.

305-3 Software Development Practices. Practices, tools and methodologies for development of software within the context of a team. Agile software practices and modern development tools are used to build an enhanced understanding of object-oriented design principles, implementation, and testing to meet

customer requirements. A team project is an integral part of this course. Prerequisite: CS 220 with C or better.

306-3 Linux/UNIX Programming. This course will prepare students to develop software in and for Linux/UNIX environments. Topics to be covered include basic operating system concepts, effective command line usage, shell programming, the C language, programming development tools, system programming, network programming (client-server model and sockets), and GUI programming. Prerequisites: CS 220 and CS 221 with a grade of C or better.

311-3 The Theory and Implementation of Programming Languages. Introduction to the theory and implementation of programming languages including finite automata, regular grammars, lexical analysis, parsing, syntax-directed translation, semantic analysis, binding variables, data types, static and dynamic scope, subprograms, abstraction, and concurrency. Study of object-oriented, functional, and logic programming languages. Lab work is essential. Prerequisite: CS 220 with a grade of C or better.

315-3 Computer Logic and Digital Design. Introduction to switching algebra and its applications. Combinational logic and combinational circuit components. Sequential logic and sequential circuit components. Asynchronous sequential circuits. Prerequisite: CS 215 with a grade of C or better.

320-3 Computer Organization and Architecture. Overview of the basic logic circuits needed in constructing a computer. Fundamental computer operations: machine and assembly language instructions, stacks, procedures and macros. The translation process: assembly, linking and loading. Hardware elements for processing, transferring, and storing information. Data path and control unit for a simple processor. Prerequisite: CS 220 with grade of C or better.

330-3 Introduction to the Design and Analysis of Algorithms. A detailed treatment of the design, analysis, and complexity of algorithms, including greedy algorithms, divide and conquer, dynamic programming, and limitations of algorithms as problems get larger or more complex. Prerequisites: CS 220 with a grade of C or better.

335-3 Operating Systems. An extended treatment of the components of operating systems including process management, concurrency, memory management, device management, file management, and security. Prerequisite: CS 220 with a grade of C or better.

350-3 Web Application Development. A comprehensive introduction to languages and tools used to create client side and server side Web applications. Topics include, but are not limited to, markup languages, scripting languages, dynamic web pages, processing forms, server-side technologies, and database access. Prerequisites: CS 202 and CS 221 with a grade of C or better or consent of the instructor.

391-1 to 3 Current Topics in Computer Science. Selected current topics from various fields of computer science. Special approval needed from the instructor.

393-1 to 6 Internship in Computer Science. Credit for participation in a formalized internship program involving computer science related work. Hours do not count toward requirements for computer science major. Mandatory Pass/Fail. Prerequisite: prior approval of the sponsoring agency and the Department of Computer Science. Restricted to Computer Science major.

401-3 Computer Architecture. Review of logical circuit design. Hardware description languages. Algorithms for high-speed addition, multiplication and division. Pipelined arithmetic. Implementation and control issues using PLA's and microprogramming control. Cache and main memory design. Input/Output. Introduction to interconnection networks and multiprocessor organization. Prerequisite: CS 320 with a grade of C or better or graduate standing.

402-3 Theory and Applications of Computer Aided Design. A study of algorithmic techniques which solve high complexity design rules. Graph algorithms and formulations, randomized solutions, techniques from operations research and statistics, computational geometry algorithms and data structures are introduced. The techniques are mainly applied on the physical design/automation problem for integrated circuits and systems. Prerequisite: CS 315 and 330 each with a grade of C or better or graduate standing.

404-3 Autonomous Mobile Robots. This course is a comprehensive introduction to modern robotics with an emphasis on autonomous mobile robotics. Fundamentals of sensors and actuators as well as algorithms for top level control are discussed. Multi-robotics and human-robot interaction issues are explored. A group project is an integral part of this course. Prerequisite: CS 330 with a grade of C or better or graduate standing. Lab fee: \$125.

406-3 Basic Linux System Administration. This course will be an introduction to the administration of Linux systems, with emphasis on security for networked systems. Topics to be covered include: installation and configuration of Linux distributions, typical maintenance activities, and security measures for networked systems. Students will have access to lab machines for hands on practice. Prerequisite: CS 306 with a grade of C or better or graduate standing.

408-3 Applied Cryptography. This course is a comprehensive introduction to modern cryptography, with an emphasis on the application and implementation of various techniques for achieving message confidentiality, integrity, authentication and non-repudiation. Applications to Internet security and electronic commerce will be discussed. All background mathematics will be covered in the course. Prerequisite: CS 330 with a grade of C or better and MATH 221 or graduate standing.

410-3 Computer Security. A broad overview of the principles, mechanisms, and implementations of computer security. Topics include cryptography, access control, software security and malicious code, trusted systems, network security and electronic commerce, audit and monitoring, risk management and disaster recovery, military security and information warfare, physical security, privacy and copyrights, and legal issues. Prerequisite: CS 306 with a grade of C or better or graduate standing.

412-3 Programming Distributed Applications. This course uses advanced features of the Java programming language to develop networked, distributed, and web-based applications. Topics covered include, but are not limited to, sockets, datagrams, the Java security model, threads, multi-tier architectures, Java RMI, Java database connectivity, and Java-based mobile agents. Prerequisite: CS 306 with a grade of C or better or graduate standing.

416-3 Compiler Construction. Introduction to compiler construction. Design of a simple complete compiler, including lexi-

cal analysis, syntactical analysis, type checking, and code generation. Prerequisite: CS 306 and 311 each with a grade of C or better or graduate standing.

420-3 Distributed Systems. A top-down approach addressing the issues to be resolved in the design of distributed systems. Concepts and existing approaches are described using a variety of methods including case studies, abstract models, algorithms and implementation exercises. Prerequisite: CS 335 or graduate standing.

425-3 Principles of Virtualization and Cloud Computing. Cloud Computing (CC) represents a recent major strategic shift in computing and Information Technology. This course explores fundamental principles, foundational technologies, architecture, design, and business values of CC. Understanding will be reinforced through multiple angles including: analysis of real world case studies, hands-on projects and in-depth study of research developments. Prerequisites: CS 330 with a grade of C or better or graduate standing.

430-3 Database Systems. The course concentrates on the relational model and includes several query languages. Topics covered include normalization, database design, catalogs, transaction support, concurrency control, integrity support, backup and recovery, and security. Projects involve the use of both personal and enterprise database systems. Prerequisite: CS 330 with a grade of C or better or graduate standing.

435-3 Software Engineering. Principles, practices and methodology for development of large software systems. Object-oriented principles, design notations, design patterns and coping with changing requirements in the software process. Experiences with modern development tools and methodologies. A team project is an integral part of this course. Prerequisite: CS 330 with a grade of C or better; CS 306 with a grade of C or better recommended or graduate standing.

436-3 Artificial Intelligence I. Search and heuristics, problem reduction. Predicate calculus, automated theorem proving. Knowledge representation. Applications of artificial intelligence. Parallel processing in artificial intelligence. Prerequisite: CS 311 and 330 each with a grade of C or better or graduate standing.

437-3 Machine Learning and Soft Computing. An introduction to the field of machine learning and soft computing. It covers rule-based expert systems, fuzzy expert systems, artificial neural networks, evolutionary computation, and hybrid systems. Students will develop rule-based expert systems, design a fuzzy system, explore artificial neural networks, and implement genetic algorithms. Prerequisite: CS 330 with a grade of C or better or graduate standing.

438-3 Bioinformatics Algorithms. This course is an introductory course on bioinformatics algorithms and the computational ideas that have driven them. The course includes discussions of different techniques that can be used to solve a large number of practical problems in biology. Prerequisite: CS 330 with a grade of C or better or graduate standing.

440-3 Computer Networks. Design and analysis of computer communication networks. Topics to be covered include queuing systems, data transmission, data link protocols, topological design, routing, flow control, security and privacy, and network performance evaluation. Prerequisite: CS 330 with a grade of C or better; CS 306 recommended or graduate standing.

441-3 Mobile and Wireless Computing. Concepts of mobile and wireless systems are presented. These concepts include, but are not limited to, Routing and Medium Access for Mobile Ad hoc and Wireless Sensor Networks, Mobile IP, Wireless LAN and IEEE 802.11. Hands-on group lab experience is an integral component in the course. Prerequisite: CS 330 with a grade of C or better, or consent of the instructor or graduate standing.

447-3 Introduction to Graph Theory. (Same as MATH 447) Graph theory is an area of mathematics which is fundamental to future problems such as computer security, parallel processing, the structure of the World Wide Web, traffic flow and scheduling problems. It also plays an increasingly important role within computer science. Topics include: trees, coverings, planarity, colorability, digraphs, depth-first and breadth-first searches. Prerequisite: MATH 349 with C or better.

449-3 Introduction to Combinatorics. (Same as MATH 449) This course will introduce the student to various basic topics in combinatorics that are widely used throughout applicable mathematics. Possible topics include: elementary counting techniques, pigeonhole principle, multinomial principle, inclusion and exclusion, recurrence relations, generating functions, partitions, designs, graphs, finite geometry, codes and cryptography. Prerequisite: MATH 349 with C or better.

451-3 Theory of Computing. The fundamental concepts of the theory of computation including finite state acceptors, formal grammars, Turing machines, and recursive functions. The relationship between grammars and machines with emphasis on regular expressions and context-free languages. Prerequisite: CS 311 and 330 each with a grade of C or better or graduate standing.

455-3 Advanced Algorithm Design and Analysis. An in-depth treatment of the design, analysis and complexity of algorithms with an emphasis on problem analysis and design techniques. Prerequisites: CS 330 with a grade of C or better or graduate standing.

471-3 Optimization Techniques. (Same as MATH 471) Introduction to algorithms for finding extreme values of nonlinear multivariable functions with or without constraints. Topics include: convex sets and functions; the arithmetic-geometric mean inequality; Taylor's theorem for multivariable functions; positive definite, negative definite, and indefinite matrices; iterative methods for unconstrained optimization. Prerequisite: MATH 221 and MATH 250 with C or better.

472-3 Linear Programming. (Same as MATH 472) Introduction to finding extreme values of linear functionals subject to linear constraints. Topics include: recognition, formulation, and solution of real problems via the simplex algorithm; development of the simplex algorithm; artificial variables; the dual problem and duality theorem; complementary slackness; sensitivity analysis; and selected applications of linear programming. Prerequisite: MATH 221 with C or better.

475-3 Numerical Analysis I. (Same as MATH 475) Introduction to theory & techniques for computation with digital computers. Topics include: solution of nonlinear equations; interpolation & approximation; solution of systems of linear equations; numerical integration. Students will use MATLAB to study the numerical performance of the algorithms introduced in the course. Prerequisites: MATH 221 and MATH 250 with C or better.

476-3 Numerical Analysis II. (Same as MATH 476) Continu-

ation of CS 475. Topics include: solution of ordinary differential equations; computation of eigenvalues and eigenvectors; and solution of partial differential equations. Students will use MATLAB to study the numerical performance of the algorithms introduced in the course. Prerequisites: MATH 305 and MATH 475 with C or better.

480-3 Computational Statistics II. This course utilizes computational and graphical approaches to solve statistical problems. A comprehensive coverage on modern and classical methods of statistical computing will be given. Case studies in various disciplines such as science, engineering and education will be discussed. Various topics such as numerical integration and simulation, optimization and maximum likelihood estimation, density estimation and smoothing as well as re-sampling will be presented. Students will be able to create graphical and numerical display based on their data analysis results using R programming language. Prerequisite: MATH 250 and CS 306 or CS 330 with a grade of C or better or graduate standing.

484-3 User Interface Design and Development. Problems and processes in the design of highly usable systems. Understanding stakeholders, requirements, tasks, prototyping, evaluation, guidelines and design process and heuristics. Interactive software concepts and implementation considerations. A group project is an integral part of this course. Prerequisite: CS 306 with a grade of C or better or graduate standing.

485-3 Computer Graphics. Principles and techniques of computer graphics. Interactive graphics software development using a modern graphics standard. Topics include: primitives, transforms, clipping, modeling, viewing, rendering, texture, animation and ray tracing. A group project is an integral part of this course. Prerequisite: CS 306 with a grade of C or better; Mathematics 150 and 221 are recommended or graduate standing.

487-3 Software Aspects of Game Development. This course focuses on software implementation and development aspects of game production including: software process, system architecture, frameworks, entity management and interaction design, game design, production and business issues as well as technical foundations in graphics modeling and rendering, collision detection, physics, artificial intelligence, and multiplayer techniques. Prerequisite: CS 330 with a grade of C or better or graduate standing.

490-1 to 6 (1 to 3 per semester) Readings. Supervised readings in selected subjects. Not for graduate credit. Mandatory Pass/Fail. Special approval needed from the instructor and department.

491-1 to 6 (1 to 3 per topic) Special Topics. Selected advanced topics from the various fields of computer science. Special approval needed from the instructor.

492-1 to 6 (1 to 3 per semester) Special Problems. Individual projects involving independent work. Special approval needed from the department.

493-1 to 4 Seminar. Supervised study. Preparation and presentation of reports. Special approval needed from the instructor.

498-2 Senior Project in Computer Science I. Selecting and planning a team project which is representative of a project graduates may encounter in their professional employment. This involves team formation, project selection, project

planning, proposal writing, and proposal presentation. Prerequisite: completion of or concurrent enrollment in at least two other 400-level Computer Science courses. Restricted to senior status in Computer Science.

499-3 Senior Project in Computer Science II. A continuation of CS 498. An exercise in the design, implementation, documentation, and deployment of a group project culminating in a presentation to the computer science faculty. Prerequisite: CS 498.

Computer Science Faculty

Akkaya, Kemal, Associate Professor, Ph.D., University of Maryland, Baltimore County, 2005.

Carver, Norman F., III, Associate Professor, Ph.D., University of Massachusetts, 1990.

Che, Dunren, Professor, Ph.D., Beijing University of Aeronautics and Astronautics, 1994.

Cheng, Qiang, Associate Professor, Ph.D., University of Illinois, 2002.

Danhof, Kenneth J., Professor, *Emeritus*, Ph.D., Purdue University, 1969.

Gupta, Bidyut, Professor, Ph.D., University of Calcutta, 1986.

Hexmoor, Henry, Associate Professor, Ph.D., University at Buffalo, 1996.

Hou, Wen-Chi, Professor, Ph.D., Case Western Reserve University, 1989.

Mark, Abraham M., Professor, *Emeritus*, Ph.D., Cornell University, 1947.

McGlinn, Robert, Associate Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1976.

Mogharreban, Namdar, Associate Professor, Ph.D., Southern Illinois University Carbondale, 1989.

Phillips, Nicholas C. K., Associate Professor, *Emeritus*, Ph.D., University of Natal, 1967.

Rahimi, Shahram, Professor and *Chair*, Ph.D., University of Southern Mississippi, 2002.

Wainer, Michael S., Associate Professor, Ph.D., University of Alabama-Birmingham, 1987.

Wright, William E., Professor, *Emeritus*, D.Sc., Washington University, 1972.

Zargham, Mehdi R., Professor, *Emeritus*, Ph.D., Michigan State University, 1983.

Zhu, Michelle, Associate Professor, Ph.D., Louisiana State University, 2005.

Conservation

(SEE FORESTRY)

Construction Management

(SEE TECHNICAL RESOURCE MANAGEMENT)

The Bachelor of Science in Technical Resource Management includes an optional specialization in Professional Construction Management. Individuals who have completed formal construction-related education or occupational training may be eligible for the major and specialization. For more information, contact the School of Information Systems and Applied Technologies.

Counselor Education

(Major, [Graduate only], Courses)

Courses (COUN)

100-2 Decision Making for Career Development. Examination of factors relating to career decision making. Emphasis on the continuous use of learned processes and information in vocational development. Supplementary group guidance and counseling sessions required. Charges may be assessed to cover the cost of administering and scoring occupational interest surveys to be given during the course. These charges should be less than \$10.

412-3 Human Behavior and Mental Health. This course is designed to provide an overview of the factors and conditions in life that tend to affect mental health and the community resources available to address mental health needs. Social, political, economic and professional resources will be examined as they relate to the development, implementation and coordination of mental health services and systems. Restricted to junior or senior standing.

430-3 Conflict Resolution Skills for Education Environments. The purpose of the course is to help educators and others to develop the understanding and skills necessary to promote peaceable means for resolving conflict with and among children and adolescents in an educational environment. The course will focus on participants developing personal techniques and approaches to assist children and adolescents to develop age-appropriate conflict resolution skills.

481-1 to 12 Seminar. Conducted by staff members and distinguished guest lecturers on pertinent topics. Special approval needed from the instructor and department.

491-1 to 6 Special Research Problem-Individual Study. For majors. Formulating, investigating, and reporting on a problem in the area of applied psychology. Restricted to advanced standing. Special approval needed from the department.

493-3 Counseling Skill Development. (Same as PSYC 441) Through simulated counseling situations and extensive examination of counseling case studies, counseling skills are examined and practiced.

Criminology and Criminal Justice

(Major, Courses, Faculty)

The Bachelor of Arts degree with a major in Criminology and Criminal Justice meets the objectives of students interested in law enforcement, the courts, corrections, juvenile justice, criminal behavior and other aspects of crime and criminal justice.

The curriculum is designed to provide students with a broad view of crime and criminal justice. Building on the fundamental knowledge developed in core courses and a set of electives, students can select from a variety of courses to gain in-depth, specialized knowledge about their particular areas of interest within the curriculum. To supplement their educational experience, students may consider coursework or a minor in other fields such as: accounting, anthropology, forestry, geography, Latino and Latin American studies, political science, psychology, sociology, or Spanish. These courses are best chosen in consultation with faculty guidance, depending on interests and career goals.

This approach provides a sound foundation in Criminology and Criminal Justice while allowing the flexibility necessary to accommodate individual interests and needs.

A field internship placement may be an important element in the program and is encouraged for interested students who meet departmental criteria.

The program requires that each Criminology and Criminal Justice major complete a minor in some other field of study. Completing the minor offered by any other four-year program at SIU Carbondale can satisfy this requirement.

Bachelor of Arts Degree in Criminology and Criminal Justice, College of Liberal Arts

CRIMINOLOGY AND CRIMINAL JUSTICE MAJOR	
<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements (See Chapter 4)</i>	15
<i>Requirements for Major in Criminology & Criminal Justice</i>	33
Core Requirements: 201, 290, 310 or 360, 316 ¹ , 317.....	15
Criminology and Criminal Justice Electives: 18 hours, at least 9 of which must be selected from 302, 306, 320, 350, 374, 384, 415, 462, 473; in addition at least 9 of the 18 hours must be selected from 400-level courses.....	18
<i>Minor</i>	15-18
<i>Electives</i>	13-16
<i>Total</i>	120

¹ Students who transfer credit in fulfillment of the 316 requirement including course substitutions must complete a CCJ course that is designated as fulfilling the CoLA Writing-Across-the-Curriculum requirement as part of their Criminology and Criminal Justice Electives.

Completion of Criminology and Criminal Justice 201 and 290 (or consent of the instructor) is required for taking many 300- or 400-level Criminology and Criminal Justice courses. In addition, completion of Criminology and Criminal Justice 316 (or consent of instructor) is required for taking most 400-level Criminology and Criminal Justice courses. Prerequisites may be associated with individual courses; refer to the catalog description of the specific course.

No more than three hours of Criminology and Criminal Justice 395 can be counted toward the major.

At least 15 of the credit hours applied toward completion of the requirements of a B.A. in Criminology and Criminal Justice must have been earned in criminology and criminal justice courses offered at SIU Carbondale.

Criminology and Criminal Justice majors are encouraged to take the Core Curriculum course, Criminology and Criminal Justice 203. Criminology and Criminal Justice 203, however, can be counted toward the 33 hours in the Criminology and Criminal Justice major only if the student fulfills the Core Curriculum Integrative Studies (Multicultural) requirement with some course other than Criminology and Criminal Justice 203.

Criminology and Criminal Justice majors are required to complete an approved SIU minor program. A student completing a single minor program may not use any hours from that minor to count for any hours in their criminology and criminal justice major. Criminology and criminal justice majors choosing the forensic science minor, however, are allowed to count Criminology and Criminal Justice 201 toward both the major and minor.

A student may substitute POLS 340 for CCJ 302; SOC 372

for CCJ 290; Psychology 211, SOC 312, or POLS 300 for CCJ 316; SOC 308 or PSYC 466 for CCJ 317.

Criminology and Criminal Justice Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
Core Science ¹	3	3
Core Social Science ¹	3	3
Core Humanities ¹	3	3
ENGL 101, 102	3	3
UCOL 101, Core Mathematics	3	3
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
CMST 101 ¹ , Core Human Health	3	2
Core Multicultural	3	-
Foreign Languages ²	3	3
CCJ 201, Fine Arts	3	3
CCJ 290, 316	3	3
CCJ 300-level	-	3
<i>Total</i>	15	14
THIRD YEAR	FALL	SPRING
ENGL 290 or equivalent	3	-
CCJ 317, CCJ 310	3	3
CCJ 300, 400 level	3	3
Electives	-	4
Minor courses	6	6
<i>Total</i>	15	16
FOURTH YEAR	FALL	SPRING
CCJ 400 level	3	3
CCJ 300 level	3	-
Minor courses	3	3
Electives	6	9
<i>Total</i>	15	15

¹See University Core Curriculum.

²See College of Liberal Arts Academic Requirements.

Minor

A minor in criminology and criminal justice consists of 18 hours of criminology and criminal justice courses, which must include 201 and 290. At least 12 of the 18 hours must consist of criminology and criminal justice courses taken at SIU Carbondale.

Courses (CCJ)

201-3 Introduction to the Criminal Justice System. [IAI Course: CRJ 901] A survey of the agencies and processes involved in the administration of criminal justice including underlying ideologies, procedures, fundamental legal concepts, and the roles and functions of police, courts, and correctional services.

203-3 Crime, Justice, and Social Diversity. (University Core Curriculum) Examination of how social heterogeneity and inequality influence the processes involved in the definition and regulation of behavior through law, particularly the criminal law. Factors such as race, ethnicity, gender and class are related to definitions of crime and justice, and to the likelihood of being the victim of crime. The differential influence of the op-

erations and outcomes of the criminal justice system on diverse groups in U.S. society is emphasized.

290-3 Introduction to Criminological Theory . [IAI Course: CRJ 912] A multidisciplinary study of the etiology and patterning of offender behavior and crime.

302-3 Introduction to Criminal Justice Administration. An introduction to the principles of administration and organization of criminal justice agencies. Prerequisite: CCJ 201 and 290 or consent of instructor.

303-3 Criminal Investigation. An introduction to the fundamentals of the modern criminal investigative process, the application of current forensic technologies, and the subsequent identification and court processes used to bring suspects to justice.

306-3 Policing in America. An examination of the police as part of society’s official control apparatus. Major topics include historical development of the police, role of the police in the criminal justice system, functions and effectiveness of the police, and the relationship of the police to the communities they serve. Prerequisite: CCJ 201 and 290 or consent of instructor.

310-3 Introduction to Criminal Law. (Same as PARL 315) An examination of the general principles that apply to all criminal offenses and the specific elements of particular crimes that prosecutors must prove beyond a reasonable doubt. Topics include actus reus, mens rea, concurrence, causation, and harmful result; the defenses of justification and excuse; the doctrines of complicity and inchoate (unfinished) crimes; and the elements of major crimes against persons, property, habitation, public order and morals, and the state.

316-3 Introduction to Criminal Justice Research. A basic introduction to the scientific perspective, relationship of research and theory, research design, measurement issues, reporting of research, and program evaluation. Emphasis on problems peculiar to criminological research. Satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: CCJ 201 and 290 or consent of instructor.

317-3 Introduction to Criminal Justice Statistics. A survey of techniques to analyze the types of data used in criminal justice and criminological research. The class has a ‘practitioner’ orientation, emphasizing how to understand, interpret, and use statistics. A variety of widely used techniques will be covered, including descriptive, univariate, and bivariate analyses. Prerequisite: CCJ 201, 290, 316 or consent of instructor.

320-3 Prosecution and Adjudication. An examination of the structure and process involved in the prosecution, adjudication, and sentencing of criminal defendants. The exercise of prosecutorial and judicial discretion is analyzed, with emphasis placed on understanding the influence of legal, organizational, and environmental contexts on decision-making. Prerequisite: CCJ 201 and 290 or consent of instructor.

325-3 Special Topics in Criminology and Criminal Justice. An in-depth study of topics selected from current issues in criminology and criminal justice. Examples include “media and crime,” “international comparisons of criminal justice,” “qualitative criminology,” and “environmental criminology.” May be repeated for a maximum of six credits.

330-3 Ethics in Criminal Justice. An examination of the major ethical systems and their application to issues in criminal justice and the behavior of criminal justice practitioners in po-

lice, courts and corrections. Prerequisite: CCJ 201 and 290 or consent of instructor.

340-3 Comparative Criminology and Criminal Justice. A comparative exploration of crime, law and criminal justice systems in different societies around the world. Transnational crime and criminal justice are also discussed. General patterns and trends are explored, with specific exemplary cases examined.

344-3 Drug Abuse and the Criminal Justice System. A comprehensive study of types of drugs, drug impact on the American culture, legal and illegal uses of drugs, offenses related to drug abuse, reaction of the criminal justice system to drugs and drug abusers, and the treatment and prevention programs coping with drug abuse.

350-3 Introduction to Private Security. An examination of the roles and functions of proprietary and contract security, loss prevention, and asset protection measures in the private sphere. Emphasis is placed on examining contemporary events and factors, which influence how, when, and why security measures can be applied and measuring their contribution and effectiveness.

360-3 Law and Social Control. An introduction to key social science theories and research traditions in the study of law and non-legal social control. Explores patterns and dynamics of law as an instrument and outcome of social control, and the processes and structures underlying law as an outcome and instrument of social change.

370-3 Terrorism and Counter-Terrorism. (Same as POLS 370) Using an interdisciplinary social science perspective, an analysis of the history, sources and consequences of domestic and international terrorism and the response by policymakers. Topics include tactics, goals, recruitment and financing of terrorists; the use of military force and legal institutions in dealing with terrorism; comparison of different state responses to terrorism; and international law, human rights, and counter-terrorism.

374-3 Juvenile Justice. [IAI Course: CRJ 914] An examination of the statutory bases which distinguish delinquency from adult crime and the juvenile justice system from the criminal justice systems. Emphasis placed on the rationale for treating juveniles accused of crime differently than their adult counterparts. Assesses the distinct juvenile justice system that has evolved in the U.S. to prevent and respond to juvenile offending.

384-3 Introduction to Corrections. [IAI Course: CRJ 911] An examination of the historical context, philosophical concepts, and major developments which have shaped corrections in the United States. Various sentencing options, correctional approaches and programs, the role of corrections in the larger criminal justice system, and contemporary correctional issues are addressed. Prerequisites: CCJ 201 and 290 or consent of instructor. Course material fee: \$114.

390-1 to 8 Readings in Criminology and Criminal Justice. In-depth, introductory and advanced readings in areas not covered in other Criminology and Criminal Justice courses. The student must submit a statement describing the topic and relevant reading materials to the faculty member sponsoring the student's readings. May re-enroll for a maximum of eight credits. (Maximum 4 semester hours per term) Prerequisite: CCJ 201, 290 and consent of instructor.

395-3 to 15 Supervised Field Experiences in Criminology and Criminal Justice. Familiarization and direct experience in applied settings. Under supervision of faculty and adjunct staff, the student assumes a student-participant role in the criminal justice agency. Student must submit internship application during the first thirty days of the preceding spring, summer, or fall semester. Mandatory pass/fail. Restricted to CCJ major. CCJ students may participate in only one internship under the CCJ 395 designation. Prerequisites: CCJ 201, 290, and 12 additional hours of Criminology and Criminal Justice courses at SIU Carbondale; minimum GPA of 2.75 overall and in CCJ courses through the semester prior to the internship experience, and consent of instructor.

408-3 Criminal Procedure. An introduction to the procedural aspects of criminal law pertaining to police powers in connection with the laws of arrest, search and seizure, the exclusionary rule, civil liberties, eaves-dropping, confessions, and related decision-making factors. Prerequisite: CCJ 201, 290, and 316, or consent of instructor.

410-3 Policing Communities. A study of the theories underlying modern police reform, how these theories have altered practice, the challenges of implementing and sustaining police reform, and the outcomes of such efforts. Prerequisites: CCJ 201, 290, and 316, or consent of instructor.

411-3 Assessment of Offenders. An examination of the theories, application, and research relevant to the identification, evaluation, and treatment planning for offenders under supervision by probation, parole, prison, and other community-based correctional organizations. The course also reviews the evidence of effectiveness associated with classification and assessment tools. Prerequisites: CCJ 201, 290, and 316, or consent of instructor.

415-3 Prevention of Crime and Delinquency. Multidisciplinary analysis of the functions, goals, and effectiveness of measures to forestall delinquency and crime. Etiology of delinquent behaviors as related to community institutions such as police, courts, corrections, mental health clinics, schools, churches, and citizen groups. Prerequisite: CCJ 201, 290 and 316, or consent of instructor.

418-3 Criminal Violence. An examination of historical, comparative, cultural, and structural aspects of homicide, robbery, rape, and assaults. Explores patterns, trends and key correlates. Prerequisite: CCJ 201, 290 and 316, or consent of instructor.

460-3 Women, Crime, and Justice. (Same as SOC 461 and WGSS 476) A study of women as offenders, as victims, and as workers in the criminal justice system.

461-3 White-Collar Crime. An examination of the physical and financial harm caused by wayward corporations and business employees from both theoretical and empirical perspectives. Emphasis is placed on ethics, theory, legal decision-making, and the regulatory monitoring and control of illegal corporate activity.

462-3 Victims of Crime. (Same as SOC 462) An examination of the extent and nature of victimization, theories about the causes of victimization, the effects of crime on victims and services available to deal with those effects, victims' experiences in the criminal justice system, the victims' rights movement, and alternative ways of defining and responding to victimization.

473-3 Juvenile Delinquency. (Same as SOC 473) An in-depth study of theories of delinquency, analytical skills useful in studying the delinquent offenders, systematic assessment of efforts at prevention, and control and rehabilitation in light of theoretical perspectives. Prerequisite: CCJ 201, 290 and 316, or consent of instructor.

480-3 Effective Correctional Practices. (Same as PSYC 480) Exploration and evaluation of correctional intervention strategies developed for the sentencing of adjudicated persons. Particular emphasis on examining empirical research literature on effective correctional practices, including programs currently implemented in institutional settings, alternatives to institutional corrections, and community based programs. Prerequisites: CCJ 201, 290, 316, and 384, or consent of instructor.

490-1 to 6 (3 credit hours per term maximum) Independent Study in Criminology and Criminal Justice. Supervised readings or independent research projects in various aspects of crime control, treatment of offenders, and the management of criminal justice programs and agencies. Prerequisite: CCJ 201, 290 and 316. Special approval needed from the instructor.

492-3 Contemporary Issues in Criminology and Criminal Justice. A forum, geared toward seniors majoring in Criminology and Criminal Justice, that focuses on criminal justice issues of concern to students and faculty. May re-enroll for a maximum of 6 credits. (Maximum 3 semester hours per term) Satisfies the CoLA Writing-Across-the Curriculum requirement. Prerequisite: CCJ 201, 290, 316, or consent of instructor. Past topics include: Crime and Place, Consequences of Mass Incarceration, Myth-busting in Criminology and Criminal Justice, and Race and Crime.

Criminology and Criminal Justice Faculty

Burruss, George, Associate Professor, Ph.D., University of Missouri-St. Louis, 2001.

Garofalo, James, Professor, *Emeritus*, Ph.D., State University of New York at Albany, 1978.

Giblin, Matthew J., Associate Professor, Ph.D., Indiana University, 2004.

Harbin, Michael, Lecturer, M.A., Southern Illinois University Carbondale, 1990.

Hibdon, Julie, Assistant Professor, Ph.D., George Mason University, 2011.

Hillyard, Daniel, Associate Professor, J.D., Ph.D., University of California, Irvine, 2001.

Kochel, Tammy Rinehart, Associate Professor, Ph.D., George Mason University, 2009.

Kroner, Daryl G., Associate Professor, Ph.D., Carleton University, 1999.

LeBeau, James L., Professor, *Emeritus*, Ph.D., Michigan State University, 1978.

McDermott, M. Joan, Associate Professor, *Emerita*, Ph.D., State University of New York at Albany, 1979.

Mullins, Christopher, Associate Professor, Ph.D., University of Missouri-St. Louis, 2004.

Narag, Raymund, Assistant Professor, M.A., Michigan State University, 2013.

Nowacki, Jeffrey, Assistant Professor, Ph.D., University of New Mexico, 2014.

Pleggenkuhle, Breanne, Assistant Professor, Ph.D., University of Missouri-St. Louis, 2012.

Schafer, Joseph A., Professor and *Chair*, Ph.D., Michigan State University, 2000.

Crop, Soil and Environmental Management (Major, Courses, Faculty)

The Crop, Soil and Environmental Management major is administered through the Plant, Soil and Agricultural Systems department. The major has two specialized areas of study, with both specializations offering a general and science option. Students choosing the general option may select their upper division and elective credits from a wide choice of courses throughout the College of Agricultural Sciences and the University. If interests are more specialized, students may elect the science option and specialize in a specific discipline.

Crop Production and Management Specialization. This specialization provides the student with the background and preparation for careers in the biotechnology, seed, or plant industries incorporating both the traditional and molecular approaches to germplasm development, the agricultural industry with expertise in crop management and protection employing a holistic approach to crop production by integrating the disciplines of plant pathology, entomology and weed science. This specialization will prepare students with careers with the Illinois/US EPA, US Forest Service, or the USDA (Agricultural Research, Forest, Animal and Plant Health Inspection Services).

Soil Science. Students selecting this specialization will receive training in soil quality management applying the principles of soil-water behavior, fertilizer use efficiency and soil ecology that influence the sustainability and quality of our soil and water resources. This specialization will prepare students with careers with the Illinois/US EPA and the USDA (National Resources Conservation Service and the state Soil-Water Conservation Service).

Opportunities for individual program development within the various specializations/options may be realized through work experience, internships, special studies, and seminars; however, no more than 30 hours of such unstructured coursework may be counted toward the degree. Students in all specializations/options are urged to make use of them to meet the goals and needs of their respective programs.

Students in all specializations must complete the crop, soil and environmental management core. These courses are CSEM 200, CSEM 240, one hour of CSEM 381, and CSEM 409.

There may be extra expenses for field trips, manuals, or supplies in some courses.

Technology Fee

The College of Agricultural Sciences assesses College of Agricultural Sciences undergraduate majors a technology fee of \$4.58 per credit hour up to twelve credit hours. The fee is charged Fall and Spring semesters.

Crop, Soil and Environmental Management, Crop Production and Management (General) Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101,102.....	3	3
CHEM 140A, B.....	4	4
MATH 125, PLB 200.....	4	4
ABE 204, GEOG 103.....	3	3
UCOL 101I.....	3	-
<i>Total</i>	17	14

SECOND YEAR	FALL	SPRING
CSEM 240, 200.....	4	3
CMST 101, CSEM 305.....	3	4
HIST 101A, B.....	3	3
PLB 303I, Fine Arts.....	3	3
HND 101, Multicultural.....	2	3
<i>Total</i>	15	16

THIRD YEAR	FALL	SPRING
CSEM 300, 401.....	4	2
CSEM Electives, CSEM 403A.....	3	2
CSEM 468, 447.....	3	3
AGR Electives, CSEM Elective.....	6	2
AGR Elective.....	-	3
Elective (upper level).....	-	3
<i>Total</i>	16	15

FOURTH YEAR	FALL	SPRING
CSEM 420, 409.....	4	3
CSEM 381, CSEM Elective.....	1	3
AGR Electives.....	3	3
Electives (upper level).....	6	4
<i>Total</i>	14	13

Crop, Soil and Environmental Management, Crop Production and Management (Science) Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
MATH 125, CHEM 210.....	4	3
CHEM 200, 211.....	3	1
CHEM 201, PLB 200.....	1	4
ABE 204, MATH 109.....	3	3
UCOL 101I, HND 101.....	3	2
<i>Total</i>	17	16

SECOND YEAR	FALL	SPRING
CSEM 240, CSEM 200.....	4	3
MATH 140, CHEM 350.....	4	3
CHEM 339, CSEM 305.....	3	4
CHEM 341, GEOG 103.....	2	3
CMST 101, Fine Arts.....	3	3
<i>Total</i>	16	16

THIRD YEAR	FALL	SPRING
CSEM 300, CSEM 401.....	4	2
PHYS 203A, CSEM 403A.....	3	2
Interdisciplinary, AGR Elective.....	3	5
HIST 101A, B.....	3	3
AGR Elective, Multicultural.....	1	3
<i>Total</i>	14	15

FOURTH YEAR	FALL	SPRING
CSEM 420, 447.....	4	3
CSEM 468, 448.....	3	2
PLB 320, AGR Elective (upper level).....	4	3
AGR Elective (upper level), Electives (upper level).....	2	4
CSEM 381.....	1	-
<i>Total</i>	14	12

Crop, Soil and Environmental Management, Soil Science (Science) Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
MATH 125, CHEM 210.....	4	3
CHEM 200, 211.....	3	1
CHEM 201, PLB 200.....	1	4
ABE 204, MATH 109.....	3	3
UCOL 101I, HND 101.....	3	2
<i>Total</i>	17	16

SECOND YEAR	FALL	SPRING
CSEM 240, 200.....	4	3
MATH 140, CHEM 350.....	4	3
CHEM 339, CSEM 441.....	3	3
CHEM 341.....	2	-
CMST 101, GEOG 303I.....	3	3
<i>Total</i>	16	12

THIRD YEAR	FALL	SPRING
CSEM 420, 447.....	4	3
CSEM 443, 448.....	3	2
PHYS 203A, B.....	3	3
HIST 101A, B.....	3	3
AGSE 472, GEOG 103.....	3	3
<i>Total</i>	16	14

FOURTH YEAR	FALL	SPRING
CSEM 446, 442.....	3	3
CSEM 454, Multicultural.....	4	3
PLB 320, AGR Elective.....	4	4
GEOG 434, Fine Arts.....	4	3
CSEM 381.....	1	-
<i>Total</i>	16	13

Bachelor of Science Degree in Crop, Soil and Environmental Management, College of Agricultural Sciences**SPECIALIZATIONS**

	Crop Production & Management		Soil Science	
	Options General Science	Options General Science	Options General Science	Options General Science
<i>University Core Curriculum Requirements</i>	43 ⁴	43 ⁴	43 ⁴	43 ⁴
Foundation Skills				
English 101 and 102	6	6	6	6
Mathematics 125 (may substitute for 108)				
Mathematics 108 ¹	3	3	3	3
Communication Studies 101	3	3	3	3
UCOL 101I ⁵	3	3	3	3
Disciplinary Studies				
Fine Arts	3	3	3	3
Human Health	2	2	2	2
Humanities	6	6	6	6
Social Science	6	6	6	6
Multicultural	3	3	3	3
	OPTIONS			
	General	Science	General Science	
Science ⁴				
Chemistry 140A substitutes for Chemistry 106	4	-	4	-
Chemistry 200 and 201 substitutes for Chemistry 106	-	5	-	5
Plant Biology 200 substitutes for Plant Biology 115	4	4	4	4
Requirements for Major in Crop, Soil and Environmental Management	58	73	58	73
<i>Course in one other major other than Agricultural Systems and Education, Horticulture, or Crop, Soil and Environmental Management.</i>	3	3	3	3
Physics 203A ² and B (or approved substitute)	-	6	-	6
Plant Biology 320 or CSEM 409	3-4	3-4	3-4	3-4
Chemistry 140B	4	-	4	-
Chemistry 210,211,340,341,350	-	13	-	13
Mathematics 109,140	-	7	-	7
CSEM 200, 240, 381-1	9	9	9	9
Other CSEM courses at 300- and 400- level ³	21	21	21	21
Other Agriculture Electives	15	8	15	8
Electives	18-19	3-4	18-19	3-4
Total	120	120	120	120

¹Mathematics 111 may be substituted.² Physics 205A may be substituted.³CSEM electives must include 18 hours of structured coursework at the 300-or 400-level, with no less than 12 hours at the 400-level.⁴The UCC requires 41 hours. Chemistry and Plant Biology are 4 hour courses, but only 3 hours count toward core requirements.⁵Required for first semester student.

Crop, Soil and Environmental Management, Soil Science (General) Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
MATH 125, CHEM 140B.....	4	4
CHEM 140A, PLB 200.....	4	4
ABE 204, GEOG 103.....	3	3
UCOL 101I, HND 101.....	3	2
<i>Total</i>	17	16

SECOND YEAR	FALL	SPRING
CSEM 240, 200	4	3
CMST 101, CSEM 441.....	3	3
HIST 101A, B.....	3	3
Multicultural, Fine Arts.....	3	3
GEOG 303I, AGR Elective (upper level)	3	3
<i>Total</i>	16	15

THIRD YEAR	FALL	SPRING
CSEM 443, 447.....	3	3
CSEM 420, 448.....	4	2
CSEM Elective, CSEM 409	3	3
AGSE 472, AGR Electives	3	6
AGR Elective (upper level)	3	-
<i>Total</i>	16	14

FOURTH YEAR	FALL	SPRING
CSEM 446, 442.....	3	3
CSEM 454, AGR Elective	4	3
CSEM 381, Electives.....	1	6
GEOG 434.....	4	-
Electives	2	-
<i>Total</i>	14	12

Minor

A minor in Crop, Soil and Environmental Management is offered. A total of 15 hours is required and at least 12 hours taken at the university. One course may be selected from CSEM 200, or 240 and at least eight hours from 300- or 400-level structured courses. The department chair or coordinating counselor must be consulted before selecting this field as a minor.

Courses (CSEM)

200-3 Introduction to Crop Science. [IAI Course: AG 903] Production of important field crops of the world with greatest emphasis on U.S. and Midwestern field crops; crop production changes and adjustments, crop distribution over U.S., and crop groups and classifications, special agronomic problems, crop enemies, crop ecology, fertilizer and liming practices, tillage, crop improvement through breeding. Field trip (no cost).

240-4 Soil Science. [IAI Course: AG 904] Basic and applied chemical, physical, and biological concepts in soils. The origin, classification and distribution of soils and their relationship to humans

and plant growth. Prerequisite: CHEM 140A. Lab fee: \$15.

257-1 to 10 Work Experience. Credit for on-campus work experience in the areas of plant and soil science, or credit through a cooperative program developed between the department and the Office of Student Work and Financial Assistance. Credit awarded based on 4 hours of work per week during the semester for each hour of credit. Special approval needed from the department. Mandatory Pass/Fail.

300-4 Field Crop Production. Principles of growth and production of field crops and their utilization. Laboratory demonstrating principles including research projects and modern production techniques. Prerequisite: an introductory crops course or consent of instructor.

305-4 Plant Genetics. Principles of genetics and evolution of plants, elementary plant breeding, and the interaction between plant breeding and industry. Special approval needed from the department.

347-3 Urban Soils. A study of the function, structure, and management of soils in urban environments. The emphasis of this class is on urban horticulture: turf, urban forests, and landscape plants in urban settings. The course will focus on the understanding and implementation of basic soil concepts, with an emphasis on sustainability and management of urban soils to minimize maintenance and maximize its utility. Special approval needed from the department. Lab fee: \$80.

359-1 to 6 Intern Program. Supervised work experience program in either an agricultural agency of the government or agribusiness. Restricted to junior standing. Special approval needed from the department. Mandatory Pass/Fail.

370-3 Agroecology-Sustainable Agricultural Systems. An introduction to the biotic, natural resource, environmental, social and economic implications and requirements of sustainable agriculture. Special approval needed from the department.

381-1 to 2 (1,1) Plant and Soil Science Seminar. Discussion of special topics and/or problems in the various areas of plant and soil science. Prerequisite: CMST 101. Restricted to junior standing.

390-1 to 8 Special Studies in Plant and Soil Science. Assignments involving research and individual problems. Special approval needed from the department.

391-1 to 4 Honors in Plant and Soil Science. Independent undergraduate research sufficiently important to three hours per week of productive effort for each credit hour. Special approval needed from the department.

400-2 Trends in Agronomy. (Same as PSAS 400) A discussion session format will be employed as a means of acquainting students with recent literature and allowing them to remain current with latest developments in their area of specialty. Special approval needed from the department.

401-2 Agricultural Plant Pathology. (Same as PSAS 401) A study of micro- and macro organisms and environmental factors that cause disease in plants of agricultural importance; of the mechanisms by which these factors induce disease in plants; and of the methods for managing diseases and reducing the damage they cause. Special approval needed from the department.

403A-2 Field Crops Diseases. (Same as PSAS 403A) A survey of major diseases of important field crops in the United States. Disease identification, cycles, and management strategies will

be addressed. Not for graduate credit. Special approval needed from the department.

405-3 Plant Breeding. (Same as PSAS 405) Principles of plant breeding emphasized together with their application to the practical breeding of agronomic, horticultural, and forest plants. Special approval needed from the department. Field trip costs approximately \$10.

408-3 World Crop Production Problems. (Same as PSAS 408) Ecological and physiological factors influencing production in various areas of the world. Natural limitations on world crop production. Non-agricultural factors influence world crop output. Prerequisite: CSEM 200.

409-3 Crop Physiology. (Same as PSAS 409) Principles of basic plant physiology. Topics include cell structure, photosynthesis, respiration, water and mineral relations, vascular transport and plant growth regulators. Special approval needed from the department. Fee: \$50.

419-3 Plant Molecular Biology. (Same as PSAS 419, PLB 419) A survey of molecular phenomena unique to plant systems. Topics will include: genome organization and synteny between plant genomes, transcriptional and post-transcriptional control of gene expression, signal transduction, epigenetics, plant-pathogen interactions and responses to biotic- and abiotic-stresses. Special approval needed from the department.

420-4 Crop Pest Control. (Same as PSAS 420) Study of field pests of forest, orchard, field, and garden crops; pest control principles and methods; control strategy; and consequences of pest control operations. Special approval needed from the department. Lab fee: \$35.

425-4 Environmental Physiology of Plants. (Same as PLB 425; Same as PSAS 425) The environmental physiology of plants focuses on the 1) influence of abiotic factors (e.g., light, water, temperature, nutrients, pollutants) on growth, development, and yield; 2) mechanisms by which plants respond to these abiotic factors; 3) use of biotechnology to increase abiotic stress tolerance in model and crop plants. Prerequisite: PLB 320 or CSEM 409. A \$35 laboratory fee will be assessed.

426-4 Genomics and Bioinformatics. (Same as PSAS 426) This course is designed to introduce students from a variety of backgrounds and departments to the scope and methodology of genomic and bioinformatic sciences. Real problems and solutions from genome data analysis are studied in this course to see how high throughput genomics is driving bioinformatics, and changing the biological sciences in revolutionary way. Special approval needed from the department.

427-5 Plant Biochemistry. (Same as PLB 427 and PSAS 427) Exploration of fundamental biochemical pathways in plants with an emphasis upon carbon and nitrogen metabolism. Not for graduate credit. Special approval needed from the department. Lab fee: \$35.

433-4 Introduction to Agricultural Biotechnology. (Same as ANS 433) (Same as PSAS 433, PLB 433) This course will cover the basic principles of plant and animal biotechnology using current examples; gene mapping in breeding, transgenic approaches to improve crop plants and transgenic approaches to improve animals will be considered. Technology transfer from laboratory to marketplace will be considered. An understanding of gene mapping, cloning, transfer and expression will be derived. Not for graduate credit. Special approval needed from the department.

435-1-4 Agricultural Molecular Biotechnology Seminar. (Same as ANS 435 and PSAS 435) Molecular biology is rapidly making important contributions to agricultural science through biotechnology. An appreciation of the techniques of molecular biology and their application to plant improvement is important to all in agriculture and biology. The relationships between plant molecular biology and the biotechnology industry will be discussed. Presentations on particular research problems will be made. Graded P/F. Not for graduate credit.

438-3 Plant and Animal Molecular Genetics Laboratory. (Same as PLB 438, PSAS 438, AGSE 438, ZOOL 438) Arabidopsis and Drosophila model organisms, lab-based training in laboratory safety, reagent preparation, phenotype analysis, genetics, DNA and RNA analysis, PCR, cDNA construction, cloning and sequencing of genes. Includes plant and bacterial transformation, and a population level analysis of genetic variation using RAPD markers in grasses and Alu insertion in humans. Two 2-hr labs and one 1-hr lecture per week. Not for graduate credit. Prerequisite: BIOL 305 or equivalent or consent of instructor. Lab fee: \$30.

441-3 Soil Morphology and Classification. (Same as PSAS 441) Development, characteristics, and identification of soils, study of profiles; and interpretation and utilization of soil survey information in land use planning. Not for graduate credit. Special approval needed from the department. Field trip costing approximately \$5.

442-3 Soil Physics. (Same as PSAS 442) A study of the physical properties of soils with special emphasis on soil and water relationships, soil productivity, and methods of physical analysis. Not for graduate credit. Prerequisite: CSEM 240.

443-3 Soil Management. (Same as PSAS 443) The soil as a substrate for plant growth. Properties of the soil important in supplying the necessary mineral nutrients, water and oxygen and for providing an environment conducive to plant root system elaboration. Soil management techniques important in optimizing plant growth. Not for graduate credit. Prerequisite: CSEM 240.

445-3 Irrigation Principles and Practices. (Same as PSAS 445) This course will cover basic principles of irrigation sciences; water requirements of crops; soil water relationship; water application methods including flooding, sprinkler, and drip (or trickle) systems; water conveyance, distribution and measurement; evaluation of irrigation efficiency; and irrigation scheduling. Considerations will also include crop production effects and economic aspects of irrigation. Not for graduate credit. Special approval needed from the department.

446-3 Soil and Water Conservation. (Same as PSAS 446) Covers the principles of hydrologic processes and soil erosion. Consideration will be given to the occurrence of soil erosion as it affects humans, food production, and the environment. The methods and technologies for protecting against and controlling of erosion will also be discussed. Not for graduate credit. Special approval needed from the department.

447-3 Fertilizers and Soil Fertility. (Same as PSAS 447) Recent trends in fertilizer use and the implications of soil fertility build up to sufficiency and/or toxicity levels; the behavior of fertilizer material in soils and factors important in ultimate plant uptake of the nutrients; the plant-essential elements in soils and ways of assessing their needs and additions; tailoring fer-

tilizer for different uses and management systems; implication of excessive fertilization in our environment. Not for graduate credit. Concurrent enrollment in CSEM 448 required. Special approval needed from the department.

448-2 Soil Fertility Evaluation. (Same as PSAS 448) A laboratory course designed to acquaint one with practical soil testing and plant analysis methods useful in evaluating soil fertility and plant needs. One hour lecture, two hours laboratory. Not for graduate credit. Concurrent enrollment in CSEM 447 required. Special approval needed from the department. Lab fee: \$15.

454-4 Soil Microbiology. (Same as MICR 454, PSAS 454) A study of microbial numbers, characteristics and biochemical activities of soil microorganisms with emphasis on transformations of organic compounds, nitrogen phosphorus, sulfur, iron, and plant essential nutrients. Not for graduate credit. Prerequisite: CSEM 240 or MICR 301. Lab fee: \$15.

455-3 Biology of Plant-Microbe Interactions. (Same as PSAS 455) The molecular basis of host-pathogen interactions and disease development in plants is examined with a critical review of original and current literature focusing on the mechanisms of pathogenesis, virulence, disease development and resistance, and response mechanisms in plants. Special approval needed from the department.

468-3 Weeds - Their Control. (Same as PSAS 468) Losses due to weeds, weed identification and distribution, methods of weed dissemination and reproduction, mechanical, biological, and chemical control of weeds. State and Federal legislation pertaining to weed control herbicides. Herbicide commercialization. Not for graduate credit. Special approval needed from the department. Field trips costing approximately \$5.

Crop, Soil and Environmental Management Faculty

Bond, Jason, Professor, Ph.D., Louisiana State University, 1999.

Chong, She Kong, Professor, *Emeritus*, Ph.D. University of Hawaii, 1979.

Cook, Rachel, Assistant Professor, Ph.D., North Carolina State University, 2012.

Fakhoury, Ahmad, Associate Professor, Ph.D., Purdue University, 2001.

Jones, K. L., Professor and *Chair*, Ph.D., Texas A&M University, 1999.

Kantartzi, Stella, Associate Professor, Ph.D., Aristotle University of Thessaloniki, 2006.

Klubek, Brian P., Professor, *Emeritus*, Ph.D., Utah State University, 1977.

Lightfoot, David A., Professor, Ph.D., University of Leeds, 1984.

McGuire, James M., Professor, *Emeritus*, Ph.D., North Carolina State University, 1961.

Meksem, Khalid, Professor, Ph.D., University of Cologne, 1995.

Olsen, Farrel J., Professor, *Emeritus*, Ph.D., Rutgers University, 1961.

Russin, John S., Professor, *Emeritus*, Ph.D., University of Kentucky, 1983.

Schmidt, Michael E., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University, 1994.

Stucky, Donald J., Professor, *Emeritus*, Ph.D., Purdue University, 1963.

Tweedy, James A., Professor, *Emeritus*, Ph.D., Michigan State University, 1966.

Varsa, Edward C., Professor, *Emeritus*, Ph.D., Michigan State University, 1970.

Curriculum and Instruction

(Department, Major, Minor [Child and Family Services], Courses, Faculty)

The Department of Curriculum and Instruction offers three majors in its undergraduate program: early childhood with specializations in preschool/primary and child and family services; elementary education; and secondary social science. A minor in child and family services is also available, as well as courses for those students pursuing the standard high school licensure program. The department offers programs to prepare teacher candidates to qualify for the following Illinois teaching licenses: Early Childhood Teacher Endorsement (for teaching ages 0-8); Elementary Teacher License (for teaching in grades 1-6); or High School Teacher License (for teaching in grades 9-12). Teacher candidates may enter the department (1) directly from within the College of Education and Human Services, (2) from the exploratory student advisement program, (3) from other academic units, or (4) from other institutions of higher education. Transfer courses to be considered toward specific Curriculum and Instruction program requirements will be reviewed for possible articulation by the Department of Curriculum and Instruction.

The Secondary Education, Early Childhood Preschool-Primary, Elementary Education, and Social Science programs in Curriculum and Instruction are accredited by the National Council for Accreditation of Teacher Education, and approved by the Illinois State Board of Education (ISBE).

Early Childhood Major

This program encompasses the professional training needed to assume a variety of roles such as infant development specialists; early childhood teachers and administrators; teacher and parent educators; family service workers; and teachers of children in elementary schools (pre-kindergarten through second grade).

EARLY CHILDHOOD MAJOR —PRESCHOOL/PRIMARY SPECIALIZATION

Teacher candidates interested in teaching children 0-8 years of age in private or state-approved settings may elect to participate in the early childhood major leading to an early childhood endorsement. Specifically designed to prepare future teachers of children up to the age of 8, this program will lead to the State of Illinois Professional Educator License.

There are sequential steps for advancement in the Preschool/Primary specialization of the Early Childhood major. Such advancement is based not only on continued satisfactory academic performance, but also on acceptable professional behaviors and competencies as reflected in the state standards for licensure (Illinois Professional Teaching Standards), the NAEYC Professional Teaching Standards, the Early Childhood Content Area Standards, and the Social Emotional Standards for all teachers. Teacher candidates are required to demonstrate their mastery

of these standards through their performance in their courses and in the field.

Teacher candidates must satisfactorily complete the requirements for admission to the Teacher Education Program in order to begin their clinical practice in this major. Curriculum and Instruction 318A/B and 405A/B may not be taken more than two times, and teacher candidates must have the consent of the department to repeat these courses. Teacher candidates must earn a grade of C or better in EDUC 314 to enroll in 318A, B and 405A, B.

To be eligible for student teaching, teacher candidates must have attained a minimum grade point average of 2.75 in the major, attained a minimum overall grade point average of 2.75, and completed the following courses with a grade of C or better: CI 317, 318A,B, 325, 337, 361, 388, 405A,B, 413, 418, 419, 426, 431, 432, 434, EDUC 301, 302, 303, 311, 313, 308, 319, 314, 401, KIN 202, and SPED 405; have made preliminary application for student teaching; and be approved by the faculty of the early childhood major based on performance in the above courses. Applications for student teaching must be submitted within the first two weeks of the semester during which the teacher candidate is enrolled in CI 337.

University Core Curriculum Requirements 41
 To include MATH 108; HED 101; POLS 114 and HIST 110; ENGL 101, 102; SCI 210A,B; CMST 101; UCOL 101; EDUC 311; 3 credit hours in Fine Arts (Fine Arts options: AD 100A, 100B, 101; HIST 201; MUS 103; THEA 101), and 6 credit hours in Humanities (Humanities options: CLAS 270, 271; CP 358I; EA 102; ENGL 121, 204; HIST 101A, 101B, 358I; LING 200; MATH 300I; PHIL 307I).

Preschool/Primary Specialization Requirements 56
 CI 317, 318A,B, 325 or AD 328, 337, 361, 388, 405A,B, 413, 418, 419, 426, 431, 432, 434; MATH 120, 220; KIN 202; and SPED 405.

Professional Education Sequence27
 EDUC 301, 302, 303, 313, 314, 308, 319, 401A,B,C

Total 124

Early Childhood Major Preschool Primary Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101,102.....	3	3
MATH 120/CI 120, MATH 220/CI 220...	3	3
UCOL 101, CMST 101	3	3
Humanities	3	3
HIST 110/POLS 114.....	3	3
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
Fine Arts, CI 325/AD 328	3	3
EDUC 314, 311	3	3
HED 101, CI 337.....	2	3
MATH 108, KIN 202.....	3	3
SCI 210A, 210B.....	3	3
<i>Total</i>	14	15
THIRD YEAR	FALL	SPRING
CI 413, 419	3	3

CI 431, 432	3	3
CI 405A,B; SPED 405	4	3
CI 317; 318A,B	3	4
EDUC 313, 319.....	3	3
EDUC 301, 302.....	1	1
<i>Total</i>	17	17
FOURTH YEAR	FALL	SPRING
CI 361	3	-
CI 434	3	-
CI 418	3	-
CI 388	3	-
CI 426	3	-
EDUC 308.....	3	-
EDUC 303.....	1	-
EDUC 401A	-	12
<i>Total</i>	19	12

EARLY CHILDHOOD MAJOR — CHILD AND FAMILY SERVICES SPECIALIZATION

The child and family services specialization offers preparation leading to a variety of positions involving work with children and families in early childhood programs and social service agencies. Such positions may include: administrator and/or teacher in non-public school programs, including child care centers; child development specialist; infant-toddler teacher; child life specialist in hospital; family life specialist in social service agencies; specialist in parent education; and parent liaison and family advocate.

There are sequential steps for advancement in the Child and Family Services specialization of the Early Childhood major. Such advancement is based not only on continued satisfactory academic performance, but also on acceptable professional behaviors that the faculty deem essential for competent and effective work with children and families. In order to assess mastery of these behaviors, students are evaluated on their performance in their courses and in the field.

An overall minimum GPA of 2.5 is required to register for the following major courses: Curriculum and Instruction 318A,B, 405A,B, 417, and 419. Students must earn a grade of C or better in EDUC 314 to enroll in 318A,B, and 405A,B. Curriculum and Instruction 318A,B, 395, 405A,B, and 495 may not be taken more than two times, and students must have the consent of the department to repeat these courses.

To be eligible for the internship, the student must have attained a minimum GPA of 2.5 in the major, an overall GPA of 2.0, have completed Curriculum and Instruction 227, 317, 318A,B, 327, 337, 395, and 405A,B with a grade of C or better, and have consent of the field experience instructor. A minimum of twelve semester hours of coursework from one of the recommended elective areas is also required prior to enrollment in the internship.

University Core Curriculum Requirements 41
 To include: Education 314; Psychology 102

Child and Family Specialization Requirements 50
 Curriculum and Instruction 227, 317, 318A,B, 327, 337, 395, 402, 403, 405A,B, 417, 419, 495 41

Psychology 331	3
Health Education 351	3
Special Education 300	3
<i>Electives</i>	29

Recommended for Early Childhood Program Director: The following 21 hours are required for the Illinois Director Credential: Curriculum and Instruction 418, 487; Accounting 210; English 291, Finance 270; Management 350; Social Work 383. Other recommended electives include Curriculum and Instruction 325, 421, 498H, 498Q, Psychology 303; Social Work 275.

Recommended for Child Development Specialist: Curriculum and Instruction 325, 413, 498H; Rehabilitation 401, 407; Social Work 291, 275, 295, 361, 383; Special Education 425, 412, 405.

Recommended for Parent Educator: Curriculum and Instruction 325, 413, 498H; Health Education 312; Psychology 306, 331; Sociology 302, 321; Social Work 275, 295, 383, 421; Special Education 425.

Recommended for Social Service Specialist: Communication Studies 201, 262, 383; Curriculum and Instruction 498H; Psychology 301, 303, 331, 333; Sociology 321, 340, 423; Women, Gender and Sexuality Studies 201, 341, 442.

<i>Total</i>	120
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Early Childhood Major Child and Family Services Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101,102.....	3	3
MATH 101 or substitute, CMST 101	3	3
UCOL 101, Fine Arts	3	3
Science Gr. I, Humanities.....	3	3
PSYC 102, EDUC 314.....	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
Human Health, CI 227	3	3
Science Gr. II, HED 351	3	3
Multicultural, Specialization Elective ...	3	3
Humanities, Specialization Elective	3	3
SPED 300	3	-
<i>Total</i>	15	12

THIRD YEAR	FALL	SPRING
CI 327, PSYC 331	3	3
CI 337, 318A	3	3
CI 403, 318B.....	3	1
CI 419, 395	3	3
CI 317, Specialization Elective.....	3	3
Specialization Elective.....	-	3
<i>Total</i>	15	16

FOURTH YEAR	FALL	SPRING
CI 402	3	-
CI 405A, Specialization Elective	2	4

CI 405B, CI 495.....	2	6
CI 417	3	-
Specialization Elective.....	3	-
Specialization Elective.....	3	-
<i>Total</i>	16	10

Graduates of Shawnee Community College with an Associate in Applied Science (A.A.S.) degree in Early Childhood Education and meeting SIU admission requirements will be considered for admission into SIU's Bachelor of Science (B.S.) degree in Early Childhood-Child and Family Services Specialization through the Capstone Option. Acceptance into the Capstone Option reduces the University Core Curriculum to 30 hours and makes it possible for the student to complete the degree in approximately 60 additional hours beyond the earned A.A.S. degree.

Elementary Education Major

A Bachelor of Science degree with a major in elementary education entitles students to apply for the State of Illinois Elementary License, which will allow them to teach in first grade through sixth grade.

Admission. All students who plan to major in Elementary Education must apply to the Teacher Education Program in the College of Education and Human Services. To be eligible for the Curriculum and Instruction methods courses and the Professional Education Sequence, elementary education majors must (1) be admitted to the Teacher Education Program; (2) have completed 30 semester hours with an overall grade point average of 2.75 (4.0 scale); and (3) have obtained a satisfactory score on the Illinois Test of Academic Proficiency or ACT+. In addition, elementary education majors entering the methods/professional sequence must have successfully completed the following University Core Curriculum courses with a grade of C or better: (a) POLS 114, HIST 110 and (b) ENGL 101, 102, CMST 101, SCI 210A and B, and CI/MATH 120, 220, or equivalent.

Advancement. Advancement in the major is based not only on continued satisfactory academic performance (grade of C or better for methods and professional sequence courses), but also on acceptable professional behaviors and competencies as reflected in the state standards for licensure: the Illinois Professional Teaching Standards, Elementary Education Standards, and Social Emotional Standards for all teachers. These standards are deemed essential for competent and effective educators. Students are required to demonstrate their achievement of these standards through their performance in their courses and in the field. The elementary education program is designed to be taken over four semesters with each semester containing a field experience.

To continue in the elementary education program, a student must maintain a 2.75 GPA in the major, earn a C or better in the elementary and professional core courses, and demonstrate appropriate progress toward meeting the Illinois Professional Teaching and Content standards. Students in the elementary education major may repeat the same Curriculum and Instruction course only once. Students must have the consent of the department to register for a repeat course.

To be eligible for the professional semester (student teaching), and completion of the program, the student must have at-

tained a minimum grade point average of 2.75 in the major and a minimum overall grade point average of 2.75; completed CI 388, 389, and CI 325, 337, 361, 362, 418, 419, 426, 427, 431, 432, 433, and 434 with a grade of C or better; have made application for the professional semester; and be approved by the department based on performance in all major courses.

ELEMENTARY EDUCATION MAJOR

University Core Curriculum Requirements 41
 To include MATH 108; HED 101; ENGL 101, 102; SCI 210A,B; POLS 114; HIST 110; EDUC 311; CMST 101; UCOL 101; 3 credit hours in Fine Arts (Fine Arts options: AD 100A, 100B, 101; HIST 201; MUS 103; THEA 101), and 6 credit hours in Humanities (Humanities options: CLAS 270, 271; CP 358I; EA 102; ENGL 121, 204; HIST 101A, 101B, 358I; LING 200; MATH 300I; PHIL 307I).

Elementary Education Major Requirements 54
 CI 388, 389; CI 325 or AD 328; CI 337, 361, 362, 418, 419, 426, 427, 431, 432, 433, 434; KIN 202; CI/MATH 120, 220, MATH 282.

Professional Education Sequence 27
 EDUC 301, 302, 303, 313, 314, 308, 319, 401A,B,C.

Total 122

If an Elementary major would like to add a middle level endorsement to his/her Professional Educator License, they need to complete the 2 middle level courses (CI 462 and 473) as well as 18 hours of coursework in one of the following areas: mathematics, science, language arts (English), or social science.

Elementary Education Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101,102.....	3	3
Humanities	3	3
CI/MATH 120, 220	3	3
HIST 110, POLS 114.....	3	3
UCOL 101, CMST 101	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
HED 101, KIN 202.....	2	3
EDUC 311, 314.....	3	3
SCI 210A, B.....	3	3
Fine Arts, CI 337.....	3	3
MATH 108, 282	3	3
<i>Total</i>	14	15

THIRD YEAR	FALL	SPRING
EDUC 313, 301; 319, 302.....	4	4
CI 325, 419	3	3
CI 431, 432	3	3
CI 388, 389	3	3
CI 426, 361	3	3
<i>Total</i>	16	16

FOURTH YEAR	FALL	SPRING
EDUC 308, 303	4	-
CI 418	3	-

CI 362	3	-
CI 427	3	-
CI 433	3	-
CI 434	3	-
EDUC 401A.....	-	12
<i>Total</i>	19	12

Social Science Major

A Bachelor of Science degree in Social Science Education is one of two ways that prepare teacher candidates to teach the social sciences. The second option is a Bachelor of Arts Degree in History (see History Department). All teacher candidates pursuing a Social Science Major in the College of Education and Human Services will work toward a designation in history, and they will select an additional concentration in geography or political science.

The complex nature of our competitive, pluralistic society mandates social science curricula, which prepares future citizens to comprehend and adjust to a changing social environment. The goal of the social science program is to prepare guiding middle school/junior high and senior high school students to live as effective citizens in a democratic society. Content and professional coursework provide the foundation used in the social science methods course, where teaching methods and strategies are explored and experienced. A series of clinical practices provide the Social Science major an opportunity to use the knowledge and skills acquired in the program. A cooperating teacher or mentor teacher, if the person has had mentor training, and a clinical supervisor will assist the teacher candidate to blend knowledge and skills with the adolescent behavior and curriculum needs.

University Core Curriculum Requirements 41
 To include GEOG 103 and HIST 301 as Core Social Science; GEOG 104 as Group I Science; HIST 101A and 101B as Core Advanced Humanities substitutes; HIST 300 as Core Multicultural substitute.

Requirements for a Designation in History 21
 HIST 3673
 HIST 3923
 Three additional 400 level U.S. history courses9
 Two additional 300-400 level non-U.S. history courses.6

Requirements for Social Science Major 18
 ECON 1133
 ECON 240 or 2413
 POLS 1143
 POLS 170 or 2703
 PSYC 1023
 SOC 1083

Additional Requirements for Social Science Concentration ... 6
 POLS 213 or 2143
 POLS 300 3

OR:
 GEOG 3043
 GEOG 310I/300I3

Education Requirements 39
 Professional Education Requirements30
 EDUC 301, 302, 303, 308, 311, 313, 314, 319, 401
 Additional Licensure Requirements9
 CI 360, 469, 470

Total 125

Social Science Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101,102.....	3	3
CMST 101.....	3	-
MATH 101, POLS 114.....	3	3
UCOL 101, Core Science.....	3	3
PSYC 102.....	3	-
Core Fine arts (HIST 201 rec).....	-	3
ECON 113.....	-	3
SOC 108.....	-	3
<i>Total</i>	15	18
SECOND YEAR	FALL	SPRING
HIST 101A, 101B.....	3	3
HIST 300, 301.....	3	3
Core Human Health, HIST 367.....	2	3
GEOG 104, 103.....	3	3
EDUC 314, ECON 240/241.....	3	3
EDUC 311, POLS 170/270.....	3	3
<i>Total</i>	17	18
THIRD YEAR	FALL	SPRING
EDUC 313, 319.....	3	3
EDUC 301, 302.....	1	1
HIST 4XX (US).....	3	3
HIST 3XX-4XX (non-US), 392.....	3	3
Soc Sci Contr GEOG/POLS.....	-	3
CI 360.....	-	3
CI 469.....	3	-
<i>Total</i>	13	16
FOURTH YEAR	FALL	SPRING
EDUC 308, 401A.....	3	12
EDUC 303.....	1	-
CI 470.....	3	-
HIST 4XX (US).....	3	-
HIST 3XX-4XX (non-US).....	3	-
Soc Sci Contr GEOG/POLS.....	3	-
<i>Total</i>	16	12

Child and Family Services Minor

The minor in child and family services is designed to provide students with basic knowledge in early childhood and family studies. The selection of coursework is flexible so that courses can be adapted to the special interests of students with diverse backgrounds and goals. Students are expected to honor all prerequisites in their selection of courses. A minimum of 18 hours of coursework is required as follows:

Curriculum and Instruction 227, Education 314.....	6
Electives to be chosen from the following: CI 317, 327, 337, 390H, 390Q, 403, 413, 419, 498H, 498Q.....	12

Courses (CI)

112-1 Strategic Reading Lab. The strategic reading lab assists students in mastering the strategies necessary to inter-

act with and comprehend college text(s). The lab is taught in conjunction with ENGL 101 so that students can become more aware of their reading and writing behaviors. The lab focuses on strategies with text(s) and critical analysis of text(s)."

120-3 Mathematics Content and Methods for the Elementary School I. (Same as MATH 120) Modern approaches to mathematics instruction for the elementary grades. Mathematics content includes problem solving, intuitive set theory, development of whole numbers, integers and rational numbers and the fundamental arithmetic operations. Place value. Prime numbers and divisibility properties. Computation includes students' informal mathematics, mental computation and estimation, algorithms and the appropriate use of calculators. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Three hours lecture/laboratory per week. Prerequisite: Three years of college preparatory mathematics including Algebra I, Algebra II and Geometry and satisfactory placement score.

199-1 Introduction to College Research. Use of resources such as the library, electronic databases, and the Internet in order to find, evaluate, and use information effectively, efficiently, and ethically. Students will learn to determine the extent of the information needed, as well as learn to use software tools to manage their research.

209-2 Philosophy of Creativity. The creative process in developing child. Emphasis will be upon the levels, dimensions and individuality of creativity as it is manifested, observed and nurtured in preschool children.

213-2 Understanding the Elementary School Child. Child development concepts necessary for understanding the elementary child, with information provided on preschool, primary, and intermediate grade levels.

220-3 Mathematics Content and Methods for the Elementary School II. (Advanced University Core Curriculum Course) (Same as MATH 220) Modern approaches to mathematics instruction for the elementary grades. Mathematics content focuses on rational and irrational numbers. Ordering of numbers. Decimal representations. Percents. Ratio and Proportion. Perimeter and area concepts. Pythagorean Theorem. Concept of square root and nth root. Exponent notation. Elementary geometry. Triangles, quadrilaterals, polygons, angles associated with a polygon. Reflectional and rotational symmetry. Congruence and Similarity. Tessellations. Transformations: translations, rotations, reflections. Measurement of perimeter, area, surface area, volume, mass, temperature. Conversion of measurements. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Prerequisite: C or better in CI 120, Mathematics 120 or equivalent.

227-3 Intimate Relationships and Family Development. (Same as WGSS 286) [IAI Course: S7 902] This course will explore topics related to intimate relationships, including attraction, communication, dating, cohabitation, marriage and conflict. Study of changing patterns in family living throughout the family life cycle and the dynamic relationships within families. Students will critically evaluate current theory and research concerning the elements of family relationships.

237-3 Early Child Development I. This introductory course

in child development surveys major milestones in children's social, emotional, physical, and intellectual development. Students are exposed to current developmental theories, as well as practices recommended for parents and teachers to support healthy development in children from infancy through the primary grades.

258-1 to 4 Credit for Work Experience. This course includes work experiences relevant to the student's major program, such as work in child care centers, teacher's aid in public school, or with federal, state, or local agencies or programs that deal with children. Prerequisite: 12 semester hours completed with a grade of B or better in the student's major area of concentration in the Curriculum and Instruction department and consent of Curriculum and Instruction Academic Affairs Committee.

317-3 Guiding Play and Building Learning Communities. Focuses on play as an integral part of child's learning. Covers play theory and design of the learning environment. Learning how to promote prosocial behaviors through supportive relationships and environments within diverse settings and guide self-regulation, prosocial development and task engagement of children. Emphasis on appropriate ways to guide children in their play activities and routines, and ways to develop creativity in children. Requires several independently scheduled observations of children's play in the campus Child Development Laboratories.

318A-3 Early Childhood Curriculum. This class will prepare students to plan optimal learning environments for preschool children. Emphasis is placed on integrated learning and appropriate instructional methods in language, literacy, social studies, math and science. Students are required to have concurrent enrollment in CI 318B. Prerequisites: C or better in EDUC 314 and CI 317. Consent of the instructor is required for non-early childhood majors and graduate students.

318B-1 Clinical Experiences in Early Childhood Curriculum. This practicum will prepare students to work in optimal learning environments for preschool children. Participation is one-half day per week for the semester at the SIU Child Development Laboratories. Students are required to have concurrent enrollment in CI 318A. Prerequisites: C or better in EDUC 314 and CI 317. Consent of instructor is required for non-early childhood majors and graduate students.

321-3 Mathematics Content and Methods for the Elementary School III. (Same as MATH 321) Modern approaches to mathematics instruction for the elementary grades. Mathematics content focuses on: straight-edge and compass construction. Justification and proof of geometric properties. Three-dimensional geometry. Coordinate geometry. Transformations expressed in coordinate notation. Analysis of linear relationships geometrically and algebraically. Modeling various "real-world" situations by linear equations and inequalities. Setting up and solving equations and inequalities. Exploration of statistical data. Representation of data, interpretation of data, misrepresentation of data. Introduction to the fundamental ideas of statistics; measures of spread and central tendency. Introduction to the fundamental concepts of probability. Counting techniques needed for calculating probabilities. Dependent and independent events. Conditional probability. Odds, expected value. Simulation. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, mak-

ing connections and communication. Prerequisite: C or better in CI 220, Mathematics 220 or equivalent.

322-3 Mathematics Content and Methods for the Elementary School IV. (Same as MATH 322) Modern approaches to mathematics instruction for the elementary grades. Mathematics content focuses on: algebra and algebraic thinking, geometry, relations and functions and their applications to real-life problems. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Prerequisite: C or better in CI 321 or Mathematics 321.

324-3 Teaching Tools for the Early Childhood Classroom. In this course, students will learn to use multimedia technology and group management strategies appropriate for Kindergarten through third grade classrooms. They will develop professional leadership and collaboration skills and apply professional standards to analyze and reflect on their work. Prerequisite: admission to the Teacher Education Program, CI 318 or concurrent enrollment in CI 318, or consent of instructor.

325-3 Young Children and the Arts. The development of creativity in young children. Methods and curriculum that foster creativity in graphic expression, music and creative movement among preschool and primary school children.

327-3 Family Studies. Study of changing patterns in family living throughout the family life cycle. Insights into common current family problems typical of each stage of the family life cycle. Prerequisite: CI 227.

337-3 Assessment of Child Development. Study of the major theories of child development and children's development in the areas of physical development, perceptual development, cognitive development, language development, social, and emotional development. Students will develop observational strategies for studying, understanding, and assessing children's development and learn various approaches to assessment of development and learning in young children. Each student will perform an "authentic" assessment. Prerequisite: EDUC 314 (C or better).

360-3 Teaching Reading and Writing in the Secondary Content Areas. State and national standards for teachers require that teachers know and demonstrate a wide range of literacy methods and skills to promote effective and appropriate classroom communication. This course provides teachers with the knowledge and skills to teach reading and writing in the secondary content areas. Restricted to admission to the Teacher Education Program or consent of instructor.

361-3 Social Studies Teaching Methods (PreK-4th Grade). This course emphasizes the structure, content, and process of teaching social studies in Prekindergarten through 4th grade classrooms. Teacher candidates develop short-term and long-term instructional plans that integrate content areas, address the needs of diverse learners, engage students in the processes of critical thinking, and facilitate effective use of current and emerging digital tools to locate and analyze, evaluate, and use information sources to support research and learning. Early Childhood majors must take CI 318A,B prior to taking this course. Prerequisite: CI 431.

362-3 Teaching Elementary/Middle Level Social Studies Methods, Grades 4-8. This course emphasizes the structure, content, and process of teaching social studies/social sciences in the elementary/middle level school setting, especially

grades 4-8. Specific attention is given to the fundamentals of developing social studies/social sciences content knowledge, literacy skills and objectives, planning interdisciplinary units of instruction (IDU), integrating various instructional strategies and methods to meet the diverse learning needs in the elementary/middle level setting, developing a general teaching model, organizing the curriculum, assessing learning processes, and facilitating effective use of current and emerging digital tools to locate and analyze, evaluate, and use information sources to support research and learning, as well as designing multi-tiered interventions. Prerequisite: CI 361.

388-3 Integrated Math Content and Methods for Teachers (PreK-4th Grade). This course is designed for early childhood and elementary school teachers, focusing on Preschool through 4th grade mathematics content and methods. Math content covers the developmental progression of concepts and skills in counting and cardinality, numbers and operations in base-ten system, algebraic thinking, fractional reasoning, measurement and data, and geometry. Methods of math teaching are integrated with the delivery of math content. The course showcases standards-based mathematical practices including problem solving, mathematical modeling, communication and justification, use of tools and technology, assessment and intervention, diverse learner support, building supportive math environments, lesson planning, and making interdisciplinary connections. Prerequisite: CI/MATH 220.

389-3 Integrated Math Content and Methods for Teachers (4th-8th Grade). This course is designed for elementary school and middle school teachers, focusing on 4th-8th grade mathematics content and methods. Math content covers the developmental sequence of grade-appropriate mathematical concepts and skills in number systems, operations and algebraic thinking, ratios and proportional relationships, expressions and equations, functions and applications, measurement and data analysis, statistics and probability, and geometry. Methods of math teaching are integrated with the delivery of math content. The course showcases standards-based mathematical practices including problem solving, mathematical modeling, communication and justification, use of tools and technology, informative assessment, meeting the needs of diverse learners, building supportive math environments, lesson planning, and making interdisciplinary connections. Co-requisites: EDUC 302 and EDUC 319. Prerequisite: CI 388.

390A-1 to 3 Readings-Curriculum. In-depth reading in various areas of education as related to the field of curriculum. Special approval needed from the instructor.

390B-1 to 3 Readings-Supervision for Instructional Improvement. In-depth reading in various areas of education as related to the field of supervision for instructional improvement. Special approval needed from the instructor.

390C-1 to 3 Readings-Language Arts. In-depth reading in various areas of education as related to the field of language arts. Special approval needed from the instructor.

390D-1 to 3 Readings-Science. In-depth reading in various areas of education as related to the field of science. Special approval needed from the instructor.

390E-1 to 3 Readings-Mathematics. In-depth reading in various areas of education as related to the field of mathematics. Special approval needed from the instructor.

390F-1 to 3 Readings-Reading. In-depth reading in various areas of education as related to the field of reading. Special approval needed from the instructor.

390G-1 to 3 Readings-Social Studies. In-depth reading in various areas of education as related to the field of social studies. Special approval needed from the instructor.

390H-1 to 3 Readings-Early Childhood Education. In-depth reading in various areas of education as related to the field of early childhood education. Special approval needed from the instructor.

390I-1 to 3 Readings-Elementary Education. In-depth reading in various areas of education as related to the field of elementary education. Special approval needed from the instructor.

390J-1 to 3 Readings-Middle School. In-depth reading in various areas of education as related to the field of middle school. Special approval needed from the instructor.

390M-1 to 3 Readings-Instruction. In-depth reading in various areas of education as related to the field of instruction. Special approval needed from the instructor.

390N-1 to 3 Readings-Educational Media. In-depth reading in various areas of education as related to the field of educational media. Special approval needed from the instructor.

390O-1 to 3 Readings-Environmental Education. In-depth reading in various areas of education as related to the field of environmental education. Special approval needed from the instructor.

390P-1 to 3 Readings-Children's Literature. In-depth reading in various areas of education as related to the field of children's literature. Special approval needed from the instructor.

390Q-1 to 3 Readings-Family Studies. In-depth reading in various areas of education as related to the field of family studies. Special approval needed from the instructor.

393A-1 to 6 Individual Research in Education-Curriculum. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

393B-1 to 6 Individual Research in Education-Supervision for Instructional Improvement. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

393D-1 to 6 Individual Research in Education-Science. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

393E-1 to 6 Individual Research in Education-Mathematics. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

393F-1 to 6 Individual Research in Education-Reading.

The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

393G-1 to 6 Individual Research in Education-Social Studies. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

393H-1 to 6 Individual Research in Education-Early Childhood Education. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

393I-1 to 6 Individual Research in Education-Elementary Education. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

393J-1 to 6 Individual Research in Education-The Middle School-Junior High School. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

393M-1 to 6 Individual Research in Education-Instruction. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

393N-1 to 6 Individual Research in Education-Educational Media. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

393O-1 to 6 Individual Research in Education-Environmental Education. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

393Q-1 to 6 Individual Research in Education-Family Studies. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff. Maximum of 6 hours to be counted toward a bachelor's degree. Special approval needed from the instructor.

395-3 Field Observation. This course focuses on the development of professional skills in work with young children and families and the exploration of career opportunities within Child and Family Services. Students will participate in practical experiences in social service agencies and early childhood programs, completing two 7-week half-day practicum experiences in different community settings. Restricted to the major.

400-3 Social and Informal Learning. Covers games, simulations, role-playing, discussion forums, and social networking as informal modes of learning in both education and training contexts. Both face-to-face and online aspects of social and in-

formal learning are considered.

401-6 (3,3) Designing Digital Games and Simulations. This course focuses on the design and development of simulated environments (such as digital games and virtual worlds) and how they may be used for the delivery of online learning and instruction. The production process will focus on the use of suitable technologies and game development toolkits to create immediately usable prototypes for learning showcases.

402-3 The Study of Cultural Diversity in Education and Family Services. The student examines origins, characteristics of behavior, learning patterns, family constellations, and lifestyles of the diverse cultural groups in our community, state, and nation. Students will identify their own cultural background and biases; recognize diversity resulting from ethnic origin, gender, age, or disability; and experience ways of learning about cultures other than their own that promote constructive communication and integration into all aspects of schooling, teaching, and family services.

403-3 Child Abuse and Neglect. Examines the many facets of child abuse and neglect. Emphasis is on current research in the field, as well as the roles and responsibilities of various professionals who work with children and their families.

404-3 Infant Development. Current theories and knowledge concerning growth and development of infants with related laboratory field observations. Prerequisite: CI 237 or Psychology 301 or equivalent.

405A-3 Infant and Toddler Development. This course is designed to be an overview of theoretical and research-based understandings of infant development. Principles of development as well as dynamics of human behavior and relations will be explored. A topical approach is taken to allow the understanding of how broad concepts of development apply to infant development. Application of developmental knowledge involves working with infants and toddlers. Students are required to have concurrent enrollment in CI 405B. Prerequisite: C or better in CI 317 and at least one of the following: CI 237, PSYC 301, EDUC 314.

405B-1 Infant and Toddler Practicum. This practicum will prepare students to conceptualize and implement optimal learning environments for infants and toddlers. Participation is one half day per week (fall and spring) or two half days per week (summer). Students are required to have concurrent enrollment in CI 405A. Prerequisite: C or better in EDUC 314, CI 318A, and CI 318B.

406-3 Foundations of Learning Systems Design & Technology. This course provides students with an overview of the issues related to learning systems design and technology (formerly, instructional design and technology). It covers historical foundations, trends, current practice, and future directions of the field and provides students with the context of the courses in the concentration.

407C-3 Diagnostic Teaching Strategies for Classroom Teachers-Language Arts. Diagnostic instruments and teaching techniques with an emphasis on understanding and teaching students underachieving. Prerequisite: Curriculum and Instruction 423 or consent of instructor.

407E-3 Diagnostic Teaching Strategies for Classroom Teachers-Mathematics. Diagnostic instruments and teaching techniques with an emphasis on understanding and teach-

ing students underachieving. Prerequisite: Curriculum and Instruction 322 or consent of instructor.

407F-3 Diagnostic Teaching Strategies for Classroom Teachers-Reading. Diagnostic instruments and teaching techniques with an emphasis on understanding and teaching students underachieving. Prerequisite: Curriculum and Instruction 422 or consent of instructor.

408-3 Current Issues in Early Intervention. This course will examine developmental ecology of early intervention and the dynamic processes by which children and their environments interact. A comprehensive overview of the knowledge base and critical assessment and implementation strategies of early childhood intervention along with intervention models and appropriate practice will be covered. Prerequisites: CI 237, SPED 405 or consent of instructor.

409-3 Creative Teaching. To assist pre- and in-service teachers in acquiring methods and materials that will improve instruction in the public school classroom, with special attention to the characteristics and needs of students. Prerequisite: Education 316 or consent of instructor.

410-2 Creative Writing in the Public School. Techniques of encouraging creative writings in the schools.

412C-3 Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Language Arts. Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student.

412D-3 Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Science. Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student.

412E-3 Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Mathematics. Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student.

412F-3 Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Reading. Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student.

412G-3 Improvement of Instruction in Early Childhood Education (Preschool-Grade 3)-Social Studies. Examines recent findings, current practices, and materials used in early childhood education. Prerequisite: specialized methods course for the field of study selected by the student.

413-3 Language Development of the Young Child, 0-8. The normal language development and communication skills of the young child will be the focus of this course; attention will be given to an integrated, holistic philosophy toward development and learning in young children ages 0-8. Specifically focusing upon social and environmental influences on the development of language and literacy, students will observe, listen, record, and analyze samples of young children's communication. Prerequisite: CI 237 or Psychology 301 or graduate standing.

415-3 Teaching Middle School Mathematics [Grades 4-8]. Examines current approaches to middle school mathematics and the use of meaningful instructional materials, quantitative

literacy, and technologies for problem solving. Students will share experiences and design activities for classroom use. Prerequisite: CI 322 and an overall GPA of at least 2.75, or consent of instructor.

417-3 Administration of Early Childhood and Family Programs. This course introduces students to the planning, organizing and daily management of programs serving young children and their families. Topics will include funding/budgeting, staffing, programming, and evaluation. Prerequisite: CI 318.

418-3 Critical Issues in the Profession of Teaching. This course explores the philosophical, social, and psychological foundations of teaching. Students will critically examine the forces that have influenced education at various historical periods. Students will become familiar with the perspective of critical pedagogy in understanding educational decision-making. Students will explore educational contexts that promote optimal learning and development for all students while considering the complexity and multiplicity of cultural variables and identities (e.g., ethnic, linguistic, racial, gender, physical abilities, socioeconomic, etc.). Students will explore, critically analyze, and express a personal philosophy of education. Prerequisite: EDUC 319.

419-3 Child, Family, and Community Engagement. This course is designed to provide students with the knowledge and skills needed to work successfully with families and caregivers in individual and community settings. The focus will be on strengthening relationships within and between home, school and community settings. Family engagement in early childhood programs and elementary schools will be stressed. Co-requisite: EDUC 319.

420-3 Adult Literacy Strategies. The focus is on understanding the problems of the individual whose literacy level does not permit full participation in economic, social, family and civic opportunities. Emphasis is placed on developing strategies to support and strengthen adult literacy skills.

421-3 Building Family Literacy Programs. This course will provide an in-depth look at family literacy. Emphasis is on the history and foundations of family literacy, related research, program models, programming, evaluation and funding. Designed for both the experienced and the developing family literacy professional. Prerequisite: CI 419.

422-3 Teaching Reading in the Elementary School. (Same as SPED 422) Examination of the reading process with emphasis on the factors and conditions that affect reading. Emphasis also on the formulation of a philosophy of reading and its implications in relation to methods, materials, organizational procedures, and evaluation techniques. Prerequisite: for Elementary Education majors, grade C or better in CI 321, 435 and Education 313 or consent of instructor; for Special Education majors, admission to the Teacher Education Program. Note: Elementary Education majors must take CI 423 and EDUC 322 concurrently with this class.

423-3 Teaching Elementary School English Language Arts. This course covers the oral and written communication processes with emphasis on the structure of the English language arts in the elementary school. Focus on the fundamentals of academic and social language of all users of English. Effective planning, delivery, and assessment of literacy lessons align

with the Illinois Common Core learning standards for writing, speaking and listening, and reading and that accommodate all learners in the elementary classroom, including English Language Learners (ELL) and students with Individualized Education Programs (IEP). Prerequisite: Communication Studies 101 or equivalent, C or better in CI 321 and CI 435, or consent of instructor. Note: Elementary Education majors must take CI 422 and EDUC 322 concurrently with this class.

426-3 An Introduction to Teaching Elementary School Science (PreK-4th Grade). Content and methods of elementary school science, grades P-4. Emphasis on materials and strategies for effective science education. One or more field trips. Prerequisites: SCI 210A, and SCI 210B. Restricted to students already admitted to the Teacher Education Program.

427-3 Science Process and Concepts for Teachers (4th-8th Grade). Specifically designed to develop those cognitive processes and concepts needed by elementary and middle level teachers in the teaching of modern science programs. Prerequisite: CI 426, SCI 210A, and SCI 210B.

428-3 Inquiry Skills for Teaching Junior and Senior High School Science. The major focus will be the application of inquiry skills as used in all areas of science instruction at the junior and senior high school levels; students will be expected to demonstrate mastery of basic and integrated science process skills through conducting and reporting results of science investigations.

429-3 Instructional Methods for the Primary Child: Social Studies and Science. Emphasis on creating optimum learning environments, planning for instruction, models of teaching, integrated learning and appropriate instructional methods in science and social studies, grades 1-3. Early childhood certification students must have concurrent enrollment in EDUC 329 to provide practical experience one-half day per week. Concurrent enrollment in CI 430 required. Prerequisites: CI 318, CI 324, or consent of instructor.

430-3 Instructional Strategies for the Primary Child: Mathematics. Emphasis on creating optimum learning environments, integrated learning and appropriate instructional methods in the content area of mathematics, grades 1-3. Early childhood certification students must have concurrent enrollment in EDUC 329 to provide practical experience one-half day per week. Concurrent enrollment in CI 429 required. Prerequisite: CI 318, CI 324, or consent of instructor.

431-3 Literacy Foundations and Instructional Models. This course provides teacher candidates with the theoretical knowledge necessary to critically examine various models of literacy instruction. It introduces the reading process, including the relationship between reading, writing, listening, and speaking; the importance of differentiating instruction for all learners; and how to select appropriate literature for use in early childhood, elementary, and middle level classrooms. Co-requisites: EDUC 301 and EDUC 313. Restricted to students already admitted to the Teacher Education Program.

432-3 Literacy Development and Assessment (PreK-4th Grade). This course explores the variables that affect literacy development at the P-4 level. Teacher candidates will learn to employ all four strands of the English/language arts (reading, writing, speaking, and listening) to teach literacy concepts and strategies across the curriculum to accommodate all learners

in culturally responsive classrooms. Emphasis will be placed on an understanding of the reading and writing process; the content of literacy instruction; and scientifically based literacy research, methods, and materials used in balanced reading instruction and assessment. Prerequisite: CI 431. Co-requisite: EDUC 302 and EDUC 319.

433-3 Instruction and Assessment of Adolescent Literacy. This course explores the variables that affect literacy development at the middle level (4th-8th grade). Emphasis will be placed on an understanding of the reading and writing process; the content of literacy instruction; and scientifically based literacy research, methods, and materials used in balanced literacy instruction and assessment. There is a focus on language and literacy demands within the content areas, needs of culturally and linguistically diverse adolescent learners, and the identification of adolescents who have literacy challenges. Prerequisite: CI 432. Co-requisite: EDUC 303 and EDUC 308.

434-3 Diagnostic Literacy Assessment and Intervention. This course surveys the principles and practices of literacy assessment. Teacher candidates examine diagnostic approaches and instructional strategies that teachers employ when working with individuals who struggle with learning to read and write. There is an emphasis on the causes of reading and writing difficulties and the contribution of factors such as cultural differences, linguistic variation, student motivation, various disabilities, and instructional approaches. It focuses on diagnostic techniques and the use of dynamic assessment to inform the design, monitoring, and evaluation of literacy instruction. Prerequisite: CI 432. Co-requisites: EDUC 303 and EDUC 308.

435-3 Literature and Informational Texts for Children and Early Adolescents. Students will engage with studies of various types of literature and informational texts as well as text exemplars from the common core initiative; analysis of literary qualities; selection of literature for various developmental needs of children in preschool, elementary school, and middle level settings; and research-based presentations of books and other media for use in various school settings. Prerequisite: C or better in English 101 and 102, and overall GPA of 2.75; or consent of instructor. Restriction: Admittance to the Teacher Education Program. Lab fee: \$10.

437-3 Instructional and Human Performance Technology. For those persons interested in the role that learning systems and instructional design and technology play in the field of human performance technology. Emphasis is upon performance problem identification, the distinction between skill/knowledge deficits and other performance problems, and the rationale for instructional solutions as well as electronic performance support systems, feedback and incentives, certification and other HP technologies.

441-3 Multicultural Literature for Children. Identification, selection and evaluation of books and audiovisual materials dealing with various cultural groups such as African Americans, Asian Americans, Native Americans, Hispanic Americans and European Americans. Prerequisite: CI 435 or consent.

445-3 Literature and Informational Texts for Young Adults. This course introduces quality literature and informational texts for young adults [grades 6-12]. Students will engage with genres and authors of young adult literature, text exemplars from the common core initiative, cross-curricular

rationales and differentiated instructional methodologies for integrating young adult literature with content and other text.

452-3 Digital Video Production. Video has become an essential aspect of teaching, training, and communications. This course is an intensive workshop that provides a thorough understanding of video formats, video production, and video editing techniques. No previous experience with video production is required. Lab fee: \$20.

455-3 Design and Delivery of e-Learning. Investigates e-learning in both higher education and corporate training contexts. The course draws upon the tradition of distance education in covering the design, delivery, and evaluation of online and blended learning in higher education. The course also draws upon the tradition of computer-based training (CBT) in covering the design, delivery, and evaluation of web-delivered training in corporations and organizations. Lab fee: \$20.

458-3 Classroom Teaching with Television. Classroom utilization of open and closed circuit television. Emphasis is placed on the changed role of the classroom teacher who uses television. Evaluation of programming, technicalities of ETV, and definition of responsibilities are included. Demonstration and a tour of production facilities are provided.

460-3 Teaching Reading and Writing in the Middle Grades. Familiarizes middle grade teachers with issues relevant to instruction in literacy skills essential to learning in any subject area. Students will demonstrate personal competency relevant to these skills and understanding of strategies for identifying problems and developing literacy competencies in young adolescents. Prerequisite: Curriculum and Instruction 422 (for elementary majors), CI 360 (for secondary majors), or consent of instructor.

462-3 Middle and Junior High School Programs. Focuses on the development of middle and junior high school curriculum and the identification of instructional activities for early adolescents. Emphasis is placed on development of literacy strategies, developmentally appropriate teaching strategies, interdisciplinary unit planning, teaming, and technologies and materials appropriate for teaching early adolescents, ages 10-14. Prerequisite: Education 313 or consent of instructor.

463-3 Meeting the Social and Emotional Needs of Gifted Children. Deals with strategies for meeting the social and emotional needs of gifted children in the classroom. This course focuses on low-incidence gifted students, including underachievers, minorities and females. The course will cover particular curriculum and instruction strategies designed for this population and will emphasize strategies for teachers to be more facilitative in assisting these students to accept and realize their potential. Prerequisite: CI 467 or consent of instructor.

464-2 Student Activities. Analysis of extra-class activities and programs in public schools with a focus on the status, trends, organization, administration, and problems.

465-3 Advanced Teaching Methods. The focus is on a variety of teaching methods and strategies which are appropriate for secondary and/or post-secondary educators. Individual and group methods are emphasized.

466-3 Documenting Accomplished Teaching. This course will help teachers understand and gain requisite skills for participation in the National Board for Professional Teaching Standards (NBPTS) certification process. As a part of learning

to understand and document NBPTS standards, teachers will describe, analyze and reflect on drafts of written commentaries, videotapes of small and large group lessons, and student work.

467-3 Methods and Materials in the Education of the Gifted. Content focused on the most appropriate instructional strategies and materials to be utilized with the gifted. Time spent practicing teaching models, designing materials and developing teaching units. Emphasis placed on techniques for individualizing instruction for the gifted and talented students.

468-3 Science Methods for Middle and Senior High Schools. A performance-based approach to instructional skills common to teaching natural science at the middle and senior high school levels. Three class hours and one micro teaching laboratory per week.

469-3 Teaching Social Sciences in the Secondary School [6-12]. Emphasis is placed on the analysis and evaluation of the social sciences with focus on instructional strategies and curricular designs in the teaching of history, geography, political science, economics, and sociology, as well as content reading for the social sciences. Prerequisite: EDUC 313 or consent of instructor.

470-3 Teaching and Learning NonFiction Sources for Adolescent and Adult Learners. This course will help students develop instructional materials and curricular designs using non-fiction resources for classrooms at the secondary level. Students will also have an opportunity to gather, analyze, corroborate, and synthesize student data for the purposes of planning instruction with an emphasis on informational sources such as written documents, images, and multimedia. Integrating technology for differentiating instruction, assessment, and content reading for the disciplines (with a specific focus on the social sciences) will also be emphasized. Not for graduate credit. Prerequisite: CI 469 with a grade of C or better.

473-3 Teaching in Middle Level Schools. Acquaints students with issues of teaching young adolescents and the role of teachers in connecting schools with community resources. Information from current area specialists and exemplary practitioners extend appropriate teaching strategies and supplement background knowledge on special topics related to social, emotional and physical development related to the curriculum. Prerequisite: CI 462, EDUC 313, or consent of instructor. Lab fee: \$10.

482-3 Web Resources for Teachers. Investigates use of the Internet in classroom instruction and for professional development. Focus is on the "4 Cs" of Internet use by teachers: Communication, Content, Collaboration, and Community. Lab fee: \$20.

483A-3 Instructional Applications for Microcomputers. A study of the development and use of microcomputers systems in educational settings. Emphasis is upon the characteristics, capabilities, applications, and implications of microcomputers and microcomputer lessons, with case studies of their integration into the teaching, learning process.

483B-3 Instructional Applications for Microcomputers. A study of the development and use of microcomputers systems in educational settings. Emphasis is upon the characteristics, capabilities, applications, and implications of microcomputers and microcomputer lessons, with case studies of their integration into the teaching, learning process. Prerequisite: CI 483A.

484-3 Interactive Multimedia for Learning. An introduction to the evaluation, design, and development of interactive instructional multimedia programs. The instructional methods of Tutorial, Drill, Simulation, and Educational Games are covered. Projects include designing, developing, and use-testing an interactive instructional multimedia program. Lab fee: \$20.

486A-3 Instructional Development Studio I. The “Learning Studio” environment provides students with the opportunity to learn and use authoring systems, languages and product development tools to design, develop and produce online resources for learning and instruction. Participants will showcase learning artifacts created using a variety of commercial productivity tools and creativity suites. Prerequisite: basic web design skills. Special approval needed from the instructor. Lab fee: \$20.

486B-3 Instructional Development Studio II. The “Learning Studio” environment provides students with the opportunity to learn and use authoring systems, languages and product development tools to design, develop and produce online resources for learning and instruction. Participants will showcase learning artifacts created using a variety of commercial productivity tools and creativity suites. Prerequisite: basic web design skills. Special approval needed from the instructor. Lab fee: \$20.

487-3 Web-based Applications for Teachers and Instructors. Survey of trends and developments and laboratory instruction in the use of Web-based applications representative of those used by teachers, education specialists, or instruction in educational settings. An emphasis is placed upon developing skills used by teachers, education specialists, or instructors which enhance and facilitate the education processes within a Web-based learning environment. Laboratory fee: \$20.

493-3 Writing for Research and Publication. The course covers the current American Psychological Association (APA) guidelines (required by the Curriculum and Instruction department for all writing, including theses and dissertations) for reporting and writing reports, annotated bibliographies, and reviews of literature. Participants will read, critique, write, and present four short (5-10 pages each) scholarly research results and/or scholarly reviews of literature. The course will emphasize professional vocabulary, format, and writing style. Participants will write final, detailed and thorough literature reviews using APA format and style in their fields of study. This course has been recommended by the CI Graduate Faculty for all CI graduate students, especially those who are early in their programs. Instructor approval required for undergraduates.

495-6 Internship in Child and Family Services. Supervised work experiences in settings for children and families and/or public agencies. Prerequisites: CI 227, 317, 318A, 318B, 327, 337, 395, 404, 405A, and 405B. Special approval needed from the instructor.

496-2 to 6 (2 to 4 per semester) Field Study Abroad. Orientation and study before travel, readings, reports, and planned travel. Includes visits to cultural and educational institutions. Maximum credit hours in any term is 4.

498A-1 to 15 (1 to 3 per topic) Workshops in Education-Curriculum. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six

hours toward a master’s degree. Special approval needed from the instructor.

498B-1 to 15 (1 to 3 per topic) Workshops in Education-Supervision for Instructional Improvement. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master’s degree. Special approval needed from the instructor.

498C-1 to 15 (1 to 3 per topic) Workshops in Education-Language Arts. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master’s degree. Special approval needed from the instructor.

498D-1 to 15 (1 to 3 per topic) Workshops in Education-Science. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master’s degree. Special approval needed from the instructor.

498E-1 to 15 (1 to 3 per topic) Workshops in Education-Mathematics. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master’s degree. Special approval needed from the instructor.

498F-1 to 15 (1 to 3 per topic) Workshops in Education-Reading. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master’s degree. Special approval needed from the instructor.

498G-1 to 15 (1 to 3 per topic) Workshops in Education-Social Studies. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master’s degree. Special approval needed from the instructor.

498H-1 to 15 (1 to 3 per topic) Workshops in Education-Early Childhood Education. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master’s degree. Special approval needed from the instructor.

498I-1 to 15 (1 to 3 per topic) Workshops in Education-

Elementary Education. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498J-1 to 15 (1 to 3 per topic) Workshops in Education-The Middle School. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498K-1 to 15 (1 to 3 per topic) Workshops in Education-Secondary Education. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498L-1 to 15 (1 to 3 per topic) Workshops in Education-School Library Media. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498M-1 to 15 (1 to 3 per topic) Workshops in Education-Instruction. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498N-1 to 15 (1 to 3 per topic) Workshops in Education-Educational Technology. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498O-1 to 15 (1 to 3 per topic) Workshops in Education-Environmental Education. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498P-1 to 15 (1 to 3 per topic) Workshops in Education-Children's Literature. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with

the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498Q-1 to 15 (1 to 3 per topic) Workshops in Education-Family Studies. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498R-1 to 15 (1 to 3 per topic) Workshops in Education-Computer Based Education. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498S-1 to 15 (1 to 3 per topic) Workshops in Education-Gifted and Talented Education. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

498T-1 to 15 (1 to 3 per topic) Workshops in Education-Teacher Education. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices. Maximum of six hours toward a master's degree. Special approval needed from the instructor.

Curriculum and Instruction Faculty

Barrette, Pierre, Associate Professor, *Emeritus*, Ed.D., University of Massachusetts, 1971.

Bauner, Ruth E., Associate Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1978.

Becker, Jerry P., Professor, Ph.D., Stanford University, 1967.

Bedient, Douglas, Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1971.

Bluhm, William J., Lecturer, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1978.

Boykin, Arsene O., Associate Professor, *Emeritus*, Ed.D., University of Illinois, 1964.

Brown, Lisa, Instructor, M.Ed., Southern Illinois University, 1993.

Bu, Lingguo, Associate Professor, Ph.D., Florida State University, 2008.

Buser, Margaret, Assistant Professor, *Emerita*, M.S.Ed., Indiana University, 1966.

Byfield, Lavern, Assistant Professor, Ph.D., University of Illinois, 2012.

- Campbell, James A.**, Associate Professor, *Emeritus*, Ph.D., Ohio State University, 1978.
- Copenhaver, Ron W.**, Associate Professor, *Emeritus*, Ed.D., Indiana University, 1978.
- Coscarelli, William**, Professor, *Emeritus*, Ph.D., Indiana University, 1977.
- Dale, Doris C.**, Professor, *Emerita*, D.L.S., Columbia University, 1968.
- Dixon, Billy G.**, Associate Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1967.
- Eichholz, Barbara**, Lecturer, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1986.
- Erickson, Lawrence**, Professor, *Emeritus*, Ph.D., University of Wisconsin, 1972.
- Fadde, Peter J.**, Professor, Ph.D., Purdue University, 2002.
- Gilbert, Sharon**, Associate Professor, *Emerita*, Ph.D., Ohio State University, 1988.
- Grace, Barbara E.**, Instructor, M.S., Southern Illinois University Carbondale, 1985.
- Grounds, Elizabeth**, Instructor, M.Ed., Southern Illinois University, 1995.
- Hungerford, Harold R.**, Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1970.
- Jackson, James**, Associate Professor, *Emeritus*, Ph.D., University of Wisconsin, 1976.
- Jackson, Michael**, Associate Professor, *Emeritus*, Ed.D., University of Florida, 1971.
- Johnson, Margaret**, Lecturer, *Emerita*, Ph.D., Southern Illinois University, 1998.
- Jones, Dan R.**, Associate Professor, *Emeritus*, Ed.D., Indiana University, 1978.
- Jones, Jennie Y.**, Assistant Professor, *Emerita*, A.M., University of Illinois, 1949.
- Karmos, Ann**, Associate Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1975.
- Killian, Joyce E.**, Professor, *Emerita*, Ph.D., Pennsylvania State University, 1980.
- Lamb, Morris L.**, Associate Professor, *Emeritus*, Ed.D., University of Oklahoma, 1970.
- Lin, Cheng-Yao**, Associate Professor, Ph.D., University of Illinois, 2003.
- Loh, Sebastian**, Associate Professor, Ph.D., University of Georgia, 2004.
- Matthias, Margaret**, Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1972.
- McIntyre, Christina**, Associate Professor, Ph.D., Georgia State University, 2007.
- McIntyre, D. John**, Professor, *Emeritus*, Ed.D., Syracuse University, 1977.
- Miller, Grant**, Associate Professor, Ph.D., Boston College, 2007.
- Mogharreban, Catherine N.**, Associate Professor, Ph.D., Southern Illinois University Carbondale, 1990.
- Nelson, JoAnn**, Assistant Professor, *Emerita*, Ph.D., University of Illinois, 1980.
- Norris, William**, Associate Professor, *Emeritus*, Ed.D., Indiana University, 1973.
- Pearlman, Susan F.**, Associate Professor, *Emerita*, Ph.D., University of Missouri, 1987.
- Post, Donna M.**, Associate Professor, Ph.D., Pennsylvania State University, 1990.
- Pultorak, Edward, Jr.**, Professor, Ph.D., Indiana State University, 1988.
- Shafer, Frances K.**, Senior Lecturer, Ph.D., Southern Illinois University, 2008.
- Shelby-Caffey, Crystal V.**, Assistant Professor, Ph.D., Southern Illinois University, 2008.
- Shepherd, Terry R.**, Associate Professor, *Emeritus*, Ph.D., University of Illinois, 1971.
- Shrock, Sharon A.**, Professor, *Emerita*, Ph.D., Indiana University, 1979.
- Smith, Lynn C.**, Associate Professor, *Emerita*, Ph.D., University of Georgia, 1984.
- Solliday, Michael**, Associate Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1975.
- Stearns, Louise**, Lecturer, M.Ed., Southern Illinois University, 1985.
- Thompson, Stacy D.**, Associate Professor, Ph.D., Iowa State University, 1998.
- Van Horn, Lori**, Lecturer, M.Ed., Southern Illinois University Carbondale, 1997.
- Viernow, Melissa R.**, Lecturer, M.Ed., Southern Illinois University Carbondale, 1999.
- Volk, Gertrude L.**, Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1983.
- Waggoner, Jan**, Associate Professor, *Emerita*, Ed.D., Memphis State University, 1990.
- Walton, Cheryl**, Instructor, M.Ed., Southern Illinois University, 1995.
- Wise, Kevin C.**, Professor, *Emeritus*, Ed.D., University of Georgia, 1983.
- Wood, Ruth B.**, Instructor, *Emerita*, M.S., University of Illinois, 1948.
- Zobairi, Nillofur**, Lecturer, *Emerita*, Ph.D., Southern Illinois University, 1993.

Dental Hygiene (Major, Courses)

The program leading to a baccalaureate degree in dental hygiene is designed to prepare the graduate to successfully enter the oral health profession of dental hygiene in any one of the six designated roles of the dental hygienist as defined by the American Dental Hygienists' Association: clinician, educator/health promoter, manager, researcher, consumer advocate and change agent. In addition, the graduates are prepared to continue their education in graduate or professional programs. The curriculum is designed to assist students in the development of knowledge, skills, attitudes and values that will enable them to adapt to a complex and changing health care delivery system. Special emphasis is placed on the development of skills related to periodontal disease, skills and attitudes to meet the needs of the geriatric population, and access to care for those persons unable to attain care, especially the underserved rural segment of the population. A minimum grade of C for all dental hygiene courses is required to maintain enrollment in the Dental Hygiene professional sequence. Dental hygiene courses typically are taught one time in an academic year. A student who fails a course (or drops out of the dental hygiene sequence) must reap-

ply to the dental hygiene program and will be required to take necessary clinic courses for further integration into the professional sequence.

Dental hygiene is a licensed profession. In order to meet licensure requirements, the student must graduate from an accredited program and successfully pass a written National Board Dental Hygiene Examination, as well as the appropriate State/Regional Practical (clinical) Board Examination.

Admission requirements to the applicant pool are the same as those to the University. Once accepted into the University, the student must submit a separate application to the Dental Hygiene program. In order to be considered for admission into the professional sequence, you must be accepted into Southern Illinois University Carbondale and have completed a minimum of 29 semester hours of college credit. These hours must include the following courses or approved substitutions: English 101, English 102, Mathematics 108, Psychology 102, Sociology 108, Microbiology 201, Allied Health 241 and Chemistry 140A. Prospective students may complete the University Core Curriculum and the basic science courses at other colleges or universities as well as at SIU. Thirty-six students begin the professional sequence in fall semester. In addition to textbooks and tuition, other expenses are required to cover the cost of instruments; uniforms and other professional supplies. Contact the Dental Hygiene Program for specifics.

The Dental Hygiene program offers an on-site clinic to provide the student with practical clinical instruction. Students perform dental hygiene services in the clinic under the direct supervision of dental hygiene faculty composed of licensed dental hygienists and licensed dentists. Students also are involved in the provision of care and education through a variety of community projects. An advisory committee composed of representatives from community dental practices, dental education and dental industry serves the program.

The program also is designed to serve as a degree completion program for dental hygienists who have completed an associate degree in dental hygiene from any accredited dental hygiene program. The Capstone Option is available to students who have obtained an Associate in Applied Science with a 2.0 (4.0 scale) or higher GPA.

The Dental Hygiene program has a Linkage Agreement with Southeastern Illinois College, Kaskaskia College and Shawnee College. If you have questions about this agreement, contact the community college advisor or SIU School of Allied Health at (618) 453-7287.

The program in Dental Hygiene is accredited by the Commission on Dental Accreditation, a specialized accrediting body recognized by the Commission on Recognition of Post-secondary Accreditation and by the United States Department of Education. The Commission on Dental Accreditation can be contacted at (312) 440-4653 or 440-2500 at 211 East Chicago Avenue, Chicago, IL 60611.

Bachelor of Science Degree in Dental Hygiene, College of Applied Sciences and Arts

University Core Curriculum	41
Including: CHEM 140A ¹ , MATH 108 ¹ , MICR 201 ¹ , PSYC 102, SOC 108, HND 101.	
Requirements for Major in Dental Hygiene	79

Including: DH 200, 206, 206L, 207, 207C, 210, 210L, 212, 218, 218L, 219, 219L, 220, 220C, 226, 233, 247, 247L, 320, 320C, 322, 322L, 340, 341, 341L, 347, 349, 355, 355C, 401, 401L, 410, 413 417, 417I, 440, 441, 441C, 448, and 448L.

Total 120

¹These courses are required for a major in dental hygiene and are approved substitutions for the University Core Curriculum requirements in science. The additional hours will be included in the total hours required for the degree.

Dental Hygiene Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
MATH 101/108, HND 101	3	2
UCOL 101, MICR 201.....	3	4
CHEM 140A, AH 241.....	4	4
*DH 200, CMST 101	2	3
<i>Total</i>	15	16
SECOND YEAR	FALL	SPRING
PSYC 102, DH 212.....	3	2
DH 206, 219	2	3
DH 207, 207C; 220, 220C.....	4	4
DH 210, 210L; 233	3	2
DH 218, 218L; 247, 247L.....	3	3
DH 226, SOC 108.....	2	3
<i>Total</i>	17	17
THIRD YEAR	FALL	SPRING
DH 320, 320C; 322, 322L.....	4	2
DH 340, 347.....	3	2
DH 341, 341L; 355, 355C.....	3	4
DH 349, UC Elective.....	3	3
UC Elective, UC Elective.....	3	3
<i>Total</i>	16	14
FOURTH YEAR	FALL	SPRING
DH 413; **401, 401L.....	2	4
**DH 417, 417I; 410.....	6	2
DH 440; **441, 441C.....	3	6
DH 448, 448L	2	-
<i>Total</i>	13	12 *

**DH 417 and **DH 401/DH 441 may be taken either fall or spring semester of the senior year.

*DH 200 will be taken in the fall or year 2 if you transfer in as a sophomore.

Courses (DH)

199-1 to 10 Individual Study. Provides first-year students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of facilities of the entire institution. Each student will work under the supervision of a sponsoring faculty member. Restricted to DH majors. Special approval needed from the school.

200-2 Orientation to Dental Hygiene. The student will be

introduced to the dental hygiene profession. Issues including patients' rights, professional ethics, the state practice act, health promotion, and communication will be presented. Learning styles, test-taking strategies, research applications, using resources, and writing styles will be included. Restricted to DH majors.

206-1 Dental Hygiene Oral Anatomy and Tooth Morphology. The student will learn to recognize and identify the structures within the oral cavity, including the tongue, salivary glands, lips and cheeks and teeth (both permanent and primary). Length of course: 16 weeks. One hour of lecture weekly. Restricted to DH majors only and approval from the School of Allied Health or the DH program.

206L-1 Dental Hygiene Oral Anatomy and Tooth Morphology. The student will learn to recognize and identify the structures within the oral cavity, including the tongue, salivary glands, lips and cheeks and teeth (both permanent and primary). Laboratory emphasis will be placed on tooth identification and tooth/root morphology to enhance the application of instrumentation techniques. Length of course: 16 weeks. Two hours of lab weekly. Restricted to DH majors only and approval from the School of Allied Health or the DH program.

207-2 Instrumentation. DH 207 is the lecture portion of the pre-clinical course which introduces the student to fundamentals of dental hygiene theory, foundational instrumentation techniques, infection control protocol, and clinical policies. Two hours of lecture weekly. Length of course: 16 weeks. Taken concurrently with DH 207C. Must be accepted into professional sequence. Restricted to DH majors only and approval from the School of Allied Health or the DH program. Laboratory fee: \$35.

207C-2 Instrumentation Pre-Clinic. DH 207C is a pre-clinical course which introduces the student to hands-on experiences with the fundamentals of dental hygiene theory, foundational instrumentation techniques, infection control protocol, and clinical policies. Students must demonstrate clinical competence with various skills involving classmates, typodonts, clinical equipment, and clinical policies. Four hours of lab weekly. Length of course: 16 weeks. Taken concurrently with DH 207 lecture. Must be accepted into professional sequence. Restricted to DH majors only and approval from the School of Allied Health or the DH program. Laboratory fee: \$35.

210-2 Patient Assessment Techniques. Assessment theory and techniques are taught to prepare the student to successfully recognize and record normal and abnormal intraoral and extraoral conditions. These assessment skills will be incorporated into treatment planning for individualized patient care. Weekly = two hours of lecture. Length of course: 16 weeks. Restricted to DH majors only and approval from the School of Allied Health or the DH program. Laboratory fee: \$35.

210L-1 Patient Assessment Pre-Clinic Lab. Assessment theories and techniques are taught to prepare the student to successfully recognize and record normal and abnormal intraoral and extraoral conditions. 2 hours pre-clinical lab. Restricted to DH majors only and approval from the School of Allied Health or the DH program. Lab fee: \$35.

212-2 Medical Emergencies in the Dental Office and General Diseases. The student will learn about medical conditions which may affect or alter the provision of oral care. Emphasis is on acquiring and evaluating the medical, dental and drug his-

tory and treatment of general system diseases. Modification of treatment plans will be discussed. Lecture two hours. 16 weeks. Prerequisite: Microbiology 201 with a grade of C or better.

218-2 Dental Radiology I Seminar. The student is introduced to principles of radiation biology and protection, x-ray production, image formation, and intraoral radiographic techniques. Lecture two hours. Length of course: 16 weeks. Restricted to DH majors only and approval from the School of Allied Health or the DH program. Laboratory fee: \$35.

218L-1 Dental Radiology I Practicum. The student is introduced to principles of radiation biology and protection, x-ray production, image formation, and intraoral radiographic techniques. Lab two hours. Length of course: 16 weeks. Restricted to DH majors only and approval from the School of Allied Health or the DH program. Lab fee: \$35.

219-2 Dental Radiology II Seminar. The student will learn special dental survey techniques including paralleling, bisecting angle, digital, occlusal and special views. The student will also identify anatomical landmarks and recognize normal and pathological conditions that appear on dental images. Lecture two hours. Course length: 16 weeks. Prerequisites: DH 218, DH 218L and DH 226. Restricted to DH majors only and approval from the School of Allied Health or the DH program.

219L-1 Dental Radiology II Practicum. The student will learn special dental survey techniques including paralleling, bisecting angle, digital, occlusal and special views. The student will also identify anatomical landmarks and recognize normal and pathological conditions that appear on dental images. Laboratory two hours. Course length: 16 weeks. Restricted to DH majors only and approval from the School of Allied Health or the DH program.

220-2 Dental Hygiene Clinic I Seminar. This course expands on theory and the clinical application of dental hygiene sciences. Includes introduction to dental hygiene clinic policies and procedures, professional conduct, patient assessment, clinical decision-making, treatment modalities, and care plan development. Emphasis is placed on the development of critical thinking skills as applied to the provision of patient care. Lecture two hours. Prerequisite: DH 206, DH 207, DH 210, DH 218, and DH 226. Restricted to DH majors only and approval from the School of Allied Health or the DH program. Laboratory fee: \$50.

220-2C Dental Hygiene Clinic I. The student will apply knowledge and utilize techniques to assess the oral health status, plan and implement treatment, and evaluate outcomes related to improved oral health. The student will provide preventive, therapeutic, and educational services to clinical patients for the treatment and prevention of oral disease. Clinic 8 hours. Prerequisite: DH 206, DH 207, DH 210, DH 218 and DH 226. Restricted to DH majors only and approval from the School of Allied Health or the DH program. Laboratory fee: \$50.

226-2 Anatomy of the Head and Neck. The goal of this course is for the dental hygiene student to acquire clinical problem solving skills through a basic understanding of the gross anatomy of the head and neck region of the human body. Through a regional approach to the head and neck, the student will be able to synthesize solutions to clinical problems by understanding the morphological and functional interrelationships of anatomical structures. 16 weeks. Two credit hours.

Restricted to DH majors.

233-2 Histology and Embryology. The goal of this course is to enable the dental hygiene student to develop a basic understanding of the microscopic structure of the primary and dental tissue groups of the human body. This course also enables the student to relate embryonic development to the normal and abnormal structures of the head and oral cavity. This background will prepare the student to differentiate between normal and abnormal clinical manifestations in subsequent courses. 16 weeks. Two credit hours. Restricted to DH majors.

247-2 Preventive Oral Care Seminar. The student will prepare for the role of oral health educator and consumer advocate. The dental hygiene process of assessment, planning, implementation and evaluation is applied for the prevention of oral disease. Each week in the 16-week course is two hours of lecture. Concurrent enrollment in DH 247L. Prerequisites: MICR 201, DH 210, DH 207, DH 226. Restricted to DH majors only and approval from the School of Allied Health or the DH program. Lab fee: \$35.

247L-1 Preventive Oral Care Practicum. The student will prepare for the role of oral health educator and consumer advocate. The dental hygiene process of assessment, planning, implementation and evaluation is applied for the prevention of oral disease. Laboratory techniques for assessing disease processes will be applied. Two hours of laboratory per week. Length of course: 16 weeks. Concurrent enrollment in DH 247. Prerequisites: MICR 201, DH 207, DH 210, DH 226. Restricted to DH majors only and approval from the School of Allied Health or the DH program. Lab fee: \$35.

298-3 Multicultural Applied Experience. An applied experience, service-oriented course in American diversity involving a group different from the student who elects the course. Difference can be manifested by things such as age, gender, ethnicity, nationality, political affiliation, race, or class. Satisfies the multicultural requirement in the University Core Curriculum.

299-1 to 16 Individual Study. Provides students with opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to resources of the facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Restricted to DH majors.

310-2 Infection Control/Safety and Health. This course is designed to provide students with basic information on infection control and occupational health and safety from a theoretical basis to practical application utilizing case based problem solving when applicable. Occupational hazards found in the dental environment, including infectious agents, chemical hazards and ergonomic issues will be discussed and explored. Practical experience developing and managing a safety and health program will be gained with hands-on experience in various clinical settings. Lecture two hours. Prerequisite: DH 220.

319-1 to 15 Occupational Internship. Each student will be assigned to a University approved organization engaged in activities related to the student's academic program and career objectives. The student will perform duties and services as assigned by the preceptor and coordinator. Reports and assignments are required to be completed by the student. Hours and credits to be individually arranged. Mandatory Pass/Fail.

320-2 Dental Hygiene Clinic II. Students will use research,

discussions, and professional judgment to provide comprehensive dental hygiene treatment plans. This course will introduce power instrumentation techniques, patient management, professionalism, and tobacco cessation education. It will also prepare the dental hygiene student for safe, effective administration of local anesthesia. Dental management software will also be introduced. Lecture two hours. Must be taken concurrently with DH 320C. Prerequisites: DH 206, DH 210, DH 218 and DH 226. Restricted to DH majors only and approval from the School of Allied Health or the DH program. Laboratory fee: \$50.

320C-2 Dental Hygiene Clinic II. This is the third course in a series of clinical courses that lead to the achievement of integrated objectives for the clinical dental hygiene practice. The student is expected to continue to develop progressively in the application of clinical skills in order to provide preventive, educational, and therapeutic services to the public. Information and skills from basic science, dental science, and the behavioral sciences will be utilized to provide individualized client/patient care. The student will perform professional services of a hygienist on designated clinical clients/patients and is expected to demonstrate improvement of skills. Eight hours of clinic. Must be taken concurrently with DH 320. Prerequisites: DH 206, DH 210, DH 218, and DH 226. Restricted to DH majors only and approval from the School of Allied Health or the DH program.

322-1 Operative Oral Care and Adjunctive Procedures. This course includes an overview of various materials and procedures used in general and specialty dentistry. Emphasis is placed on the role of dental hygienists in explaining these procedures to clients and in adapting dental hygiene services. One hour of lecture. Must be taken concurrently with DH 322L. If DH 322L is dropped then DH 322 must be dropped. Prerequisite: DH 320. Restricted to DH majors only and approval from the School of Allied Health or the DH program. Lab fee: \$50.

322L-1 Operative Oral Care and Adjunctive Procedures. Adjunctive procedures that augment operative care are taught in this laboratory. Two hours of lab. Must be taken concurrently with DH 322. If DH 322 is dropped then DH 322L must be dropped. Prerequisite: DH 320. Restricted to DH majors only and approval from the School of Allied Health or the DH program. Lab fee: \$50.

340-3 Dental Pharmacology and Pain Control. This course is designed to teach the student about different drugs used in dentistry, the biochemical activity of each, appropriate use, interactions with other drugs or systemic conditions, and some basic pharmacology terminology. Pharmacotherapeutics will be presented to the dental hygiene student in a meaningful, practical manner. Emphasis will be placed on clinical efforts, dosages, adverse effects and contraindications of drugs commonly prescribed in dentistry or which patients may be taking under direction of other health care providers or under self-direction. Information will be presented from a perspective to include pharmacological basis for drugs, the need for and use of a medical history, legal aspects related to these subjects. Prerequisite: DH 212, DH 220.

341-2 Periodontics and Local Anesthesia Seminar. The student will be introduced to the identification, treatment, and prevention of pathological conditions that affect the periodontium. Includes assessment, diagnosis, and initial treatment of

periodontal diseases. Emphasis will be placed on the anatomy and histology of normal periodontal tissues, etiology of periodontal diseases and resulting tissue changes. The course will also provide a working knowledge of local anesthesia as applied to the practice of dental hygiene. Students will be provided with the knowledge and skills necessary to administer both maxillary (infiltration) and mandibular (block) injections proficiently and safely. Lecture two hours. Length of course: 16 weeks. Prerequisites: DH 212, DH 220, and DH 226, and concurrent enrollment in DH 340 and DH 341L. Laboratory fee: \$50.

341L-1 Periodontics and Local Anesthesia Practicum. The student will be introduced to the identification, treatment, and prevention of pathological conditions that affect the periodontium. Emphasis will be placed on anatomy and histology of the periodontium. Etiology of periodontal diseases and resulting tissue changes. Includes assessment, diagnosis, and initial treatment of periodontal diseases. The course will also provide a working knowledge of local anesthesia as applied to the practice of dental hygiene. Students will be provided with the knowledge and skills necessary to administer both maxillary (infiltration) and mandibular (block) injections proficiently and safely. Lab two hours. Length of course: 16 weeks. Concurrent enrollment in DH 340, DH 341 required. Prerequisites: DH 212, DH 220, DH 226. Laboratory fee: \$50.

347-2 Community Oral Health. The student is introduced to the general principles of dental public health, community dentistry and epidemiology. Also presented is an overview of current community based oral health programs and roles of a community based dental hygienist. Lecture two hours. 16 weeks. Prerequisite: DH 247, Sociology 108, Health Care Management 365.

349-3 General & Oral Pathology. This course will focus on the identification and physiological understanding of general and oral pathology. Students will study principles of broad disease classifications with emphasis on the relationships to oral diseases. Clinical features, significance, causes, locations, oral manifestations are presented. Prerequisites: DH 210, DH 212, DH 226, and DH 233.

355-2 Dental Hygiene Clinic III. This course will introduce nutritional counseling, implant maintenance, CDT codes. Continued focus on anesthesia, case studies and patient management. Students will be introduced to criteria for board patient selection. Two hour lecture. Must be taken concurrently with DH 355C. Prerequisites: DH 320, DH 340, DH 341. Restricted to DH majors only and approval from the School of Allied Health or the DH program. Laboratory fee: \$75.

355C-2 Dental Hygiene Clinic III. This is the fourth clinical course in a series that leads to the achievement of specific objectives for the clinical dental hygiene practice. The student will maintain and develop clinical skills, preventive care and provide dental education to each patient they encounter. This care will also include successful treatment modalities, dental hygiene care planning and continuous care in a recall system. The student will provide comprehensive individualized treatment using all aspects of dental hygiene care in the clinical setting. Emphasis is on mastery of skills and techniques previously introduced. Eight hours of clinic. Must be taken concurrently with DH 355. Prerequisites: DH 320 and DH 340. Restricted to

DH majors only and approval from the School of Allied Health or the DH program.

401-2 Dental Hygiene Practicum Seminar. The student will learn curriculum development, evaluation methods, theories of learning, and instructional strategies. Not for graduate credit. Lecture one hour. Prerequisite: DH 355. Restricted to DH majors only and approval from the School of Allied Health or the DH program.

401L-2 Dental Hygiene Practicum Lab. The student will participate in laboratory and clinical sessions emphasizing psychomotor development, feedback, and identification of cognitive, psychomotor, and affective behaviors, and faculty calibration. Students will also participate in service-learning activities. Not for graduate credit. Lab practicum four hours per week. Prerequisite: DH 355. Restricted to DH majors only and approval from the School of Allied Health or the DH program.

410-2 Ethics, Jurisprudence and Practice Management for Dental Hygienists. Ethical and legal issues related to the practice of dentistry and dental hygiene are studied. Case situations are evaluated to determine appropriate man agreement in accordance with the principles of dental ethics and jurisprudence. Review and interpretation of dental practice acts and licensure requirements are included. The student integrates current knowledge of the dental hygiene field with additional information on employment issues such as dental office procedures, resumes, staff relationships, career opportunities, etc. Prerequisite: DH 355.

413-2 Dental Hygiene Seminar. This course is designed to assist senior dental hygiene students in preparing for the credentialing examinations and the other procedures required for obtaining a dental hygiene license. Course content will include review of dental hygiene curriculum content and requirements for licensure. Prerequisites: DH 355.

417-3 Multicultural Applied Experience in Dental Hygiene. (Advanced University Core Curriculum course) A comprehensive approach to special needs patients and diverse populations. The oral health needs of rural, geriatric, minority, low income, medically compromised, disabled and other special needs populations will be addressed. Lecture three hours. Not for graduate credit. Prerequisites: DH 355 and DH 448 or concurrent enrollment or consent of school. Laboratory fee: \$50.

417I-3 Multicultural Internship. Rotations through several clinical facilities providing dental hygiene services to a variety of patient population groups. Twelve internship hours. Not for graduate credit. Prerequisites: DH 355 and DH 448 or concurrent enrollment. Restricted to DH majors only and approval from the School of Allied Health or the DH program. Laboratory fee: \$50.

440-3 Research Methodology. The course introduces the fundamental principles of research methodology with an emphasis on how these principles are applied for conducting research in the field of dental hygiene. A brief overview of the scientific method will be presented with a concentration on research planning, research designs, data collection, descriptive statistics, inferential statistics, and dissemination of research. Not for graduate credit. Prerequisite: DH 355.

441-3 Advanced Periodontics Clinic IV Seminar. Didactic instruction will emphasize clinical application of patient management skills including comprehensive individualized treat-

ment for complex periodontal patients. Emphasis will be placed on comprehensive evaluation, risk assessment, treatment planning, pain control, adjunctive antibiotic therapy, instrumentation, soft tissue management, evaluation and maintenance. Lecture three hours. Not for graduate credit. Prerequisite: DH 355. Restricted to DH majors only and approval from the School of Allied Health or the DH program. Laboratory fee: \$75.

441C-3 Advanced Periodontics Clinic IV Seminar. The student will provide comprehensive individualized treatment for complex periodontal patients. Emphasis will be placed on clinical application of patient management skills including comprehensive evaluation, risk assessment, treatment planning, pain control, adjunctive antibiotic therapy, instrumentation, soft tissue management, evaluation and maintenance. Clinic twelve hours. Not for graduate credit. Prerequisite: DH 355. Restricted to DH majors only and approval from the School of Allied Health or the DH program. Laboratory fee: \$75.

448-1 Community Oral Health Practicum. Principles of community oral health are applied through practical experience. Programming phases of assessment, planning, implementation, and evaluation are studied in detail. Lecture one hour weekly. 16 weeks. One credit hour. Not for graduate credit. Prerequisite: DH 347, CMST 101, ENGL 101 and 102. Restricted to DH majors only and approval from the School of Allied Health or the DH program. Laboratory fee: \$35.

448L-1 Community Oral Health Practicum. The student will develop and implement community dental health service and education programs according to programming principles. This course is writing intensive and reflects the College's Communication-Across-the-Curriculum initiative. Practicum two hours. 16 weeks. 1 credit hour. Not for graduate credit. Prerequisite: DH 347, CMST 101, ENGL 101 and 102. Restricted to DH majors only and approval from the School of Allied Health or the DH program. Laboratory fee: \$35.

Design

(SEE ART AND DESIGN)

Early Childhood

(SEE CURRICULUM AND INSTRUCTION)

East Asian Languages

(SEE FOREIGN LANGUAGES AND LITERATURES)

Economics

(Department, Major, Courses, Faculty)

The study of economics examines how entities from individuals to nations allocate resources to achieve objectives congruent with their desires and interests. A strong economics background can help one better predict movements in stock markets, achieve a balance between economic policy and environmental goals, recognize the costs and benefits of increased globalization including international trade, and predict how different government policies influence the business cycle.

Economic forces have had powerful effects throughout world history and so a strong background within economics can greatly increase one's understanding of the world today. Moreover,

economics helps develop analytical abilities and skills such as forecasting market trends and managing financial portfolios that are attractive to a wide range of employers in both the private and public sectors. Obtaining an economics major is also beneficial to those who enter graduate programs in business, law, or any of the social sciences.

Within the major, students can specialize in different fields, including international economics and financial economics. Both areas are rapidly increasing in importance as the world becomes more interdependent and as more people hold financial portfolios. Students specializing in general economics can also tailor a program to meet their specific interests through consultation with one of the undergraduate advisors in the department.

After meeting the requirements of the economics major and those of the College of Liberal Arts, students still have 35 hours of electives outside the department. This flexibility allows students to augment their economic training with courses that meet particular interests in areas such as business, political science, or journalism. Students can thus combine their economics degree with other disciplines so as to pursue a wide range of careers and interests.

The requirements for an economics major are given below. Economics courses at the 300-level generally require only introductory economics (ECON 240 or 241) whereas those at the 400-level are more sophisticated treatments building upon Economics 340 or 341. Courses taken for a pass/fail grade will not be counted toward the major without the written consent of the director of undergraduate studies within the economics department. Transfer students can receive credit towards the major from equivalent economics courses at other institutions. However, at least five economics courses must be taken at Southern Illinois University Carbondale.

Students are highly encouraged to discuss their major programs and career goals with a professor within the department. Undergraduates considering graduate economics programs should meet with a professor as soon as possible in order to adequately prepare for the economics and mathematical rigor of these graduate programs.

Bachelor of Arts Degree in Economics, College of Liberal Arts

ECONOMICS MAJOR – GENERAL

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements</i>	14
<i>Economics Requirements</i>	30
Foundation courses: Economics 240, 241, 308, 340, 341 ...	15
Five electives: chosen in consultation with major advisors	15
<i>Electives</i>	35
<i>Total</i>	120

ECONOMICS MAJOR – FINANCIAL ECONOMICS
SPECIALIZATION

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements</i>	14
<i>Financial Economics Specialization Requirements</i>	30
Foundational courses: ECON 240, 241, 308, 340, 341	15
Specialized courses: ECON 315 or FIN 330, and	

ECON 416	6
Three electives: chosen in consultation with major advisor	9
<i>Electives</i>	35
<i>Total</i>	120
ECONOMICS MAJOR – INTERNATIONAL ECONOMICS SPECIALIZATION	
<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements</i>	14
<i>International Economics Specialization Requirements</i>	30
Foundational courses: ECON 240, 241, 308, 340, 341	15
Specialized courses: ECON 329 and ECON 429	6
Three electives: chosen in consultation with major advisors	9
<i>Electives</i>	35
<i>Total</i>	120
ECONOMICS MAJOR – LAW AND ECONOMICS SPECIALIZATION	
<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements</i>	14
<i>Law and Economics Specialization Requirements</i>	30
Foundation courses: ECON 240, 241, 308, 340, 341	15
Specialized courses: ECON 302I and 350	6
Three electives: chosen in consultation with major advisors	9
<i>Electives</i>	35
<i>Total</i>	120

Departmental Honors Program

Juniors and seniors who are economics majors and working toward a Bachelor of Arts degree in the College of Liberal Arts may choose to enter the Departmental Honors Program. To receive departmental honors, a student must have a GPA in Economics of 3.5 or better AND: a) Complete six hours of Econ 443, Honors Research in Economics, with a grade of B or better OR b) Complete six hours of 400-level coursework within the economics department with a grade of B or better in each course. Moreover, for each of these courses the student must complete an assignment beyond that of the regular coursework asked of non-Honors students, An outline of this assignment must receive the written consent of both the instructor and the department chair for the assignment to be approved as fulfilling the requirements of the Honors Program. Successful completion of the department’s honors program is noted on the diploma and the transcript. Students receiving credit for Economics 443 may not apply Economics 301 hours toward the major. Concurrent participation in the University Honors Program is encouraged.

Economics Minor

For students majoring in other departments, a minor in economics is useful for employment in business or government and for graduate work in any of the social sciences, law, or business. A minor requires 15 hours of economics courses, including both Economics 240 and 241. Economics 301 cannot be counted towards the minor. Students must obtain at least a 2.0 grade point average in the 15 hours of coursework counted towards the minor. Transfer students must take at least three economics courses at Southern Illinois University Carbondale.

Economics Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101.....	3	-
ENGL 101,102.....	3	3
Core Science	3	3
Core Mathematics.....	3	-
Core Humanities.....	3	3
Core Social Science	-	3
Core Fine Arts.....	-	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
Core Communication Studies.....	3	-
Core Multicultural, Health.....	3	2
Core Social Science	3	-
Foreign Language	4	4
Science with Lab, Elective.....	3	3
ECON 240.....	-	3
English Composition.....	-	3
<i>Total</i>	16	15

THIRD YEAR	FALL	SPRING
ECON 241, ECON XXX	3	3
ECON 308, ECON XXX	3	3
ECON 340,341.....	3	3
Electives	6	6
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
ECON XXX.....	6	-
ECON XXX	-	3
Electives	9	12
<i>Total</i>	15	15

Courses (ECON)

113-3 Economics of Contemporary Social Issues. (University Core Curriculum) The purpose of this course is to examine a number of major social issues from an economics perspective. Thus the student will be taught some basic economic concepts (tool kit) which will then be used to analyze a variety of social problems. The emphasis will be on policy. Once the causes of social problems have been analyzed, then specific policies effective in solving or dealing with the social problem will be discussed. Only one of the courses, Economics 113 or Economics 114, can count among those economics courses required for an economics major or minor.

114-3 Introduction to Economics: Class Simulations. (University Core Curriculum) Basic economic problems are analyzed with market simulations through the use of in-class experiments, in which the students act as the buyers and sellers. Topics usually include the effects of market-based taxes, illegal drug markets, minimum wage, pollution, monopoly, textbook pricing, measuring productivity and international trade. Only one of the courses, Economics 113 or Economics 114, can count

among those economics courses required for an economics major or minor.

240-3 Introduction to Microeconomics. (Advanced University Core Curriculum course) [IAI Course: S3 902] Study of businesses, consumers, and the government and their effects on prices, output and income distribution. Current economic problems will be used as illustrative examples. Prerequisite: satisfaction of the University Core Curriculum mathematics requirement. Satisfies the University Core Curriculum Social Science requirement in lieu of Economics 113.

241-3 Introduction to Macroeconomics. (Advanced University Core Curriculum course) [IAI Course: S3 901] Determination of income, employment, output and price levels in the national economy; government taxation, expenditure, and monetary policies to solve problems such as inflation and unemployment. Prerequisite: satisfaction of the University Core Curriculum mathematics requirement. Satisfies the University Core Curriculum Social Science requirement in lieu of Economics 113.

301-1 to 6 Economic Readings. Readings in books and periodicals in a defined field, under direction of one or more faculty members. Periodic written and oral reports. No more than three credit hours of 301 may be counted as part of the 30 credit hour economics requirements for economics majors. Special approval needed from the instructor and department chair.

302I-3 History and Philosophy of the World's Economic Systems. (University Core Curriculum) An investigation into how economic systems coexist with, and determine, or are determined by, the political and social structures in internationally diverse countries. Utilizing both economic concepts and an institutional approach the evolution of systems in nations such as Russia, Japan, the United States, China and others will be explored.

303-3 Poverty and the Economy. Poverty as a study of income inequality. Economic determinants of income inequality are isolated and related to current policy proposals.

308-3 Economics and Business Statistics. An examination of the research methods and data analysis techniques used by economists in their analysis of economics questions and problems including the principal statistical methods used in economic and business decision making. This course satisfies the CoLA Writing Across the Curriculum requirement.

310-3 Labor Problems. A comprehensive overview of the relation of labor to the United States economy. Included are the history of labor in the United States; analysis of institutions affecting labor; the theory of wage and employment determination; as well as analyses of unions and collective bargaining, discrimination, unemployment, and the distribution of income. Prerequisite: ECON 240 or consent of instructor.

315-3 Money and Banking. Study of the operation of the money and banking system in the United States. Stresses Federal Reserve control of the money supply and credit conditions to combat inflation and unemployment and the operation of the commercial bank operating as a firm within the Federal Reserve System. Policy issues are examined for the regulation of the banking industry as well as for the control of the domestic money supply. Prerequisite: ECON 241 or consent of instructor.

322-3 Introduction to Economic Development. An analysis of the preconditions, processes, and problems involved in

economic development. Both the theory and policy relevant to development, with special emphasis on the developing or emerging economies, are stressed. Prerequisite: ECON 240 and 241 or consent of instructor.

325-3 Economics of Transition. This course is a survey of the problems confronting former socialist economies making a transition to a market economy. We focus primarily on the case of countries in Eastern Europe and on Russia. Students will learn to apply economic principles to understand the costs and benefits of policies including gradual versus rapid reform, price liberalization, privatization, federalist arrangements and stabilization. Prerequisite: ECON 240 and 241 or consent of instructor.

329-3 Introduction to International Economics. Introduction to the principles of international economics. Stresses the relationship between the balance of payments and the United States economy, the determinants of deficits and surpluses, and policy options to correct an imbalance. Prerequisite: ECON 240 and 241 or consent of instructor.

330-3 Public Finance. Effects of government spending and taxing activities on the rest of the economy. Analysis of government debt, the federal budgetary process, and various taxes used in the United States. Prerequisite: ECON 240 or consent of instructor.

333-3 Economics of the Environment. Factors which lead to physical and human deterioration in a market economy. Consideration of solutions to such problems as urban decay, overpopulation, and pollution. Prerequisite: ECON 240 or 241 or consent of instructor.

334-3 Health Economics. Factors underlying the demand for and supply of health and medical care services. Included are the market, voluntary nonprofit, and governmental sectors of the industry. Special topics are the regional coordination of hospital facilities and services, the consumer price index and the measurement and costs of control programs. Prerequisite: ECON 240 or consent of instructor.

340-3 Intermediate Microeconomics. A survey of theories of household, firm, and government economic behavior in the determination of competitive and non-competitive market prices. Emphasis is on understanding the United States economic system and on evaluating existing and proposed government microeconomic policies designed to improve the system. Not open to students who have had Economics 440. Prerequisite: ECON 240 or consent of instructor.

341-3 Intermediate Macroeconomics. The determinants of fluctuations in aggregate economic activity, unemployment and inflation. An analysis of the behavior of consumption and investment, the impact of government monetary and fiscal policies, and factors affecting the rate of economic growth. Not open to students who have had Economics 441. Prerequisite: ECON 241 or consent of instructor.

350-3 Law and Economics. The application of economics to the study of legal rules and institutions with an emphasis on how legal rules influence individual behavior and a discussion of whether such rules and resulting behavior are efficient and/or equitable. Applications from property, contract, tort, and criminal law will be used. Prerequisite: ECON 240 or consent of instructor.

370-3 Pacific Rim Economics. This course offers an overview of the development process, and the associated successes and

failures of Pacific Rim economies during the latter half of the Twentieth Century. The course explores the forces underlying the causes and consequences of these changes, with particular emphasis on the role of the state, along with the interdependence of the financial and the real sectors, as evidenced by recent financial crises in East Asia. Prerequisite: ECON 240 and 241, or consent of instructor.

374-3 Industrial Organization. A survey of economic theories and empirical studies on the nature and consequences of business rivalry in imperfectly competitive markets. Includes such topics as oligopoly, economics of scale, natural monopoly, introductory game theory, advertising, imperfect information, spatial competition, patents, and innovation. Prerequisite: ECON 240.

399-3 Internship in Economics. Internship constitutes paid or unpaid work in a firm, organization, or government office applying economic principles learned in class to real world experiences. Only one internship counted towards the economics major. Grades determined by periodic written reports. Prerequisite: successful completion of ECON 240, 241 and six additional credit hours of economics at SIUC; declared major in economics; and written approval from the Economics department.

400-3 Contemporary Economic Problems. A study of one or more contemporary economic problems. Problems chosen vary from semester to semester. Topics will be announced in advance. Not for graduate credit. Restricted to senior status and economics major.

408-3 Research Methods in Economics. A continuation of 308 which includes the construction, interpretation, and use of economic data. Topics include correlation, regression, decision making, index numbers, time series analysis, forecasting, and other statistical techniques used in analyzing economic and business data. This course will not count as graduate credit for economics majors. Not for graduate credit. Prerequisite: ECON 308 or equivalent.

416-3 Financial Economics. Study the role of money within the financial system, and the role of the financial system itself in providing risk-sharing, liquidity and information services. An examination of the bond market, interest rates and the concepts of risk, liquidity, information costs, taxation and investment maturity. A detailed examination of financial markets, e.g., the markets for stocks, foreign exchange, and market for financial derivatives. Finally, a more detailed account of why and how financial institutions and instruments evolve. Prerequisite: ECON 241 or consent of instructor.

419-3 Latin American Economic Development. Special attention to contemporary policy issues and alternative strategies for development. Among the topics included are inflation and financial reform, international trade and economic integration, foreign investment, and agrarian reform. Prerequisite: ECON 315 or 341 or consent of instructor.

429-3 International Trade and Finance. Analysis of the pattern and volume of world trade and capital flows; effects of trade and payments on the domestic economy; problems and methods of adjusting to change in the balance of payments. Prerequisite: ECON 340 and 341 or consent of instructor.

431-3 Public Finance II. State and local. Analysis of the economic effects, problems, and alternative solutions concerning state and local government expenditures, revenues, and debt.

Prerequisite: ECON 330 or 340 or 341 or consent of instructor.

440-3 Price, Output, and Allocation Theories. A systematic survey of theories of product prices, wage rates, rates of production and resource utilization under conditions of competition, monopolistic competition, oligopoly and monopoly markets. Emphasis is on developing analytical tools useful in the social sciences. Not open to students who have had Economics 340. Prerequisite: ECON 240 or consent of instructor.

441-3 Contemporary Macroeconomic Theory. An examination in the causes of inflation, unemployment, and fluctuations in aggregate economic activity, factors affecting consumption and investment, and the sources of economic growth. Emphasis is on understanding contemporary United States macroeconomic problems and the options for fiscal, monetary and income policies facing the United States government. Not open to students who have had 341. Prerequisite: ECON 241 or consent of instructor.

443-3 Honors Research in Economics. Individual research for honors students in economics; student must be a junior or senior with a grade point average of 3.25 or better, overall and in the major. For undergraduate credit only. Not for graduate credit. Prerequisite: Mathematics 140, 150 or equivalent. Special approval needed from the departmental chair and a faculty supervisor.

450-3 History of Economic Thought. An analytical study of the development of economic ideas, with special reference to historical and societal context, central thrust, and impact. Such benchmark figures as Smith, Marx, Marshall, Veblen, and Keynes are highlighted and major schools of economic thought are identified. Prerequisite: ECON 240 and 241; or 113; or consent of instructor.

463-3 Introduction to Applied Econometrics. Applications of statistical tools to specific economic problems. Numerous examples will be examined in order to achieve this goal. Emphasis will be given to model misspecification, non-classical estimation techniques, data analysis, and simultaneous equations. Prerequisite: ECON 308 or equivalent or consent of instructor.

465-4 Mathematical Economics I. A systematic survey of the fundamental mathematical tools for economic analysis. Topics include functions and their properties, including derivatives and integrals. The focus is on calculus techniques for optimization and comparative statics analysis. Prerequisite: ECON 340 or 440, and MATH 140 or consent of instructor.

474-3 Economic Strategies for Business. This course will be concerned with broad principles of microeconomics that underlie all business decision-making. The main topics discussed may include the firm's costs, pricing and research and development decisions under different market structures, price discrimination, strategies of different business practices, information, advertising, decision-making over time, and decision-making under symmetric information. Prerequisite: ECON 240 or its equivalent or consent of instructor.

479-3 Problems in Business and Economics. Application of economic theory and tools of analysis to practical business problems. Cost and demand functions, and forecasting are analyzed from a policy standpoint. Prerequisite: ECON 240, 308 or consent of instructor.

Economics Faculty

Becsi, Zsolt, Associate Professor, Ph.D., University of Wisconsin-Madison, 1991.

Dai, Chifeng, Associate Professor, Ph.D., University of Florida, 2003.

Fare, Rolf, Professor, *Emeritus*, Docent., University of Lund, 1976.

Gilbert, Scott, Associate Professor, Ph.D., University of California at San Diego, 1996.

Grabowski, Richard, Professor, *Emeritus*, Ph.D., University of Utah, 1977.

Lahiri, Sajal, Professor and *Vandever Chair*, Ph.D., Indian Statistical Institute, 1976.

Laumas, G. S., Professor, *Emeritus*, Ph.D., Wayne State University, 1966.

Layer, Robert G., Professor, *Emeritus*, Ph.D., Harvard University, 1952.

Mitchell, Thomas, Associate Professor, *Emeritus*, Ph.D., Brown University, 1984.

Morshed, Akm, Associate Professor, Ph.D., University of Washington, 2001.

Myers, John G., Professor, *Emeritus*, Ph.D., Columbia University, 1961.

Primont, Daniel A., Professor, *Emeritus*, Ph.D., University of California at Santa Barbara, 1970.

Sharma, Subhash C., Professor and *Chair*, Ph.D., University of Kentucky, 1983.

Sylwester, Kevin, Associate Professor, Ph.D., University of Wisconsin-Madison, 1997.

Trescott, Paul B., Professor, *Emeritus*, Ph.D., Princeton University, 1954.

Watts, Alison, Professor, Ph.D., Duke University, 1993.

Education and Human Services

(SEE TEACHER EDUCATION PROGRAM)

Educational Administration

(Major, [Graduate only], Courses)

Courses (EAHE)

256-1 to 3 Student Strengths and Goal Setting. This course provides students with an opportunity to identify their strengths and then use this information to set academic, career, and life goals. The design of this course devotes special consideration to the needs of First Scholars participants, first-generation college students, and others who desire some support in finding direction for their lives and their time in college.

Educational Psychology

(SEE COUNSELOR EDUCATION OR QUANTITATIVE METHODS)

Electrical and Computer Engineering

(Department, Majors [Electrical Engineering, Computer Engineering], Courses, Faculty)

MISSION STATEMENT

The mission of the Department of Electrical and Computer Engineering is to serve society as a center for learning and innovation in all major areas of electrical and computer engineering. The department accomplishes its mission by disseminating existing knowledge through teaching, by creating new knowledge through research and publications, and by converting original ideas and concepts into new technologies. Through integration of education and research, the department creates the academic environment necessary for training innovators and leaders for the future.

Bachelor of Science Degree in Electrical Engineering

The fundamental goal of the undergraduate program in Electrical Engineering is to offer a high-quality education, designed to achieve the following specific educational objectives:

EDUCATIONAL OBJECTIVES

Within a few years of graduation, Electrical Engineering graduates are expected to attain:

1. Increasing responsibility beyond that in their entry-level description in job functions within Electrical Engineering or related employment, and/or
2. Successful progress within graduate degree programs in Electrical Engineering or other professional degrees such as other Engineering, Business, Law or Medicine, and continued successful professional development and adaptation to evolving technologies within their chosen field.

The flexibility of the electrical engineering curriculum allows the students to choose courses among four tracks, (a) Electronic Circuits and Devices: electronic circuits, instrumentation, RF circuit design, microwave circuit design. Relevant courses: ECE 438, ECE 440, ECE 446, ECE 447, ECE 449, ECE 479. (b) Electromagnetics and Photonics: microwave engineering, antenna systems, fiber optic systems. Relevant courses: ECE 441, ECE 448, ECE 472, ECE 477, ECE 479. (c) Power Systems and Energy: utility power systems, energy systems, electric drives. Relevant courses: ECE 481, ECE 483, ECE 484, ECE 486, ECE 487, ECE 488, ECE 489. (d) Signals and Control: signals and systems, signal processing, telecommunications, control. Relevant courses: ECE 456, ECE 459, ECE 467, ECE 468A, ECE 471, ECE 476, ECE 478.

Employment opportunities exist within a wide range of organizations, such as computer, semiconductor, aviation, electronics, microelectronics, broadcasting, telecommunications, defense, automotive, manufacturing and electric power companies, state and federal agencies and laboratories. Employment opportunities cover the spectrum of engineering activities, ranging from research and development, to systems analysis, automation, manufacturing, customer service and support, marketing and sales.

The undergraduate program in electrical engineering is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>.

Bachelor of Science Degree in Electrical Engineering, College of Engineering

ELECTRICAL ENGINEERING MAJOR

<i>University Core Curriculum Requirements</i>	41
Foundation Skills	15
UCOL 101E*.....	3
English 101, 102	6
Communication Studies 101	3
Mathematics (see major)	3
Disciplinary Studies	23
Economics 240 or Economics 241.....	3
Social Science Elective.....	3
Fine Arts Elective.....	3
Natural Sciences (see major)	6
Biology 202	2
Philosophy 104, 105	6
Integrative Studies	3
Engineering 304I	3
<i>Requirements for Major in Electrical Engineering</i>	(9) + 85
Basic Sciences	6
Physics 205A, 205B, 255A, 255B	(6) + 2
Science Elective (with lab)	4
Mathematics	11
Mathematics 150, 250, 251, 305	(3) + 11
Required ECE Courses	44
ECE 222, 225, 235, 296 or 396H, 315, 327, 345, 355, 356, 375, 385, 495C, 495D	44
Technical Electives	24**
Total	126

* Same as ECE 101 or ENGR 101.

** Approved by the Department. At least 21 hours of ECE electives, including at least nine hours of Engineering Design.

Electrical Engineering Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
MATH 150, 250	4	4
UCOL 101E, ENGL 102	3	3
ENGL 101; PHYS 205A, 255A	3	4
CMST 101, Fine Arts	3	3
ECE 222, 225	3	4
<i>Total</i>	16	18
SECOND YEAR	FALL	SPRING
MATH 251, 305	3	3
PHYS 205B, 255B; Science Elective	4	4
ECE 296/396.....	-	2
ECE 235, 375.....	4	3
ECE 327, 345	4	4
<i>Total</i>	15	16
THIRD YEAR	FALL	SPRING
ENGR 304I, BIOL 202.....	3	2
PHIL 104, 105	3	3
ECE 355, 356.....	4	3
ECE 315, Technical Elective	3	4
ECE 385, Technical Elective	4	4
<i>Total</i>	17	16

FOURTH YEAR	FALL	SPRING
ECE 495C, D	3	3
Technical Electives	8	8
ECON 240/241, Social Science Elective	3	3
<i>Total</i>	14	14

Bachelor of Science Degree in Computer Engineering

The fundamental goal of the undergraduate program in Computer Engineering is to offer a high-quality education, designed to achieve the following specific educational objectives:

EDUCATIONAL OBJECTIVES

Within a few years of graduation, Computer Engineering graduates are expected to attain:

1. Increasing responsibility beyond that in their entry-level description in job functions within Computer Engineering or related employment, and/or
2. Successful progress within graduate degree programs in Computer Engineering or other professional degrees such as other Engineering, Business, Law or Medicine, and
3. Continued successful professional development and adaptation to evolving technologies within their chosen field.

In the computer engineering curriculum the students can choose courses in (a) Design Automation and Application Programming: Algorithms and software development for digital integrated circuits, embedded systems, microcontrollers, multicore architecture, networks. Relevant courses in this track are ECE 422, 424, 425, 432, and 456. (b) Computer Hardware Design: Design and evaluation of integrated circuits, configurable hardware, embedded systems, computer architectures. Relevant courses: ECE 422, 423, 424, 425, 427, 428, 429.

Employment opportunities exist within a wide range of organizations, such as computer, semiconductor, aviation, electronics, microelectronics, broadcasting, telecommunications, defense, automotive, manufacturing and electric power companies, state and federal agencies and laboratories. Employment opportunities cover the spectrum of engineering activities, ranging from research and development, to systems analysis, automation, manufacturing, customer service and support, marketing and sales.

The undergraduate program in computer engineering is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>.

Bachelor of Science Degree in Computer Engineering, College of Engineering

COMPUTER ENGINEERING MAJOR

<i>University Core Curriculum Requirements</i>	41
Foundation Skills	15
UCOL 101E*.....	3
English 101, 102	6
Communication Studies 101	3
Mathematics (see major)	3
Disciplinary Studies	23
Economics 240 or Economics 241.....	3
Social Science Elective.....	3
Fine Arts Elective.....	3

Natural Sciences (see major)	6
Biology 202	2
Philosophy 104, 105	6
Integrative Studies	3
Engineering 304I	3
<i>Requirements for Major in Computer Engineering</i>	(9) + 85
Basic Sciences	6
Physics 205A, 205B, 255A, 255B	(6) + 2
Science Elective with Lab	4
Mathematics	11
Mathematics 150, 250, 251, 305	(3) + 11
Required ECE Courses	37
ECE 222, 225, 235, 296 or 396H, 315, 321, 327, 329, 345, 495C, 495D	37
Technical Electives	31**
Total	126

* Same as ECE 101 or ENGR 101.

** Approved by the Department. At least 25 hours of ECE electives.

At least 20 hours from the following list: ECE 422, 423, 424, 425, 427, 428, 429, 432, two approved CS courses.

Computer Engineering Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
MATH 150, 250	4	4
UCOL 101E, ENGL 102	3	3
ENGL 101, Fine Arts	3	3
CMST 101; PHYS 205A, 255A	3	4
ECE 222, 225	3	4
<i>Total</i>	16	18

SECOND YEAR	FALL	SPRING
MATH 251, 305	3	3
PHYS 205B, 255B	4	-
PHIL 104, ECE 296/396H	3	2
ENGR 304I	-	3
ECE 321, 345	3	4
ECE 235, 327	4	4
<i>Total</i>	17	16

THIRD YEAR	FALL	SPRING
ECE 315, Technical Elective	3	3
PHIL 105, Technical Elective	3	4
ECE 329, Technical Electives	4	8
Science Elective, BIOL 202	4	2
<i>Total</i>	14	17

FOURTH YEAR	FALL	SPRING
ECE 495C, D	3	3
Technical Electives	8	8
ECON 240/241/Social Science Elective ..	3	3
<i>Total</i>	14	14

Dual B.S. Degree in Electrical Engineering and Computer Engineering

ELECTRICAL AND COMPUTER ENGINEERING DUAL DEGREE

University Core Curriculum Requirements 41

Foundation Skills	15
UCOL 101E*	3
English 101, 102	6
Communication Studies 101	3
Mathematics (see major)	3
Disciplinary Studies	23
Economics 240 or Economics 241	3
Social Science Elective	3
Fine Arts Elective	3
Natural Sciences (see major)	6
Biology 202	2
Philosophy 104, 105	6
Integrative Studies	3
Engineering 304I	3
<i>Requirements for Dual Major in Electrical and Computer Engineering</i>	(9) + 109
Basic Sciences	6
Physics 205A, 205B, 255A, 255B	(6) + 2
Science Elective (with lab)	4
Mathematics	11
Mathematics 150, 250, 251, 305	(3) + 11
Required ECE Courses	51
ECE 222, 225, 235, 296 or 396H, 315, 321, 327, 329, 345, 355, 356, 375, 385, 495C, 495D	51
Technical Electives	41**
Total	150

* Same as ECE 101 or ENGR 101.

** Approved by the Department. At least 35 hours of ECE elctives. At least 20 hours from the following list: ECE 422, 423, 424, 425, 427, 428, 429, 432, two approved CS courses.

Dual Degree in Electrical and Computer Engineering Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
MATH 150, 250	4	4
UCOL 101E, ENGL 102	3	3
CMST 101; PHYS 205A, 255A	3	4
ENGL 101, PHIL 104	3	3
ECE 222, 235	3	4
<i>Total</i>	16	18

SECOND YEAR	FALL	SPRING
MATH 251, 305	3	3
PHYS 205B, 255B; ECE 296/396H	4	2
ECE 235, ENGR 304I	4	3
ECE 321, ECON 240/241	3	3
ECE 327, 345	4	4
<i>Total</i>	18	15

THIRD YEAR	FALL	SPRING
Science Elective, BIOL 202	4	2
ECE 355, 356	4	3
ECE 315, 385	3	4
ECE 329, PHIL 105	4	3
ECE 375, Technical Elective	3	4
<i>Total</i>	18	16

FOURTH YEAR	FALL	SPRING
Technical Electives	15	8
CMST 101	-	3
Social Science Elective	-	3
ECE 495C	-	3
<i>Total</i>	15	17

FIFTH YEAR (ninth semester)	FALL	SPRING
ECE 495D	3	-
Technical Electives	14	-
<i>Total</i>	17	-

Second Bachelor's Degree

A student already holding one of the degrees may earn the other bachelor's degree upon completion of at least 22 hours (making a total of 150 hours minimum), provided that the student fulfills the Department requirements for both the degrees and the University Core Curriculum requirements.

Courses (ECE)

101-3 Introduction to Electrical and Computer Engineering. (Same as ENGR 101, UCOL 101E) Introduction to the engineering profession and the engineering programs in the College of Engineering. Lectures and hands-on laboratory projects aimed at stimulating interest in engineering and at guiding students in choosing an engineering curriculum. Seminars presented by distinguished speakers on engineering careers, ethics, and employment trends. No prerequisites.

222-3 Introduction to Digital Computation. Digital computation to solve basic problems in electrical and computer engineering. Analyzing problems, flowcharting, coding, diagnosing, executing and verifying solutions. Programming in C language. Prerequisite: Mathematics 111.

225-4 Introduction to Discrete Logic and Digital Systems. [IAI Course: EGR 932L] Boolean Algebra. Propositional and predicate calculus. Summations and induction. Number systems. Combinational circuits. Gate minimization. Multiplexers and decoders. Counting and combinatorics. Basic graph algorithms. Prerequisite: ECE 222 and Mathematics 150.

235-4 Electric Circuits. [IAI Course: EGR 931L] Basic circuit elements and concepts. Introduction to Pspice and MATLAB. Methods of circuits analysis. Mesh and nodal methods. Circuit theorems. Superposition principle. Energy storage elements. Transient analysis of first-order circuits. Introduction to second-order circuits. Sinusoidal steady-state analysis. Phasors and phasor diagrams. Basic electrical measurements and instrumentation. Lecture, laboratory and tutorial. Prerequisite: Mathematics 250.

296-2 Software Tools for Engineers. (Same as ECE 396H) (a) General purpose software: scientific computing using MATLAB. (b) Technical software: Simulink and LabView. (c) Class project. Prerequisite: ECE 235.

315-3 Mathematical Methods in Engineering. A three-part course designed to introduce all Electrical and Computer Engineering students to advanced mathematical methods, through applications to engineering problems. Part A: applications of complex variables to electrical circuits, systems and electro-

magnetic fields. Part B: applications of linear algebra and matrix methods to electric circuits, systems and electromagnetic fields. Part C: applications of probability and statistics to electrical engineering problems. Prerequisite: Mathematics 251.

321-3 Introduction to Software Engineering. Introduction to the tools, concepts and techniques to develop complex software projects. The tools include object-oriented programming and advanced data structures. Concepts and techniques include introduction to software engineering, including requirements specifications, design methodology, and testing; and principles of operating system design. Prerequisite: ECE 222, ECE 225 with grades 'C' or better.

321H-3 Introduction to Software Engineering. (University Honors Program) Available for Honors credit by special arrangement. Prerequisites: ECE 222, ECE 225.

327-4 Digital Circuit Design with HDL. Modular combinational design. Arithmetic circuits. Programmable logic. Synchronous and asynchronous sequential circuits. Flip-flops, memory, shifters, counters. Finite State Machine Design. Synthesis and simulation with the Verilog Hardware Description Language (HDL). Prerequisite: ECE 225 with a grade of C or better. Lab fee: \$10 to help defray costs of consumable items.

329-4 Computer Organization and Design. Introduction to the design and organization of digital computers: data-path and control, hardwired and microprogrammed control, interrupts, memory organization concepts. An introduction to optimization issues. Design and implementation of simple computers with hardwired and microprogrammed control. Prerequisite: ECE 327.

329H-4 Computer Organization and Design. (University Honors Program) Available for Honors credit by special arrangement. Prerequisite: ECE 327.

345-4 Electronics. Fundamental electronics and basic signal processing. Characteristics and typical applications of analog and digital electronics modules. Operational amplifiers. Fundamentals of transistors. Lecture and lab. Prerequisite: ECE 235 and Physics 205B. Lab fee: \$10 to help defray cost of consumable items.

345H-4 Electronics. (University Honors Program) Available for Honors credit by special arrangement. Prerequisite: ECE 235 and Physics 205B.

355-4 Signals and Systems. Signal and system classification, operations on signals, time-domain analysis, impulse response and stability, Fourier series and transform, application to communications, Laplace transform, application to linear circuits and systems, frequency response techniques, introduction to discrete-time signals and systems, sampling, discrete and fast Fourier transforms. Lecture and laboratory. Prerequisite: ECE 235 and Mathematics 305.

355H-4 Signals and Systems. (University Honors Program) Available for Honors credit by special arrangement. Prerequisite: ECE 235 and Mathematics 305.

356-3 Systems and Control. Modeling of dynamic systems and circuits, dynamic response, basic properties of feedback PID control, root-locus design method, frequency-response design method, introduction to state-space modeling and design method. Prerequisite: ECE 315 and 355.

375-3 Introduction to Electromagnetic Fields. Elementary electromagnetic field theory, vectors and fields, fields and ma-

terials, Maxwell's equations in integral and differential forms, static and quasistatic fields, time-domain analysis of waves, engineering applications. Prerequisite: ECE 235, Mathematics 251 and Physics 205B.

375H-3 Introduction to Electromagnetic Fields. (University Honors Program) Available for Honors credit by special arrangement. Prerequisites: ECE 235, Mathematics 251 and Physics 205B.

385-4 Electromechanical Energy Conversion. Circuits in the sinusoidal steady state, phasors and impedance. Power in sinusoidal steady state. Three-phase circuits. Magnetic circuits and power transformers. AC machines: synchronous machines; synchronous motors; induction motors. Prerequisite: ECE 235 with a grade of C or better.

392-1 to 6 Electrical Engineering Cooperative Education. Supervised work experience in industry, government or in a professional organization. Students work with on-site supervisor and faculty adviser. Reports are required from the student and the employer. Hours do not count toward degree requirements. Mandatory Pass/Fail. Restricted to sophomore standing.

396H-2 Software Tools for Engineers. (University Honors Program) (Same as ECE 296) Available for Honors credit by special arrangement. (a) General purpose software: scientific computing using MATLAB. (b) Technical software: Simulink and LabView. (c) Class project. Prerequisite: ECE 235.

422-4 Computer Network System Architecture. (Same as ECE 553) Principles of Computer Networks. Protocols and system level implementations. Socket programming, router and switching fabric architecture, security and packet classification techniques, multimedia networking and QoS. Prerequisite: ECE 327.

423-4 Digital VLSI Design. (Same as ECE 513) Principles of the design and layout of Very Large Scale Integrated (VLSI) circuits concentrating on the CMOS technology. MOS transistor theory and the CMOS technology. Characterization and performance estimation of CMOS gates. CMOS gate and circuit design. Layout and simulation using CAD tools. CMOS design of datapath subsystems. Design of finite state machines. Examples of CMOS system designs. Laboratory experience in CMOS VLSI design. Lecture and laboratory. Prerequisite: ECE 327 and 345.

424-4 Design of Embedded Systems. (Same as ECE 514) Introduction of modern embedded system application, platform architecture and software development. Principles of embedded processor architecture, operating systems and networking connectivity. Design and optimize in terms of system power, security and performance. Rapid prototyping using Intel-Atom based platform. Lecture and laboratory. Prerequisite: ECE 321 and ECE 329, or consent of instructor.

425-4 VLSI Design and Test Automation. (Same as ECE 520) Principles of the automated synthesis, verification, testing and layout of Very Large Scale Integrated (VLSI) circuits concentrating on the CMOS technology. Resource allocation and scheduling in high-level synthesis. Automation of the logic synthesis for combinational and sequential logic. The physical design automation cycle and CMOS technology considerations. Fault modeling and testing. Timing analysis. Laboratory experience using commercial tools for synthesis and layout. Prerequisite: ECE 329.

427-3 Integrated Interconnection Networks. (Same as ECE 527) Importance of interconnection networks and networks-on-chip (NOCs). Specifications and constraints. Topology, routing, flow control, deadlock, livelock, arbitration, allocation, performance analysis, simulation. Prerequisite: ECE 329 or concurrent enrollment.

428-4 Programmable ASIC Design. (Same as ECE 528) Principle and practice of designing and implementing Application-Specific Integrated Circuits (ASIC). Field Programmable Gate Arrays (FPGA). Timing analysis, timing closure and managing difference clock domains in ASIC design. Complex arithmetic circuits. Digital signal processing (DSP) circuits. FPGA microprocessors. Prerequisite: ECE 327 with a grade of C or better. Fee of \$10 to help defray costs of consumable items.

429-3 Computer Systems Architecture. (Same as ECE 529) Advanced computer arithmetic, principles of performance evaluation, instruction set principles, pipeline considerations and instruction level parallelism, vector processors, memory hierarchy design. Prerequisite: ECE 329.

432-3 Programming for Multi-Core Processors. Multi-core architecture and design, threads, thread execution models, thread priority and scheduling, concurrency, multi-threaded programming models, synchronization, performance measurement and local balance, software tools for multi-threaded programming. Prerequisites: ECE 329, CS 306 or consent of instructor.

438-3 Medical Instrumentation: Application and Design. (Same as ECE 538 and BME 538) Basic concept of medical instrumentation, basics sensors and principles, amplifiers, biopotential electrodes, blood pressure and sound, measurement of respiratory system, chemical biosensors, cellular measurement, nervous system measurements, magnetic resonance imaging. Prerequisite: ECE 355.

440-4 CMOS Radio-Frequency Integrated Circuit Design. (Same as ECE 535) Introduction to RF IC, passive RLC Networks, passive IC components, MOS Transistors, distributed systems, Smith Chart and S-Parameters, introduction to Bandwidth estimation, biasing and voltage reference, noise in RF IC, introduction to Amplifiers, Phase-Locked Loops and Oscillators. Lecture and Laboratory. Prerequisite: ECE 345, ECE 375 or equivalent.

441-4 Photonics I. (Same as ECE 542) Ray optics, wave optics, beam optics, polarization of light, statistical optics, photons and atoms. Prerequisite: ECE 375 with a grade of C or better.

446-4 Electronic Circuit Design. (Same as ECE 546) Analysis and design of electronic circuits, both discrete and integrated. Computer-aided circuit design and analysis. Design of amplifier and filter circuits. Circuit stability analysis and frequency compensation techniques. Prerequisite: ECE 345 and ECE 355 with a grade of C or better or concurrent enrollment. Laboratory fee of \$10 to defray cost of consumable items.

447-4 Semiconductor Devices. (Same as ECE 547) Semiconductor industry and Moore's law. Review of quantum mechanics of atoms. From atoms to crystals: energy bands, effective mass and density-of-states. Semiconductor statistics. Carrier transport phenomena. PN junctions. Schottky junctions. Bipolar junction transistors (BJTs). MOSFETs: capacitance-voltage and current-voltage characteristics, threshold voltage, SPICE modes, scaling and short-channel effects. Basic optoelectronic

devices: LEDs and solar cells. CMOS process integration. Prerequisite: ECE 345 or equivalent.

448-4 Photonics II. (Same as ECE 544) Fourier optics, fiber optics, electro-optics, nonlinear optical media, acousto-optics, photonic switching, optical and interconnections and optical storage. Prerequisite: ECE 441 or consent of instructor.

449-3 Technology of Integrated Circuits. (Same as ECE 560) The market drivers for IC industry: Moore's law and more-than-Moore. Materials for state-of-the-art ICs: semiconductor crystals, tubular and monolayer materials, organic materials, heterostructures, wafers and notations. Micro and nano fabrication technologies: IC production flow, wafer, selective doping, nanolithography, etching, contacts and interconnects, spontaneous formation and ordering of nanostructures, fabrication of MEMS/NEMS systems, IC assembly and packaging. Device and circuit characterization: electrical CV and IV profiling, defect characterization using DLTS, optical microscopy and spectroscopy, particle beam and X-ray techniques. Reliability of devices and ICs: harsh environments, hot carriers, NBTI, electromigration, electrostatic discharge, IC power and hot-spot cooling using thermoelectrics. Prerequisite: ECE 447 or consent of instructor.

456-4 Embedded Control and Mechatronics. Introduction to mechatronic systems, systems modeling and simulation, sensors and actuators, real-time interfacing, DSPs and microcontrollers, analysis of sampled-data systems, z-transform, digital control design techniques, emulation method, direct method, industrial applications. Lecture and laboratory. Prerequisite: ECE 315 and 356.

458-3 Digital Image Processing I. (Same as ECE 558) Basic concepts, scope and examples of digital image processing, digital image fundamentals, image sampling and quantization, an image model, relationship between pixels, enhancement in the spatial domain, enhancement in the frequency domain, image segmentation, basics of color image processing. Prerequisite: ECE 355 or consent of instructor.

459-3 MEMS and Micro-Engineering. Introduction to micro electro-mechanical systems (MEMS), manufacturing techniques, microsensors, microactuators, microelectronics and micro-controllers. Lecture and laboratory. Prerequisite: ECE 315 and 356.

460-3 Principles of Biomedical Engineering. Principles of biomechanics, biomaterials, electrophysiology, modeling, instrumentation, biosignal processing, medical imaging, and biomedical optics. Not for credit towards the BS in Electrical or the BS in Computer Engineering. Prerequisite: ECE 315, ECE 355 or equivalent.

467-4 Introduction to Biomedical Imaging. (Same as ECE 567 and BME 532) Biomedical imaging. X-ray imaging. Computed tomography (CT). Ultrasound. Magnetic resonance imaging (MRI). Image quality. Image reconstruction. Prerequisite: ECE 355 or consent of instructor.

468A-4 Digital Signal Processing. Discrete-time signals and systems: z-transform; discrete Fourier transform, fast Fourier transform algorithms; digital filter design; digital filter realizations. Lecture and laboratory. Prerequisite: ECE 355.

468B-4 Digital Signal Processing. Discrete-time signals and systems: z-transform; discrete Fourier transform, fast Fourier transform algorithms; digital filter design; digital filter realizations.

Lecture and laboratory. Restricted to graduate standing.

471-3 Wireless and Personal Communication Systems. (Same as ECE 571) Introduction to cellular systems. Propagation modeling. Modulation techniques. Digital signaling on fading channels. Diversity and MIMO. OFDM and CDMA. Prerequisite: ECE 315 and ECE 355.

472-4 Antennas I. (Same as ECE 575) Analysis, design, fabrication, measurement and CAD applied to basic antenna types. Fundamental parameters. Friis transmission equation. Impedance and pattern measurements. Resonant microstrip and wire antennas. Arrays and line sources. Lecture and Laboratory. Prerequisite: ECE 375.

476-3 Introduction to Information Theory and Channel Coding. (Same as ECE 555) Entropy and Mutual Information. Channel Capacity. Gaussian Channel. Linear Block Codes. Convolutional Codes. Advance Channel Coding Techniques. Prerequisite: ECE 315 and 355.

477-3 Fields and Waves I. Transmission lines for communications. Guided wave principles and resonators. Applications in electronics, optoelectronics and photonics. Principles of radiation. Solution techniques for Laplace's equation and one-dimensional wave equation. Prerequisite: ECE 375.

478-4 Principles of Communication Systems. (Same as ECE 570) Amplitude, frequency, and phase modulation. Sampling theorem. Pulse code modulation. Digital carrier systems. Optimum signal detection. Lectures and laboratory projects. Prerequisite: ECE 315 and ECE 355.

479-4 Microwave Engineering I. (Same as ECE 562) Electromagnetic theory, analysis, design, fabrication, measurement and CAD applied to passive networks at microwave frequencies. Topics include: Transmission lines, Waveguides, Impedance matching, Tuning, Resonators, Scattering parameters, the Smith Chart. Lecture and Laboratory. Prerequisite: ECE 375.

481-3 Wind and Solar Energy Power Systems. (Same as ECE 581) This course introduces students to wind and solar energy power systems. Planning of wind generation; and operation of wind generators, mechanical and electrical design, power conditioning, control and protection. Planning, operation and design of electric solar plants; power conditioning, control and protection. Prerequisite: ECE 385.

482-3 Power and Converter Design and Control. (Same as ECE 582) This course covers all the steps required for designing an actual power converter or electric drive system. The power stage design considerations, gate drive circuits, isolated high voltage/current measuring circuits, and application of a Texas Instrument Digital Signal Processor (DSP) for implementing different control schemes are discussed in detail. A brief introduction about the digital control theory and implementation of digital controller transfer functions using the DSP are provided as well. Prerequisite ECE 296, ECE 356, ECE 385 with a minimum grade of C or consent of instructor.

483-3 Electric Drive Systems. (Same as ECE 583) Course content is roughly 1/3 power electronics, 1/3 applied control and 1/3 electric machinery and focuses on analysis, simulation, and control design of electric drive-based speed, torque, and position control systems. Advanced topics depending on the semester are also taught. Prerequisite: ECE 296, ECE 356, ECE 385 with grades of C or better or consent of instructor.

484-3 Electric and Hybrid Vehicles. (Same as ECE 584)

This course covers an entire range of topics related to analysis, design, control, and optimization of electric, hybrid, and plug-in hybrid power trains including automotive applications of adjustable speed motor drives, energy storage systems, and advanced power converters. Prerequisite: ECE 385 with a grade of C or better or instructor consent.

486-3 Clean Electric Energy. History and Future of the Energy Resources and their use as a component of Electrical Systems. Energy Resources (Fossil, Nuclear, Hydro, Fuel Cell, Wind, Solar, Tidal, Waste, Bio-Energy, Oceanic, Renewable, etc.). Environmental and Economical Impacts of Various Energy Sources. Electric Energy Generating Plants. Renewable Energy. Special approval needed from the instructor.

487-3 Power Systems Analysis. Introduction to analysis of electric power systems. Modeling of power system components. Transmission line calculations and modeling. Power system configuration. Per-unit quantities. Power system modeling. Introduction to load-flow analysis. Lecture and laboratory. Prerequisite: ECE 315 and ECE 385.

488-3 Power Systems Engineering. Power flow control. Voltage control. Economic operation of power systems. Symmetrical faults. Symmetrical components. Analysis of asymmetrical faults. Power system stability. Lecture and laboratory. Prerequisite: ECE 356 and ECE 487.

489-3 Electric Power Distribution. (Same as ECE 589) Design of primary and secondary distribution networks. Load characteristics. Voltage regulation. Metering techniques and systems. Protection of distribution systems. Special topics related to power distribution. Prerequisite: ECE 385.

492-1 to 6 Special Studies in Electrical Engineering. Individual projects and problems selected by student or instructor. Open to seniors only. Not for graduate credit. Special approval needed from the instructor.

493-1 to 4 Special Topics in Electrical Engineering. Lectures on topics of special interest to students in various areas of electrical engineering. Designed to test new and experimental courses in electrical engineering. Special approval needed from the instructor.

495C-3 Electrical and Computer Engineering Senior Design I. Capstone Design part 1. Includes proposal and preliminary designs as part of a team project. Project development skills, scope of work, feasibility and cost-benefit analysis, trade studies, quality function deployment, ethical issues, professionalism, documentation of team member efforts, preliminary designs, identification and assignment of tasks to project team members, coordination of interdisciplinary team effort, development of final proposal, design work, design review, oral presentations of final proposal. Not for graduate credit. Concurrent enrollment: two ECE technical electives. Restricted to senior standing in Electrical or Computer Engineering (second to last semester). Special approval needed from the department.

495D-3 Electrical & Computer Engineering Senior Design II. Capstone Design part 2. Team approach in engineering projects. Work plan/time scheduling. Design options & cost-benefit analysis. Development of the final decision. Team coordination & documentation of team member efforts, design stages, team communications & team decision making processes. Implementation of the design (if the project warrants). Evaluation of final product. Written, oral & poster presentation of final

design. Not for graduate credit. Prerequisite: ECE 495C.

496A-3 Honors in Electrical and Computer Engineering-Honors Reading. Must be taken during the last two years of the undergraduate's career. Special approval needed from the department.

496B-3 Honors in Electrical and Computer Engineering-Honors Supervised Research. Must be taken during the last two years of the undergraduate's career. Research culminating in an honors thesis for the University Honors program. Prerequisite: ECE 396H and ECE 496A or consent of department.

Electrical and Computer Engineering Faculty

Ahmadi, Reza, Assistant Professor, Ph.D. Missouri University of Science and Technology, 2013.

Ahmed, Shaikh, Associate Professor, Ph.D., Arizona State University, 2005.

Botros, Nazeih, Professor, Ph.D., University of Oklahoma, 1985.

Brown, David P., Professor, *Emeritus*, Ph.D., Michigan State University, 1961.

Chen, Ying, Associate Professor, Ph.D., Duke University, 2007.

Daneshdoost, Morteza, Professor, *Emeritus*, Ph.D., Drexel University, 1984.

Galanos, Glafkos, Professor, *Emeritus*, University of Manchester, England, 1970.

Gupta, Lalit, Professor, Ph.D., Southern Methodist University, 1986.

Haniotakis, Themistoklis, Associate Professor, Ph.D., University of Athens, 1998.

Harackiewicz, Frances J., Professor, University of Massachusetts at Amherst, 1990.

Hatziaodoniu, C., Professor, Ph.D., West Virginia University, 1988.

Kagaris, Dimitrios N., Professor, Ph.D., Dartmouth College, 1994.

Osborne, William P., Professor, *Emeritus*, Ph.D., New Mexico State University, 1970.

Phegley, James, Senior Lecturer, Ph.D., Southern Illinois University, 2001.

Pourboghraat, Farzad, Professor, *Emeritus*, Ph.D., University of Iowa, 1984.

Qin, Jun, Assistant Professor, Ph.D., Duke University, 2008.

Ramaprasad, Harini, Assistant Professor, Ph.D., North Carolina State University, 2006.

Sayeh, Mohammad, Professor, Ph.D., Oklahoma State University, 1985.

Singh-Gupta, Vidya, Senior Lecturer, Ph.D., Southern Illinois University, 1988.

Smith, James G., Professor, *Emeritus*, Ph.D., University of Missouri at Rolla, 1967.

Tragoudas, Spyros, Professor and *Chair*, Ph.D., University of Texas, Dallas, 1991.

Viswanathan, R., Professor, *Emeritus*, Ph.D., Southern Methodist University, 1983.

Wang, Haibo, Professor, Ph.D., University of Arizona, 2002.

Weng, Ning, Associate Professor, Ph.D., University of Massachusetts, 2005.

Zhou, Xiangwei, Assistant Professor, Ph.D., Georgia Institute of Technology, 2011.

Electronic Systems Technologies (Major, Courses)

The Bachelor of Science in Electronic Systems Technologies (EST) provides advanced technical and managerial coursework for students pursuing careers in the electronics industry. The program allows students the flexibility to choose a curriculum that will complement their career goals with their educational and work experience. Graduates with an EST degree possess the skills required of the technologist entering areas such as biomedical equipment technology, communications and networking technology, and automation and control technology. The Electronics Management Specialization (ELM) within the EST degree is well suited for technicians or technologists with coursework and work experience seeking advancement or placement in managerial roles in the electronics industry.

The Electronic Systems Technologies degree is a baccalaureate completion degree (300/400 level coursework for a 2+2 degree) designed as a path for students who have completed Electronic Technology AAS degree or equivalent. Students with other types of education and training can also be admitted, including those with military training. Students entering the completion degree are expected to have had coursework, documented training or work experience in the following technical subject areas:

- DC/AC Electronics Fundamentals
- Solid State Electronics Fundamentals
- Digital Electronics Fundamentals
- PC Troubleshooting & Repair
- LAN Networking
- A Programming Language

Students lacking formal education or documented experience in the listed areas may meet these requirements through a variety of methods. The Electronics Fundamentals requirements, with content equivalent to EST 101, EST 102 and EST 201, may be met through additional community college coursework, proficiency exams, or documented training. The PC Troubleshooting, LAN networking and programming language requirements may be met through SIU courses ISAT 121, ISAT 224 and IST 209 respectively, available proficiency exams, or community college coursework. Please see our website for additional entry information and guidance (<http://isat.siu.edu/est>).

In addition, transfer credit for University Core Curriculum requirements varies depending on previous coursework. An individual who has earned an AAS degree also may qualify for the Southern Illinois University Carbondale Capstone Option. Capstone gives maximum credit for previous academic and work experience in the student’s occupational field and reduces the University Core Curriculum requirements. More information about the Capstone Option can be found in Chapter 3.

The Electronic Systems Technologies program has a number of “Program Articulation Agreements” with electronics-related community college degree programs in order to facilitate the transfer of community college students to SIU. These agree-

ments take full advantage of the Capstone Option for admission to the Bachelor of Science in Electronic Systems Technologies. Please check with your guidance counselor at the community college on the status of these articulation agreements.

If you have questions about how the degree requirements and articulation agreements apply to your personal situation, contact the community college program representative or the academic advisor in Electronic Systems Technologies at (618) 453-7200 or through our website at <http://isat.siu.edu/est>.

Bachelor of Science Degree in Electronic Systems Technologies, College of Applied Sciences and Arts

ELECTRONIC SYSTEMS TECHNOLOGIES MAJOR

The student with an Electronic Systems Technologies (EST) major will take coursework designed to provide an effective school-to-work transition for careers in the electronics industry. A mandatory internship ensures that students receive field experience within their chosen career fields. The curriculum places emphasis on skills necessary to achieve long-term career goals in the electronics field, but has courses specific to the following career paths:

1. Biomedical Equipment Technology
2. Automation and Control Technology
3. Telecommunications and Networking Technology

Completion of this degree provides graduates with advanced skills required by electronic technologists. Technical skills include: the evaluation of current technologies, the planning and implementation of preventive maintenance programs and the testing, troubleshooting and configuration of electronic equipment and systems. In addition, the degree improves skills in writing, interpreting and presenting technical documentation.

<i>University Core Curriculum</i> ¹	41
<i>Requirements for the Major in Electronic Systems Technologies</i>	42-48
EST Core Requirements (or approved equivalents):	
Electronic Systems Technologies 305, 308, 319, 340, 341, 404, 451, Information Systems and Applied Technologies 365, 366.....	27
Technical Requirements:	
Selected approved electives, including:	
Electronic Systems Technologies 301, 302, 306, 307, 310, 311, 317, 342, 343, 407, 411	
Information Systems and Applied Technologies 335, 415, 416, 360, 316.....	21
<i>Approved Technical or Career Electives</i>	31-37
² DC/AC Electronics.....	3-6
² Solid State Electronics	3-6
² Digital Electronics	3-6
³ Information Systems and Applied Technologies 121 and 224	6
³ Information Systems Technologies 209	3
Other approved coursework	4-19
Total	120

¹The Capstone Option reduces University Core Curriculum requirements.
²May be satisfied through documented coursework, documented training, available proficiency exams or approved seminars.
³May be satisfied through documented coursework, documented training, or available proficiency exams.

Electronic Systems Technologies Suggested Curricular Guide

THIRD YEAR	FALL	SPRING
EST 341, 340	3	3
EST 308, 305	3	3
ISAT 365, 366.....	3	3
University Core ¹	3	3
Approved Electives ²	3	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
EST 404, 451	3	3
EST 319	-	3
University Core ¹	6	3
Approved Electives	6	6
<i>Total</i>	15	15

¹Transcripts of applicants will be reviewed individually. Senior institution hour requirements beyond minimum requirements of the major may be met through additional elective coursework.

²A list of approved elective courses is maintained by the program advisor.

ELECTRONIC SYSTEMS TECHNOLOGIES MAJOR WITH AN ELECTRONICS MANAGEMENT SPECIALIZATION

An Electronic Systems Technologies major who chooses the Electronic Management Specialization is provided a curriculum focused on the skills and knowledge necessary to effectively integrate technology into the work place. Graduates will possess the technical, managerial and supervisory skills needed for entry-level positions in the electronics field with the increased potential for vertical mobility in today’s workforce.

The process of evaluating and acquiring new and existing technologies, maintaining and managing technological systems and effectively utilizing human resources will be studied. The graduate from this specialization will be able to communicate effectively and coordinate the efforts of skilled technicians in managing complex systems. Skills acquired will allow the graduate to train people in the use and maintenance of complex systems, plan and prioritize efforts to maximize the use of technological resources, and explain technical ideas to non-technical personnel.

<i>University Core Curriculum Requirements</i>	41
<i>Requirements for Major in Electronic Systems Technologies with a specialization in Electronics Management</i>	48
EST Core Requirements	
Electronic Systems Technologies 340, 341, 451.....	9
Information Systems and Applied Technologies 366.....	3
Management & Technical Requirements:	
Electronic Systems Technologies 365, 385, 387, and/or 388, 404 and 441.....	15-18
Elective Requirements	
Approved Electives.....	6-18
Internship or independent studies or approved equivalent	4-12
<i>Approved Technical or Career Electives</i>	31
² DC/AC Electronics.....	3-6
² Solid State Electronics	3-6

²Digital Electronics3-6

³Information Systems and Applied Technologies 121 and 224

³Information Systems Technologies 209

Other approved coursework

Total

¹The Capstone Option reduces University Core Curriculum requirements.

²May be satisfied through documented coursework, documented training, available proficiency exams or approved seminars.

³May be satisfied through documented coursework, documented training, or available proficiency exams.

Electronic Systems Technologies with a Specialization in Electronics Management Suggested Curricular Guide

THIRD YEAR	FALL	SPRING
EST 341, 340	3	3
EST 385, 387 or 388	3	3
EST 365, ISAT 366.....	3	3
University Core ¹	3	3
Approved Electives	3	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
EST 404, 451	3	3
EST 441	-	3
University Core ¹	6	3
Approved Electives ² , Internship, or Independent Study	6	6
<i>Total</i>	15	15

¹Transcripts of applicants will be reviewed individually. Senior institution hour requirements beyond minimum requirements of the major may be met through additional elective coursework.

²A list of approved elective courses is maintained by the program advisor.

Courses (EST)

100-3 Introduction to Electronics. This course is an introduction to the field of electronics technology designed for students who are not majoring in Electronic systems technologies. It examines the role of the electronics technician and teaches the fundamental concepts of electronics.

101-3 DC-AC Circuit Analysis. This course covers the theory and application of passive DC and AC circuits presented in a comprehensive manner using qualitative and quantitative methods. Theoretical topics such as Ohm’s Law and Kirchhoff’s Law are applied to analyze DC and AC circuits. Co-requisite: EST 111 and MATH 101 or MATH 108 or higher. Prerequisite: MATH 101 or MATH 108 or higher.

102-3 Electronic Circuits Theory. This course presents the use and analysis of active and passive devices in electronic circuits. Semiconductor diodes, bipolar junction transistors and field effect transistors are discussed in circuit applications which include power supplies, amplifiers and switching circuits. Prerequisite: EST 101. Co-requisite: EST 112.

111-3 DC-AC Circuit Analysis Laboratory. This course introduces fundamental skills required by the electronics technicians. The fundamental laws of passive DC-AC circuits will be

verified with experiments. Test equipment including the oscilloscope, multimeter, power supply, and signal generator will be used to analyze and troubleshoot electronic circuits. Six contact hours. Concurrent enrollment in EST 101 or consent of school. Lab fee: \$85 for DC-AC parts kit.

112-3 Electronics Circuits Laboratory. This course introduces the fundamental operation, application and troubleshooting techniques associated with semiconductor devices. Formulas and theories associated with the operation of semiconductor circuits will be verified using the oscilloscope, multimeter, power supply and signal generator. Experiments demonstrate the application of diode, transistor amplifier and transistor switching circuits. Six contact hours. Prerequisite: EST 111. Co-requisite: EST 102.

201-3 Digital Circuits Theory. This course presents the concepts of digital circuits that make up systems such as numeric control, computers and communications networks. The application and analysis of counters, registers, arithmetic logic circuits, analog conversion circuits, memory circuits and basic microprocessor systems are presented. Prerequisite: EST 102.

211-3 Digital Circuits Laboratory. This course provides practical experience assembling, testing, and troubleshooting counters, registers, arithmetic logic circuits, analog conversion circuits, memory circuits and basic microprocessor systems. An emphasis is placed on the use of data books, safety and troubleshooting. Six contact hours. Prerequisite: EST 112 or consent of school. Lab Fee: \$25 for digital electronics parts kit.

223-1 to 3 Electronics Certification Test Preparation. This course will provide the student an opportunity to prepare for industry recognized certification tests. This is an individualized self-paced course. Certification tests are in the areas of communications technology, biomedical technology, industrial electronics technology and computer technology. The student will be responsible for all fees associated with taking the certification tests and purchasing reference materials that are not provided by the program.

258-1 to 30 Electronics Work Experience. Credit granted for prior job skills, management-worker relations, and supervisory experience while employed in the electronics industry. Credit will be established by departmental evaluation. This credit may be applied only at the 100 and 200 level unless otherwise determined by the department chair. Restricted to electronic systems technologies majors.

259-1 to 60 Electronics Occupational Education. A designation for credit granted for past occupational educational experiences related to electronic systems technologies. Credit will be established by departmental evaluation. This credit may be applied only at the 100 and 200 level unless otherwise determined by the department chair. Restricted to electronic systems technologies majors.

300-3 Introduction to Electronic Systems Technologies Research. An introduction to library resources, electronic media resources and formal academic writing styles common to electronic systems technologies research. Introduction to basic theories, concepts and practices pertinent to electronic systems technologies. May be independent study. Restricted to electronic systems technologies majors.

301-3 Introduction to Biomedical Instrumentation. This course covers a broad range of Biomedical Technician material

including the maintenance, calibration, safe application and management of biomedical equipment. Also covered are the theory of operation, terminology, and the underlying principles of biomedical equipment. Restricted to EST majors or consent of instructor. Co-requisite: EST 311.

302-3 Optical Electronics. This course is designed to provide the theory and practice necessary to introduce the student to the broad fields of fiber optics and optoelectronics. Fiber optics is the optical technology concerned with the transmission of radiant power through transparent fibers, and optoelectronics pertains to devices that emit, modify, or respond to optical radiation. Applications of fiber optics and optoelectronics to communications, imaging and sensing will be emphasized, with a concentration on communications applications. Lecture and Laboratory. Restricted to EST majors or consent of school.

305-3 Electronic Troubleshooting and Maintenance. This course covers troubleshooting and maintenance of electronic and interrelated systems. Formalized troubleshooting and preventative maintenance procedures will be covered with hands-on theoretical exercises. Other areas include customer relations, documentation and proper test equipment usage. Lecture and Laboratory. Restricted to EST majors or consent of school.

306-3 Technical Drawing. The theory and practice of computer-aided drawing and design encountered in the electrical/electronics industry. The course develops the competencies and skills necessary to produce the type of graphic documentation utilized in the field. Synthesis and design applications are also covered.

307-3 Automation and Control Technology. The selection, programming, installation, maintenance, and troubleshooting of Programmable Logic Controllers, (PLCs) and Programmable Automation Controllers (PACs) related industrial control devices. Individual components will be defined and examined with respect to the overall control system. Safety and standard practices will be emphasized throughout the course. Lecture and Laboratory.

308-3 Electronic Sensing and Control. This course introduces the principles of acquisition, signal conditioning, and application of measurements and data in industrial and commercial systems. The course also emphasizes the theory and application of solid state and electromechanical devices used in industrial control. Principles of operation of digital and analog process control are introduced. Lecture and Laboratory. Restricted to EST majors or consent of school.

310-3 Information Technology, Integration and Support. This course uses a lab/lecture approach designed to give students background information and "hands-on" experience with personal computers, network systems, and related technologies. An introductory presentation includes information on proprietary and open operating systems, basic networking and PC hardware components, peripheral devices, digital video and audio technologies, and local area networks concepts and configurations. Students will disassemble and reassemble PCs, add and remove hardware devices, configure settings and drivers, and become familiar with basic troubleshooting practices. Emerging related and advanced technologies will also be explored.

311-3 Biomedical Instrumentation Laboratory. This course provides hands-on experience with the types of equip-

ment encountered by a typical biomedical electronic technician (BMET). The exercises will teach the theory of operation, equipment safety, calibration and maintenance of biomedical equipment. Co-requisite: EST 301. Restricted to EST majors or consent of instructor.

317-3 Industrial Human Machine Interfacing. The selection, programming, installation, maintenance, and troubleshooting of industrial Human Machine Interface (HMI) equipment. Programming of Programmable Logic Controllers (PLC) for HMI will be included. Individual components will be defined and examined with respect to the overall control system. Safety and standard practices will be emphasized throughout the course. Lecture and laboratory. Prerequisite: EST 307.

319-1 to 15 Electronic Occupations Internship. Students will be assigned to a University approved program to engage in activities related to the Electronic Systems Technologies program and the student's career objectives. The student will perform duties as assigned by the work supervisor and the internship coordinator. Mandatory Pass/Fail. Special approval needed from the instructor.

320-1 to 12 Electronics Occupations Cooperative Education. Each student will participate in a departmentally approved cooperative education program that includes formal instruction, training and/or career-related work experience. Students receive a salary or wages and engage in prearranged assignments related to their academic program and career objectives. Department faculty evaluation, cooperative agency student performance evaluations and student reports are required. Hours and credit to be individually arranged. Mandatory Pass/Fail. Special approval needed from the instructor.

338-3 Alternative and Renewable Energy Technology. This course examines alternative and renewable energy technologies and applications. Power generation from solar, wind, geothermal, biomass, and fuel cell technologies will be discussed and reinforced with laboratory demonstrations. Power electronics will be reviewed with an emphasis on energy conservation and energy harvesting technologies. Lecture and laboratory.

340-3 Application of Solid State Devices. Lecture/Lab. This course covers the characteristics of semiconductor materials, diodes, power supplies, thyristors, BJTs, FETs, and Op Amps. These devices will be applied to various amplifiers (including multistage), active filters, oscillators, and linear regulators and the student will perform in-depth circuit analysis on these circuits. Restricted to EST majors.

341-3 Digital Applications. Lecture/lab. This course covers digital combinational logic and simplification in order to create state machines that may be implemented in programmable logic devices or microprocessors/DSPs. The second part of this course (data synthesis) examines data acquisition, transmission, microcontroller/microcomputer architecture, and digital logic families. Restricted to ISAT majors.

342-3 Microcontroller Applications Lecture. This course emphasizes microcontroller fundamentals and applications as seen from the standpoint of the technical manager. Microcomputer theory is introduced since microcontrollers are a subset of microcomputer technology. Basic characteristics and principles of microcomputers and microcontrollers will be reviewed to provide an understanding of applications in specific business and industrial settings. Prerequisite: EST 341.

343-3 Microcontroller Applications Laboratory. Laboratory experiences selected to reinforce microcontroller characteristics and applications in business and industry. Students sample microcontroller programming on operational microcontrollers and through the use of simulation software. Included is the theory of operation, the control of input and output devices, multi-controller communication, and program development and entry. Students will be required to purchase a microcontroller system ranging in cost between \$100-130. Prerequisite: EST 342 or concurrent enrollment in 342; may be independent study.

350-1 to 32 Technical Career Subjects. This course provides the student with in-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, professions and health service occupations offered through various workshops, special short courses, and seminars. Hours and credits to be individually arranged. This course may be classified as independent study. Special approval needed from the instructor.

351-3 Readings in Electronic Systems Technologies. The use of written and electronic media resources relevant to electronic systems technologies and the development of an electronic systems technologies research bibliography. The use of bibliographic resources to produce written comparative or persuasive research reports. May be independent study. Prerequisite: EST 300. Restricted to electronic systems technologies majors.

358-1 to 30 Electronics Work Experience-II. Credit granted for prior systems design, management-worker relations, and supervisory experience while employed in industry. Credit will be established by departmental evaluation. Restricted to electronic systems technologies majors.

365-3 Electronics Industry Data Applications. The application of statistical data within the electronics industry to include an introduction to the basic statistical treatment of data, data sources and the design of statistical studies. Emphasis is on the principles and techniques of data analysis, synthesis, and utilization as applied to decision making in the electronics field. Student will gain experience in applying data to decision making through case studies and class projects. Prerequisite: MATH 108 or MATH 125.

385-3 Fiscal Aspects of Electronic Systems Technologies. An introduction to the types of fiscal problems encountered in the electronics industry. The course will address the diverse sizes and types of business within the field and will include an introduction to the accounting process. Emphasis will be given to financial management systems, financial analysis tools, cash flow management and budgeting procedures. Restricted to electronic systems technologies majors.

387-3 Electronics Industry Labor-Management Relations. A study of economic situations that affect labor-management relations in electronics-related career fields. Study will include the evolution of labor relations in the American electronics industry and interactive differences in labor-management relations from a global perspective. Laws that are common to both union and non-union employees will be emphasized. Restricted to electronic systems technologies majors.

388-3 Legal Aspects of Electronics. An introduction to the types of legal problems encountered in the electronics industry to include American legal heritage and legal rights. The course

will emphasize the nature and classification of contracts, warranties, product liabilities, consumer protection and applicable employment laws. Restricted to electronic systems technologies majors.

401-3 Analysis of Issues in the Electronics Industry. The identification and study of current economic, regulatory or operational issues impacting the electronics industry. The use of both written and oral reports to present a critical analysis of selected topics. May be independent study. Not for graduate credit. Prerequisite: EST 300. Restricted to electronic systems technologies majors.

404-3 Communication Systems Management. This course will provide knowledge about the theory of operation, terminology and the underlying principles associated with the transmission of voice, data and video information through telephone, satellite and cellular radio communications equipment at the level of a technical manager. An emphasis on the latest developments in telecommunications and emerging technologies, including networking technologies is covered. The course includes an emphasis on computer network. Not for graduate credit. Restricted to Electronic Systems Technologies majors or consent of school.

407-3 Industrial Networking and Systems Integration. The selection, configuration, installation, maintenance, and troubleshooting of industrial peer-to-peer and device level networks will be examined with the purpose of forming a complete industrial control network structure. The integration of various industrial control devices, components, and automation cells to form a complete automated control system will be examined. Safety and standard practices will be emphasized throughout the course. Lecture and Laboratory. Not for graduate credit. Prerequisite: EST 307.

411-3 Imaging and Information Systems in Healthcare. Lecture/Lab. This course discusses radiation, radiographic imaging (X-ray, CT, MRI) and ultrasound. The student will also understand the processes of image formation, manipulation, and enhancement within the framework of a PACS/DICOM Healthcare Information System (HIS). BMET management issues and the use of computerized maintenance management systems will also be covered. Not for graduate credit. Prerequisite: EST 301 and EST 311 or consent of instructor. Co-requisite allowed: ISAT 335 or consent of instructor. Restricted to EST majors or consent of instructor.

420-1 to 12 Electronic Systems Technologies Cooperative Education. Students may participate in a departmentally approved cooperative education program that includes formal instruction, training and/or career-related work experience. Students will receive a salary or wages and engage in prearranged assignments related to their academic program and career objectives. Department faculty evaluation, cooperative agency student performance evaluations and student reports are required. Hours and credit to be individually arranged. Mandatory Pass/Fail. Not for graduate credit. Special approval needed from the instructor.

441-3 Career Development for Electronics Managers. A study of elements to consider when seeking employment in an electronics career field. These elements include personal inventories and resumes, placement service and employment agencies, interviewing techniques, letters of application, refer-

ences and employment testing. Emphasis will be placed on the roles of mentoring, membership in professional organizations, continuing education and other opportunities for professional growth throughout a career in the electronics industry. Each student will develop a portfolio including personal and professional information related to individual career goals. Not for graduate credit. Restricted to electronic systems technologies majors.

450-3 Management Problems in the Electronics Industry. The identification and study of problems related to management within the electronics industry. The application of electronic systems technologies theories, concepts and practices to the identified management problems. The use of written and electronic media research resources to produce a written problem solving report. May be independent study. Not for graduate credit. Prerequisite: EST 351 or EST 401. Restricted to electronic systems technologies majors.

451-3 Industry Operations Management. Discusses operational management of technical industries. The course covers forecasting, system design, quality, supply chain/inventory management, scheduling, and project management. This course is reading and writing intensive, and reflects the College's Communication-Across-the-Curriculum initiative. Not for graduate credit. Prerequisite: ISAT 365 and ISAT 366 or consent of school. Restricted to senior status in EST.

Elementary Education

(SEE CURRICULUM AND INSTRUCTION)

Energy Economics

(SEE AGRIBUSINESS ECONOMICS)

Engineering (College, Courses)

Courses (ENGR)

101-3 Introduction to Engineering. (Same as ECE 101) Introduction to the engineering profession and the engineering programs in the College of Engineering. Lectures and hands-on laboratory projects aimed at stimulating interest in engineering and at guiding students in choosing an engineering curriculum. Seminars presented by distinguished speakers on engineering careers, ethics, and employment trends. No prerequisites.

110-1 Engineering Orientation. Orientation for first year engineering students. Course is designed to increase students' understanding of engineering as a field of study and as a profession. Emphasis is placed upon becoming a team player in engineering and developing an effective strategy for academic success in mathematics, science, and engineering courses. This course does not satisfy ABET or engineering requirements and it does not count toward the hours needed for graduation in engineering. Restricted to first year engineering students or consent of instructor.

111A-3 Engineering Learning Skills. Special approval needed from the Instructor, Academic Advisor, or MEP Director.

111B-3 Engineering Learning Skills. Special approval needed from the Instructor, Academic Advisor, or MEP Director.

111C-3 Engineering Learning Skills. Special approval needed from the Instructor, Academic Advisor, or MEP Director.

222A-2 Computational Methods for Engineers and Technologists. Introduces the student to the use of digital computers in the solution of technical problems that are specifically designed for the engineering and technology student. Problem analysis, flowcharting, coding, diagnostics, execution, and solution verification are discussed. Programs written in FORTRAN. Prerequisite: Mathematics 111 or equivalent with a minimum grade of C.

222B-2 Computational Methods for Engineers and Technologists. Introduces the student to the use of digital computers in the solution of technical problems that are specifically designed for the engineering and technology student. Problem analysis, flowcharting, coding, diagnostics, execution, and solution verification are discussed. Programs written in C++ language. Prerequisite: Mathematics 111 or equivalent with a minimum grade of C.

250-3 Statics. Principles of statics; force systems; equilibrium of particles and rigid bodies; trusses; frames; 2-D centroids; friction; moments of inertia; distributed loads; 3-D centroids; internal forces; shear and bending moment diagrams. Mass moment of inertia. Prerequisite: MATH 150 with a grade of C or better.

261-3 Dynamics. Fundamentals of particle and rigid body dynamics. Kinematics and kinetics of a single particle and system of particles. Application of Newton's laws and energy and moment principles in solving problems involving particles or rigid bodies in planar motion. Introduction to kinetics of rigid bodies in three dimensions. Prerequisites: MATH 250, ENGR 250, and PHYS 205A, all with a C or better.

301I-3 Humans and Their Environment. (University Core Curriculum: Students with a catalog year prior to Summer, 2012 only) [IAI Course: L1 905] An introduction to the study of the relationship between humans, resource consumption, pollution and the resulting environment. The effects of current human pollution and resource consumption on the environmental quality of the future. The interrelation of human population resource consumption and pollution. Methods of minimizing resource consumption and human pollution through both technological controls and changes in human behavior. Prerequisite: high school chemistry or equivalent.

303I-3 The Role of Energy in Society. (University Core Curriculum: Students with a catalog year prior to Summer, 2012 only) Lectures, discussions and class projects directed at understanding the role of energy, power and related concepts in society in the past, the present and the future. Review of current energy resources and use patterns, as well as projections for new energy conservation techniques and the development of alternative energy technology. An overview of worldwide energy needs, seeking to identify future limits on energy use attributable to environmental, economic, political and other technological and evolutionary constraints. Prerequisite: satisfactory completion of three hours of University Core Curriculum science requirements.

304I-3 Social History of American Technology. (University Core Curriculum) Survey of some key technological transformations and their related social developments in the United States from colonial times to the present with emphasis on unequal effects on cultural groups defined by race, gender, and ethnicity.

335-3 Electric Circuits. [IAI Course: EGR 931] Foundation course in electric circuits. Basic laws and concepts of linear cir-

cuits. Analysis of AC and DC circuits by mesh and nodal methods, Thevenin's and Norton's theorems, superposition principle, and phasor notation. Transients. Prerequisite: Mathematics 250 with a grade of C or better.

350A-3 Mechanics of Materials. Introduction to the mechanics of deformable bodies. Stress and strain. Torsion. Stresses and deflections in beams and columns. Influence lines. Statically indeterminate beams. Prerequisites: ENGR 250, MATH 250, Physics 205A and Physics 255A with minimum grades of C or better. Lab fee: \$30.

350B-1 Mechanics of Materials. Laboratory only. For transfer students who have satisfied the lecture but not the laboratory component of the 350A requirement. Prerequisites: ENGR 250, MATH 250, Physics 205A and Physics 255A with minimum grades of C. Lab fee: \$30.

350C-2 Mechanics of Materials-Course Only Articulation. For transfer students articulation only. This course is used to designate that a student has completed ENGR 350A without a laboratory.

351-3 Numerical Methods in Engineering. Overview of numerical procedures such as root finding, curve fitting, integration, solutions of simultaneous equations, and solutions of ordinary differential equations. Emphasis will be on applications of these techniques to problems in civil, environmental and mechanical engineering. Prerequisite: concurrent enrollment in or completion of MATH 305.

361-2 Engineering Economics in Design. Procedures for evaluating the relative economic merits of engineering projects and designs. Use of these procedures permits comparing alternate engineering estimates, evaluating engineering effectiveness, and proceeding toward decision making based on economic and engineering optimization. Professional engineering examinations include these course materials. Prerequisite: Mathematics 111 or equivalent with a grade of C or better.

370A-3 Fluid Mechanics. Fluid properties; fluid statics. Fluid flow; governing equations. Dimensional analysis and model-prototype relationships. Closed conduit flow. Open-channel flow. Introduction to numerical modeling. Prerequisite: ENGR 261 with a minimum grade of C. Lab fee: \$30.

370B-1 Fluid Mechanics-Laboratory Only. For transfer students who have satisfied the lecture but not the laboratory component of the ENGR 370A requirement. Prerequisite: concurrent enrollment in or completion of ENGR 370A. Lab fee: \$30.

370C-2 Fluid Mechanics-Course Only Articulation. For transfer students articulation only. This course is used to designate that a student has completed the lecture component of ENGR 370A without a laboratory.

Engineering Technology

(Major, Courses, Faculty)

Engineering Technology is part of the technological field that requires the application of scientific and engineering knowledge and methods combined with technical skills in support of engineering activities; it lies in the occupational spectrum between the technician and the engineer at the end of the spectrum closest to the engineer.

A Capstone Option may be available in the engineering technology major and is explained in Chapter 3 of this catalog. Students holding associate degrees of at least 60 semester hours in non-baccalaureate-oriented programs or equivalent certification with a minimum grade point average of 2.0 are qualified. For the engineering technology major, the associate degree or equivalent certification should be in an electrical or electronics-related field. This option permits qualified students to fulfill their degree requirements by completing 60 semester hours of work approved by the Capstone adviser. Each individual's program of study may differ according to the previous academic work.

The undergraduate program in engineering technology is accredited by the Engineering Technology Accreditation Commission of ABET, <http://www.abet.org>. These curricula are the electrical engineering technology specializations. For each curriculum, a minimum of 30 hours in engineering technology courses must be taken in residence at Southern Illinois University Carbondale.

Bachelor of Science Degree in Engineering Technology, College of Engineering

ENGINEERING TECHNOLOGY MAJOR—ELECTRICAL ENGINEERING TECHNOLOGY SPECIALIZATION

The electrical engineering technology specialization is designed to prepare technologists who are capable of technical design and who can contribute to the development, production, testing, and installation of electrical and electronic devices, circuits, and systems. In addition, graduates are capable of participation in the planning and installation of power distribution systems and operating and maintaining complex electrical systems. Graduates of the program are employed in communications, power, electronics, sales, manufacturing, and other fields.

<i>University Core Curriculum Requirements</i>	41
Foundation Skills	15
English 101, 102	6
Mathematics (substitute Mathematics in major)	3
Communication Studies 101	3
UCOL 101	3
Disciplinary Studies	26
Fine Arts	3
Human Health (Biology 202)	2
Humanities	6
Science (substitute Physics in major)	6
Social Science	3
Integrative Studies	3
Multicultural	3
<i>Requirements for Major in Engineering Technology with Electrical Engineering Technology Specialization</i>	(9) + 83
Physics 203A,B 253A,B.....	(6) + 2
Mathematics 111, 150, 282	(3) + 8
Management 202	3
Engineering 222B	2
Engineering Technology 150, 238, 245, 304A, 304B, 332A, 332B, 403A, 403B, 437A, 437B, 438A, 438B, 439 495A, 495B	56
Technical electives	8
<i>Total</i>	120

¹Courses in parenthesis will also apply towards 6 hours in the University Core Curriculum, making a total of 41 .

Electrical Engineering Technology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101, Select ¹	3	3
ENGL 101, 102.....	3	3
CMST 101	3	-
MATH 111 ²	4	-
MATH 150	-	4
Select ¹	3	5
<i>Total</i>	16	15

SECOND YEAR	FALL	SPRING
Select ¹	6	3
ET 150, ENGR 222B	2	2
ET 245.....	-	4
MATH 282, MGMT 202	3	3
PHYS 203A,B	3	3
PHYS 253A,B	1	1
<i>Total</i>	15	16

THIRD YEAR	FALL	SPRING
Technical Electives	3	3
ET 238, ET 439	4	4
ET 304A,B	4	4
ET 332A,B	4	4
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
ET 495A, 495B	1	1
ET 403A,B	4	4
ET 437A,B	4	4
ET 438A,B	4	4
Technical Elective	2	-
<i>Total</i>	15	13

¹See University Core Curriculum requirement

²Substitutes for University Core Curriculum

Courses (ET)

A suitable calculator and textbooks are required for most of the following courses.

103-3 Engineering Drawing I. (Same as IT 105) Links the components of technical sketching with current CAD software. Sketching to include: orthographic projection, sectional views and dimensioning. Employ these elements with current CAD software in creating drawing entities, managing layers, displaying and modifying drawings, annotating and dimensioning, and file management. Restricted to College of Engineering students or departmental approval required.

104-3 Engineering Drawing II. Principles and practices of engineering drawing. Representation of mechanical components, dimensioning, tolerancing, and mechanical drawing symbols. Introduction to computer-aided drawing systems with applications to both micro-computer and mini-computer sys-

tems. Prerequisite: ET 103. Restricted to College of Engineering students or departmental approval required.

150-2 Introduction to Electrical Engineering Technology. This laboratory course gives students instrumentation and construction skills. It covers CAD/CAM for electronics and instrumentation used to measure circuit values and generate signals. Students learn to identify components, analyze error, use units common to electrical measurement, and learn to design and build circuits. Students demonstrate skills by assembling, testing, and trouble-shooting an electronic kit. Prerequisite: MATH 111 or concurrent enrollment. Restricted to College of Engineering students or departmental approval required.

209-3 Manufacturing Process Laboratory. (Same as IT 209) Laboratory experiments to familiarize the student with the theory and operation of manufacturing processes. Lab. Prerequisite: IT 208 or consent of instructor. Restricted to College of Engineering students or departmental approval required.

238-4 Digital System Fundamentals. This course studies fundamental digital concepts used in electronic design and application. The course covers traditional design approaches for combinational and sequential circuits. The course introduces contemporary approaches such as hardware design languages. Topics include logic gates, flip-flops, memory circuits, Karnaugh map, and VHDL/Verilog. A laboratory emphasizes design and application. Prerequisite: ET 150 or concurrent enrollment, MATH 111 or concurrent enrollment. Restricted to College of Engineering students or departmental approval required.

245-4 Introductory Circuit Theory and Applications. This course covers the fundamental theories of electric circuits. It covers symbols and diagrams that represent electric circuits and includes mathematical definitions and application of circuit components. Students analyze circuits using Ohm's and Kirchoff's Laws. The course introduces mathematical descriptions for alternating currents with practical examples. A laboratory demonstrates theory. Prerequisite: MATH 111, ET 150 or equivalent. Restricted to College of Engineering students or departmental approval required.

304A-4 AC/DC Circuit Theory and Application. DC network mesh and nodal analysis. The course covers Thevenin's theorems, Norton's theorems, superposition, delta-wye resistor transformations, maximum power transfer, phasor transforms and impedance concepts for AC analysis. The course covers frequency response of RC, RL, and RLC resonant circuits. The course presents Bode plots of simple RC and RL filter circuits. A laboratory teaches safety and instrument usage. Prerequisite: ET 245. Restricted to College of Engineering students or departmental approval required.

304B-4 Network Theory and Application. Course covers phasor transform methods for AC networks, dependent sources, source conversions, mesh and nodal analysis, AC bridges, superposition, Thevenin's theorem, Norton's theorem and delta-wye conversion. The course analyzes RC transient response and pulse characteristics. It presents and solves ideal OP AMP circuits. Fourier series theory for non-sinusoidal signals. Laboratory teaches instrument usage. Prerequisite: ET 304A, MATH 150. Restricted to College of Engineering students or departmental approval required.

321-3 Automated Instrumentation and Data Acquisition. The course covers computerized control of instruments and data

acquisition systems. Students learn equipment and sensors selection, test equipment control and data acquisition systems development. The course introduces LabVIEW programming language. Students develop automated testing programs to control processes, display and analyze data using programmable test equipment and software. (Lecture + Lab). Prerequisite: ENGR 222B or CS 202; ET 245. Restricted to College of Engineering students or departmental approval required.

332A-4 DC Motors, Generators and Energy Conversion Devices. Course covers theory, application, and operation of DC motors and generators. It emphasizes testing and measurement of machine characteristics, parameters and efficiency and develops circuit models describing machine operation. The course covers analysis of industrial motor protection and control schemes. It introduces the science, application, and economics of DC power using photocells. Laboratory. Prerequisite: ET 304A or concurrent enrollment. Restricted to College of Engineering students or departmental approval required.

332B-4 AC Electric Machines and Power Systems. The theory and operation of AC machines and industrial power systems with emphasis on testing and measurement of machine characteristics, parameters and efficiency. The course reviews basic AC circuit analysis and introduces three-phase circuit analysis. The course develops power transformer, AC motor, and AC generator models. Laboratory experience using test instruments and software. Prerequisite: ET 304B or concurrent enrollment. Restricted to College of Engineering students or departmental approval required.

342-2 Technology Design. A design project on any technical subject selected by the student with advice from the instructor. Individual or group effort required to develop functional design. Report writing and oral presentation required. Restricted to College of Engineering students or departmental approval required.

390-3 Cost Estimating. (Same as IT 390) Study of the techniques of cost estimation for products, processes, equipment, projects, and systems. Prerequisite: Mathematics 111. Restricted to College of Engineering students or departmental approval required.

392A-1 Engineering Technology Co-op. Supervised work experience in Engineering Technology industry. Restricted to junior standing. Special approval needed from the instructor. Mandatory Pass/Fail. Restricted to College of Engineering students or departmental approval required.

392B-1 Engineering Technology Co-op. Supervised work experience in Engineering Technology industry. Restricted to junior standing. Special approval needed from the instructor. Mandatory Pass/Fail. Restricted to College of Engineering students or departmental approval required.

403A-4 Electronic Circuit Analysis. This course studies fundamental solid-state electronic concepts, the application and design of transistor amplifiers, and operational amplifier circuits. Course topics include the ideal operational amplifier, diodes, rectifiers, analysis and design of bipolar transistor (BJT) amplifiers, and the analysis and design of field effect transistor (FET) amplifiers. A laboratory emphasizes electronics circuit design and analysis. Prerequisite: ET 304B. Restricted to College of Engineering students or departmental approval required. Restricted to Junior/Senior standing.

403B-4 Electronics Application and Design. This course focuses on system-level design and application of electronics circuits. Circuits include linear integrated circuits, quasi-linear circuits, integrated digital circuits, and pulse waveform generating and timing circuits. Topics include power amplifiers, Schmitt triggers, comparators, timers, and active filters. A design laboratory allows students to implement several design projects with increasing complexity. Prerequisite: ET 403A. Restricted to College of Engineering students or departmental approval required. Restricted to Junior/Senior standing.

437A-4 Telecommunication Systems Fundamentals. This course is a study of the fundamental concepts of analog and digital communication systems in addition to a survey of the state of the art of current and emerging communication technologies. Topics include modulation, signal encoding, transmission media, multiplexing, cellular, bluetooth, Wi-Fi, WIMAX and LTE-Advanced. Associated labs reinforce the concepts introduced and allow students to stimulate and build real systems. (Lecture + Lab). Prerequisite: ET 304B with a minimum grade of C. Restricted to College of Engineering students or departmental approval required.

437B-4 Data and Computer Communication. This course is a study of data and computer networks. Students are introduced to communication protocols, networking technologies and the various computer networks topologies. The OSI (Open Systems Interconnection) model is used as a guide in introducing the purpose and underlying principles of the existing communication protocol standards. The course concludes with an overview of emerging communication standards and technologies. Topics include LAN, WAN, TCP/IP, Routing, and Data Link layer. Associated labs reinforce the concepts introduced and allow students to simulate and build real systems. Lecture + Lab. Prerequisite: ET 437A with a minimum grade of C. Restricted to College of Engineering students or departmental approval required.

438A-4 Automatic Control Systems Technology. The mathematical concepts and tools used to model and design automatic control systems. The mathematical models for electric, hydraulic, mechanical and thermal processes found in industry. The course uses Laplace transforms, transfer functions, block diagrams and signal flow graphs to represent systems, determine system response and design control systems. A laboratory demonstrates applications. Prerequisite: ET 304B and ET 332A. Restricted to College of Engineering students or departmental approval required. Restricted to Junior/Senior standing.

438B-4 Sequential Digital Control and Data Acquisition. Concepts and components used in data acquisition and sequential control systems. The course covers sensors, signal conditioning, analog-to-digital/digital-to-analog conversion devices, relay logic design and programmable logic controllers. A laboratory demonstrates lecture topics and gives students experience with data acquisition and control languages and ladder logic programming within a design team. Prerequisite: ET 438A, ENGR 222B or CS 202. Restricted to College of Engineering students or departmental approval required. Restricted to Junior/Senior standing.

439-4 Microcontroller Application and Design. This course introduces embedded systems design and microcontroller programming. Students study microcontroller architectures and

design applications. The course emphasizes interfacing micro-controllers with sensors and actuators. Software tools like Matlab and Simulink aid in visualization and Model-Based Design. A laboratory provides programming/design experience. Prerequisite: ET 238, ENGR 222B or CS 202. Restricted to College of Engineering students or departmental approval required. Restricted to Junior/Senior standing.

445-3 Computer-Aided Manufacturing. (Same as IT 445) Introduction to the use of computers in the manufacturing of products. Includes the study of direct and computer numerical control of machine tools as well as interaction with process planning, inventory control and quality control. Laboratory. Prerequisite: IT 105 or IT 110, IT 208, MATH 111 or equivalent. Restricted to College of Engineering students or departmental approval required. Restricted to Junior/Senior standing.

455-3 Industrial Robotics. (Same as IT 455) Study of robotics within a wide variety of application areas. Topics covered include classification of robots, sensor technology, machine vision; control systems, including programmable logic controllers (PLCs); robot safety and maintenance; and economic justification of robotic systems. Prerequisite: Mathematics 111 or equivalent. Restricted to College of Engineering students or departmental approval required. Restricted to Junior/Senior standing.

492-1 to 6 Special Problems in Industry and Technology. Special opportunity for students to obtain assistance and guidance in the investigation and solution of selected technical problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering students or departmental approval required.

495A-1 Engineering Technology Senior Design I. Capstone Design Part 1. Includes proposal and preliminary design as part of a team project. Project development skills, scope of work, time and cost estimating, quality, ethical issues, professionalism, documentation of team member efforts, preliminary designs, identification and assignment of tasks to project team members, development of final proposal, design work and review, oral presentation of final proposal. Not for graduate credit. Restricted to senior standing in Engineering Technology (second to last semester).

495B-1 Engineering Technology Senior Design II. Capstone Design Part 2. Demonstrated project management principles. Design options and cost-benefit analysis. Development of the final decision matrix. Team coordination and documentation of team member efforts, design stages, team communication and team decision making processes. Implementation of the design (if the project warrants). Evaluation of final product. Written, oral and poster presentation of final design. Not for graduate credit. Prerequisite: ET 495A with a grade of C or better. Restricted to senior standing in Engineering Technology (last semester).

Technology Faculty

Chang, Feng-Chang (Roger), Associate Professor, Ph.D., Ohio State University, 1985.

Chen, Han Lin, Associate Professor, *Emeritus*, M.S., Southern Illinois University, 1958.

Contor, Keith L., Associate Professor, *Emeritus*, M.S., State College of Washington at Pullman, 1960.

- Crosby, Garth V.**, Associate Professor, Ph.D., Florida International University, 2007.
- Cross, Bud D.**, Visiting Assistant Professor, *Emeritus*, M.S., Southern Illinois University, 1965.
- DeRuntz, Bruce D.**, Professor, Ph.D., Southern Illinois University Carbondale, 2005.
- Dunning, E. Leon**, Professor, *Emeritus*, Ph.D., University of Houston, 1967.
- Dunston, Julie K.**, Associate Professor, Ph.D., Florida State University, 1995.
- King, Frank H.**, Visiting Assistant Professor, *Emeritus*, Ph.D., Southern Illinois University, 1981.
- Marusarz, Ronald K.**, Associate Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1999.
- Meyers, Fred E.**, Associate Professor, *Emeritus*, M.B.A., Capitol University, 1975.
- Rogers, C. Lee**, Associate Professor, *Emeritus*, Ph.D., Southern Illinois University, 1975.
- Savage, Mandara**, Associate Professor and *Chair*, Ph.D., Iowa State University, 1999.
- Spezia, Carl J.**, Associate Professor, Ph.D., Southern Illinois University Carbondale, 2002; 2005.
- Velasco, Tomas**, Associate Professor, Ph.D., University of Arkansas, 1991.

English

(Department, Major, Courses, Faculty)

The major in English is 36 semester hours at least half of which must be taken at Southern Illinois University Carbondale. The English major may choose from four specializations listed below.

Students who wish to declare English as a major should consult the Director of Undergraduate Studies in English early in their college careers. Continuing students who wish to declare an English major should petition the Department of English for admission to the department. Transfer students should bring their transcripts and syllabi of courses in English for evaluation of transfer credit. Thereafter, all English majors must have their advance registration forms signed by an advisor in the Department of English.

Only English courses completed with at least a *C* will fulfill a major requirement. Deviations from regular programs must have prior written department approval.

Students who wish to construct an inter-departmental major in English and certain related fields may do so in consultation and with the approval of the Director of Undergraduate Studies in English.

Students are urged to supplement their English majors through the study of classical and modern languages, as well as the study of foreign literature in translation. Majors preparing for graduate school should take two years of a foreign language.

Although a minor field is not required, English majors are encouraged to consider complementary minor fields such as communication studies, foreign languages and literatures, history, philosophy, linguistics, journalism, psychology, sociology, political science, Africana studies, theater, computer science, business administration, and marketing. In fact creativity, critical

thinking, and communication – skills acquired in the English major – are crucial for success in any field of study. The English major and minor complement and enhance study in virtually all-academic disciplines.

ENGLISH CORE COURSES

All students majoring in English will take the following English core courses:

English 301, 302A, 302B, 303, 305 and 365 or 471 or 472.

ENGLISH PROGRAM SPECIALIZATIONS

Bachelor of Arts Degree in English, College of Liberal Arts
A student may wish to pursue one of several specializations in the College of Liberal Arts. The degree earned and the requirements for the degree are as follows:

<i>University Core Curriculum Requirements</i>	41
Recommended but not required, Classics 230, with a grade of <i>C</i> or better.	
<i>College of Liberal Arts Academic Requirements (See Chapter 4) Requirements for Major in English</i>	36
In addition, one year college credit in a single foreign language with at least a <i>C</i> (also fulfills College of Liberal Arts foreign language requirement)	6
<i>Electives</i>	37
Total	120

Students should regularly consult with their departmental advisor to achieve a suitable range and breadth of course work. Students planning to enter graduate school are strongly urged to take two years of a foreign language.

ENGLISH MAJOR — LITERATURE SPECIALIZATION

In addition to the English core courses, students will take six electives from the 300 and 400-level courses in English. At least three of these elective courses must include the following: one course in English, American, or Irish Literature before 1800; one course in English, American, or Irish Literature after 1800; and one course in continental literature or substitute.

English Suggested Curricular Guide (Literature Specialization)

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
CMST 101	-	3
UCOL 101.....	3	-
Core Science	3	3
Core Mathematics.....	3	3
Core Fine Arts.....	3	3
Total	15	15
SECOND YEAR	FALL	SPRING
English Composition.....	-	3
Core Humanities	3	3
Core Social Science	3	3
Core Multicultural, Health	3	2
Foreign Language	3	3
Science with Lab	3	-
Total	15	14

THIRD YEAR	FALL	SPRING
ENGL 301, Elective	3	3
ENGL 365, Elective	3	3
ENGL 302A, 302B.....	3	3
ENGL 303, 305.....	3	3
Electives	3	4
<i>Total</i>	15	16

FOURTH YEAR	FALL	SPRING
English/American/Irish Literature Before 1800, After 1800	3	3
Continental Literature	3	-
Electives	9	12
<i>Total</i>	15	15

ENGLISH MAJOR — CREATIVE WRITING SPECIALIZATION
 In addition to the English core courses, students will take English 381A and 382A; English 381B and 382B; English 351 or 352; and either 492A or 492B

English Suggested Curricular Guide (Creative Writing Specialization)

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
CMST 101	-	3
UCOL 101.....	3	-
Core Science	3	3
Core Mathematics.....	3	3
Core Fine Arts.....	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
English Composition.....	-	3
Core Humanities	3	3
Core Social Science	3	3
Core Multicultural, Health	3	2
Foreign Language	3	3
Science with Lab	3	-
<i>Total</i>	15	14

THIRD YEAR	FALL	SPRING
ENGL 301, Elective	3	3
ENGL 365, Elective	3	3
ENGL 302A, 302B.....	3	3
ENGL 303, 305.....	3	3
ENGL 382A, 382B.....	3	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
ENGL 381A, 382B.....	3	3
ENGL 351/352, 492A/492B.....	3	3
Electives	10	9
<i>Total</i>	16	15

ENGLISH MAJOR — PREPROFESSIONAL SPECIALIZATION

In addition to the English core courses, majors interested in such fields as law, business, technical communication, information technology, and government will take the following courses: English 290 or 291 or 390 or 391 or 392; English 300 or 401 or 403; English 490 or 491; three electives from the 300 and 400-level courses in English, or with the consent of the departmental advisor, a course in another department.

English Suggested Curricular Guide (Pre-professional Specialization)

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
CMST 101	-	3
UCOL 101.....	3	-
Core Science	3	3
Core Mathematics.....	3	3
Core Fine Arts.....	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
English Composition.....	-	3
Core Humanities	3	3
Core Social Science	3	3
Core Multicultural, Health	3	2
Foreign Language	3	3
Science with Lab	3	-
<i>Total</i>	15	14

THIRD YEAR	FALL	SPRING
ENGL 301	3	-
ENGL 290/291/390/391/392	-	3
ENGL 365, Elective	3	3
ENGL 302A, 302B.....	3	3
ENGL 303, 305.....	3	3
Electives	4	3
<i>Total</i>	16	15

FOURTH YEAR	FALL	SPRING
ENGL 300/401/403.....	3	-
ENGL 490/491.....	-	3
Electives	12	12
<i>Total</i>	15	15

Bachelor of Science Degree, College of Education and Human Services or Bachelor of Arts Degree, College of Liberal Arts

ENGLISH MAJOR – TEACHER EDUCATION PREPARATION

The major in English is 36 semester hours at least half of which must be taken at Southern Illinois University Carbondale. The English major may choose from four specializations listed below.

Students who wish to declare English as a major should consult the Director of Undergraduate Studies in English early in their college careers. Continuing students who wish to declare

an English major should petition the Department of English for admission to the department. Transfer students should bring their transcripts and syllabi of courses in English for evaluation of transfer credit. Thereafter, all English majors must have their advance registration forms signed by an advisor in the Department of English.

Only English courses completed with at least a C will fulfill a major requirement. Deviations from regular programs must have prior written department approval.

Students who wish to construct an interdepartmental major in English and certain related fields may do so in consultation and with the approval of the Director of Undergraduate Studies in English.

Students are urged to supplement their English majors through the study of classical and modern languages, as well as the study of foreign literature in translation. Majors preparing for graduate school should take two years of a foreign language.

Although a minor field is not required, English majors are encouraged to consider complementary minor fields such as communication studies, foreign languages and literatures, history, philosophy, linguistics, journalism, psychology, sociology, political science, Africana studies, theater, computer science, business administration, and marketing. In fact creativity, critical thinking, and communication – skills acquired in the English major – are crucial for success in any field of study. The English major and minor complement and enhance study in virtually all-academic disciplines.

No ILP course will count toward the major without prior consent from the Undergraduate Studies Director or the Director's assistant. In making such determinations, the Director will take into account the nature of the students' other educational experiences. Except in rare circumstances, students on campus during a given semester will not be allowed to take an ILP course in lieu of a course that is simultaneously being offered in traditional format. Except in rare circumstances, students will not be allowed to take more than two ILP courses toward completion of the English major.

ENGLISH CORE COURSES

All students majoring in English will take the following English core courses:

English 301, 302A, 302B, 303, 305 and 365 or 471 or 472.

ENGLISH MAJOR – TEACHER EDUCATION PREPARATION

In addition to the English core courses, majors interested in becoming teachers of English will take the following courses: English 300 or 401, 485A and 485B. At least one course in English, American, or Irish Literature before 1800; one course in English, American, or Irish Literature after 1800; and one course in continental literature or substitute. NOTE: For the teacher licensure requirements, please see the course work offered by the College of Education and Human Services.

Bachelor of Science Degree, College of Education and Human Services or Bachelor of Arts Degree, College of Liberal Arts

Students who wish to become certified teachers of English may pursue their majors for the BS or BA degree as follows:

<i>University Core Curriculum Requirements</i>	41
(Psychology 102; Education 311, 314; Classics 230 recommended but not required)	

Requirements for Major in English

Content Courses: English 301, 300 or 401, 302A,B, 303, 305, 365, Before 1800, After 1800, Continental Literature	30
Methods Courses: English 485A, 485B	6
Professional Education Requirements: EDUC 313, 308, 319, 301, 302, 303, 401	24
Teacher training candidates must take the Teacher Education Preparation specialization in the English major described above.	
In addition, one year college credit in a single foreign language	6
<i>Electives</i>	13
<i>Total</i>	120

English Suggested Curricular Guide (Teacher Education Specialization)

FIRST YEAR	FALL	SPRING
ENGL 101, 102	3	3
CMST 101, Fine Arts	3	3
UCOL 101, Core Humanities	3	3
PSYC 102, Core Science	3	3
MATH 101, EDUC 314	3	3
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
CLAS 230, EDUC 311	3	3
Core Science, ENGL 301	3	3
HED 101, ENGL 302A	2	3
ENGL Elective, ENGL 499; ENGL 365	4	3
Foreign Language	3	3
<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING
EDUC 301, 302	1	1
EDUC 313, 319	3	3
ENGL Elective, ENGL 300 (or 401)	3	3
ENGL Elective, ENGL 485A	3	3
ENGL Elective, ENGL 302B	3	3
ENGL 303, 305	3	3
<i>Total</i>	16	16
FOURTH YEAR	FALL	SPRING
Continental Literature	3	-
English/American/Irish Literature:		
Before 1800	3	-
After 1800	3	-
ENGL 485B	3	-
EDUC 308	3	-
EDUC 303	1	-
EDUC 401	-	12
<i>Total</i>	16	12

English Minor

The minor in English is a minimum of 18 semester hours at least half of which must be taken at Southern Illinois Universi-

ty Carbondale. Only English courses which are completed with at least a C fulfill a minor requirement.

Minors are available with four specializations. Students interested in English as a minor are asked to confer with the Director of Undergraduate Studies in English or an advisor in the Department of English to determine their specific course of study.

ENGLISH MINOR — PREPROFESSIONAL SPECIALIZATION (18 HOURS)

Preprofessional specialization English 290 or 291; 300; 301; 365 or 471 or 472; 390, 391, or 392; and 490 or 491.

ENGLISH MINOR — CREATIVE WRITING SPECIALIZATION (18 HOURS)

Creative writing minors should take at least one course from English 381A, 382A or 384; English 381B or 382B; English 351 or 352; either English 492A, 492B, or 492C; and two 300- or 400- level English courses.

ENGLISH MINOR — WORLD LITERATURE SPECIALIZATION (18 HOURS)

English 204, 301; and four courses from 425, 445, 447, 455, 465.

ENGLISH MINOR — TEACHING SPECIALIZATION (24 HOURS)

For students who wish to meet the Elementary Education Major requirements in English, 12 hours of the following English courses must be upper division: ENGL 209, 290, 302a, 302b, 303, 305, 325, 332, 333, 335, 365, 401 or 481.

Courses (ENGL)

100-3 Basic Writing. This course prepares students for the writing demands of English 101 and of the University. It teaches students processes for developing ideas, developing and organizing sentences and paragraphs, drafting, revising and editing. Placement in this course is determined by a combination of ACT score and a writing placement exam, or by a diagnostic essay exam given the first week of class in English 101.

101-3 English Composition I. (University Core Curriculum) [IAI Course: C1 900] Rhetorical foundations for demands of academic and professional writing, including recognition and deployment of strategies and processes for effective written products in various contexts and for various purposes. Class discussion and readings focus on the function and scope of professional and personal literacy. Course material fee: \$62.

102-3 English Composition II. (University Core Curriculum) [IAI Course: C1 901R] The second course in the two-course sequence of composition courses required of all students in the University. Using culturally diverse reading materials, the course focuses on the kinds of writing students will do in the University and in the world outside the University. The emphasis is on helping students understand the purpose of research, develop methods of research (using both primary and secondary sources), and report their findings in the appropriate form. Prerequisite: English 101 or equivalent with a minimum grade of C. To receive credit in the University Core Curriculum, a student must earn a C or better in English 102. Course material fee: \$62.

119-3 Introduction to Creative Writing. (University Core Curriculum) This course offers an introduction to the art and

craft of writing poetry and short fiction. Requirements will include writing exercises, reading and analyzing published poetry and fiction, conferences, and the creation of a portfolio of original poetry and fiction. There may be examinations, journal writing, and/or compilation of an anthology of published or original works.

120H-3 Honors Advanced Freshman Composition. (University Honors Program) (University Core Curriculum) [IAI Course: C1 901R] Fulfills Foundation Skills requirement for composition. Writing critical essays on important books in the following categories: autobiography; politics; fiction; eyewitness reporting; and an intellectual discipline. To receive credit in the University Core Curriculum, a student must earn a C or better. Prerequisite: ACT score of 29 or higher or CLEP test qualifying score of 57-60 or admission to the University Honors Program.

121-3 The Western Literary Tradition. (University Core Curriculum) [IAI Course: H3 900] The course offers a critical introduction to some of the most influential and representative work in the Western literary tradition. Emphasis is on the interconnections between literature and the philosophical and social thought that has helped to shape Western culture.

201-3 Introduction to Drama. [IAI Course: H3 902] Students will read and discuss plays of different types and periods. Prerequisite: ENGL 101 and 102; or 120.

202-3 Introduction to Poetry. [IAI Course: H3 903] Students will read and discuss poems of different types and periods. Prerequisite: English 101 and 102; or 120.

204-3 Literary Perspectives of the Modern World. (University Core Curriculum) [IAI Course: H3 900] This course introduces the literature of the twentieth century using representative works from the beginning through the close of the century. Course material may be drawn from fiction, verse, and drama, as well as including examples from supporting media (film, performance). Course may be taken as a sequence to English 121, "The Western Literary Tradition", but 121 is not a prerequisite for this course. Prerequisite: ENGL 102 or its equivalent.

205-3 Cultural Diversity in American Literature. (University Core Curriculum) [IAI Course: H3 910D] This course explores the cultural diversity within American Literature. By studying the historical, philosophical, political and narrative contexts attributed to each culture, we will understand a particular culture's interpretation of what it means to be an American and, in turn, appreciate our racial and multicultural diversity. Topics include the initial encounters between Native Americans and European colonists; slavery; immigration; African Americans, Eastern and Western European Americans, Hispanic Americans, Asian Americans and others who represent the American experience as reflected in literature, both in fiction and non-fiction.

206A-3 Literature Among the Arts: The Visual. (University Core Curriculum) A theoretical and historical examination of American graphic novellas, comic books and "comix" from their origins in the 1930s to the present, emphasizing the opportunities that a new and developing medium makes available for redefining narration, for social critique, and for examining the historical.

209-3 Introduction to the Forms of Literature. [IAI Course: H3 900] Poetry, drama, and fiction. Statement and illustration of the techniques of the three genres over the range of Ameri-

can and English literature. Prerequisite: ENGL 101 and 102; or 120; or equivalent.

210-3 Introduction to Fiction. [IAI Course: H3 901] Students will read and discuss a variety of American and European short stories and novels. Prerequisite: ENGL 101 and 102; or 120; or equivalent.

212-3 Introduction to American Studies. (Same as HIST 212) (University Core Curriculum) Offers interdisciplinary approach to the study of America and American selfhood, and thus to the central question, "What is an American?". Texts range from novels and films to museums and shopping malls. Issues range from multiculturalism to abstract notions such as citizenship and authenticity. Fulfills central requirement for American Studies Minor.

225-3 Women in Literature. (Advanced University Core Curriculum course) (Same as WGSS 225) [IAI Course: H3 911D] Examines the ways in which women are portrayed in literature, especially in twentieth-century novels, drama, short fiction, and poetry written by women. Prerequisite: ENGL 102 or 120. Satisfies the University Core Curriculum Multicultural requirement in lieu of English 205.

290-3 Intermediate Analytical Writing. Offers students practice and reflection in analytical, argumentative and expository writing. Emphasis is placed on understanding the writing and analytical processes necessary for effective integration of findings and arguments into reasoned written statements. Prerequisite: ENGL 101 and 102; or 120; or equivalent.

291-3 Intermediate Technical Writing. An intermediate course in technical and professional writing for sophomores, juniors, and seniors. Intended for students preparing for careers in applied technology, science, agriculture, business, and other fields where practical writing is a part of the daily routine. Prerequisite: ENGL 101 and 102; or 120; or equivalent.

293-3 to 9 (3 per topic) Special Topics in Literature and Language. Topics vary and are announced in advance. Both students and faculty suggest ideas. May be repeated as the topic varies. Special approval needed from the department.

300-3 Introduction to Language Analysis. Nature of language and linguistic inquiry. Dialectology, usage, and chief grammatical descriptions of present day American English. Required of teacher training candidates. Prerequisite: ENGL 102 or 120 or equivalent.

301-3 Introduction to Literary Analysis. Intensive reading and writing, designed to acquaint students with basic terms, concepts and discourse of literary analysis. Satisfies CoLA Writing-Across-the-Curriculum requirement for English majors. Restricted to English majors, English minors and Elementary Education majors. Prerequisite: ENGL 102 or ENGL 120 or equivalent.

302A-3 Literary History of Britain, Beowulf to Civil War. A survey of British literature from Beowulf to the English Civil War. Prerequisite: ENGL 102 or 120 or equivalent.

302B-3 Literary History of Britain, Restoration to 1900. A survey of British literature from the English Restoration to 1900. Prerequisite: ENGL 102 or 120 or equivalent.

303-3 Literary History of the United States Before 1900. A survey of American literature to the beginning of 1900. Prerequisite: ENGL 102 or 120 or equivalent.

305-3 Literary History of Britain and the United States,

1900 to present. A survey of British and American literature from 1900 to the present. Prerequisite: ENGL 102 or 120 or equivalent.

307I-3 Film as Literary Art. (University Core Curriculum) [IAI Course: F2 908] This course proposes to examine the influential role literature has on the cinematic tradition both in the past and present. It intends to emphasize the artistic and visual debt cinema owes to literature by concentrating on major achievements and analyzing them accordingly.

313A-3 Beginning Irish Language. This course will provide students with an introduction to the Irish language. Students will be able to communicate, at a basic level, through the medium of Irish on a range of topics. Emphasis will be placed on the spoken language. The course will also include some aspects relating to Irish culture. No prerequisites.

313B-3 Continuing Irish Language. This course will provide students with continuing work in the Irish language. Students will be able to communicate, at a basic level, through the medium of Irish on a range of topics. Emphasis will be placed on the spoken language and some written work will be required. The course will also include some aspects relating to Irish culture. Prerequisite: ENGL 313A, or permission of the instructor.

325-3 Black American Writers. (Advanced University Core Curriculum course) (Same as AFR 325) [IAI Course: H3 910D] Poetry, drama, and fiction by Black American writers. Satisfies the University Core Curriculum Multicultural requirements in lieu of English 205. Prerequisite: ENGL 102 or ENGL 120 or equivalent.

332-3 Folktales and Mythology. A survey of non-classical mythology and folktales, emphasizing its medieval and modern aspects as well as the use of folklore in major literary works. Readings will cover Norse, Celtic, and Middle Eastern mythology, their use by English and American writers, such as Tennyson, Irving, and Hawthorne and the popular folk-ballad. Students are encouraged to explore other aspects of world folklore in their independent research papers. Prerequisite: ENGL 102 or 120 or equivalent.

333-3 The Bible as Literature. To introduce students to types of literature in the Bible while familiarizing them with Biblical texts. Prerequisite: ENGL 102 or 120 or equivalent.

335-3 The Short Story. Reading and discussion of short stories by American and European authors. Prerequisite: ENGL 101 and 102; or 120; or equivalent.

351-3 Forms of Fiction. A study of fictional forms and form in fiction through selected readings and exercises. This course is taught by a publishing fiction writer and designed for student fiction writers. Prerequisite: ENGL 381A or consent of instructor.

352-3 Forms of Poetry. A study of poetic forms and form in poetry through selected readings and exercises. This course is taught by a publishing poet and designed for student poets. Prerequisite: ENGL 382A or consent of instructor.

355A-3 Survey of African-American Literature, Part I. (Same as AFR 355A) Course traces evolution African American Literature from roots in such Afri-based secular and sacred oral texts as folk tales, work songs, the Spirituals, Blues and other verbal forms, through the emergence of written texts, the eighteenth century up to the end of the Harlem Renaissance in 1940. Among these concerns are the continuing quest for free-

dom, identity, protest against oppression, and writers' interpretation of enduring African American spiritual and cultural values.

355B-3 Survey of African-American Literature, Part II. (Same as AFR 355B) Examination of literary texts, voices and movements in the USA from 1940 to Present. Among these concerns are the continuing quest for freedom, identity, protest against oppression, and writers' interpretation of the enduring African American spiritual and cultural values. Focus on the major developments in African American literature after the Harlem Renaissance and its impact on the contemporary literature of African Americans.

365-3 Shakespeare. Reading and discussion of the major plays. Satisfies CoLA Writing-Across-the-Curriculum requirement for English majors. Prerequisite: ENGL 101 and 102; or 120; or equivalent.

381A-3 Creative Writing: Beginning Fiction. Introduction to basic intentions and techniques of writing creative prose, through readings, exercises, story writing, and workshopping. Prerequisite: ENGL 102 or 120; or consent of instructor.

381B-3 Creative Writing: Intermediate Fiction. Focus upon the writing of fiction, through readings, considerations of form and technique, writing of stories or other narratives, and workshopping. Prerequisite: ENGL 381A, or consent of instructor.

382A-3 Creative Writing: Beginning Poetry. Introduction to basic intentions and techniques of writing poetry, through readings, exercises, writing poems, and workshopping. Prerequisite: ENGL 102 or 120; or consent of instructor.

382B-3 Creative Writing: Intermediate Poetry. Focus on the writing of poetry, through readings, considerations of form and technique, writing poems, and workshopping. Prerequisite: ENGL 382A or consent of instructor.

384-3 Creative Writing: Introduction of Literary Nonfiction. Introduction to basic intentions and techniques of writing literary nonfiction, through readings, exercises, writing nonfiction, and workshopping. Prerequisite: ENGL 102 or 120; or consent of instructor.

390-3 Advanced Composition. Expository writing. Prerequisite: C average in ENGL 120; or C average in ENGL 101 and 102; or equivalent. Open to English majors and minors or with consent of department.

391-3 Precision in Reading and Writing. To improve the student's ability to read and write with precision and clarity, depending on reading complex material (requiring no particular background for comprehension) and on writing precis of it. Prerequisite: grade of B in ENGL 102; or C in ENGL 120; or C in ENGL 290.

392-3 Technology and Technical Communication. A course in technical and professional writing intended to provide practical experience with writing and advanced writing technologies. Intended for students preparing for careers where writing with technology is a part of the daily routine. Prerequisite: ENGL 290 or 291; or equivalent.

393-3 to 9 (3 per topic) Special Topics in Literature and Language. Topics vary and are announced in advance. Both students and faculty suggest ideas. May be repeated as the topic varies. Special approval needed from the department.

401-3 Modern English Grammars. Survey of the structure of

English, with emphasis on phonetics and phonology, morphology, syntax, semantics, pragmatics, grammar instruction, stylistics and language variation. Specifically designed to meet the needs of prospective teachers of composition and language arts at the secondary and college levels.

402-3 Old English Language and Literature. Introduction to the language, literature and culture of Anglo-Saxon England, with emphasis on Old English heroic and elegiac poetry, exclusive of Beowulf.

403-3 History of the English Language. (Same as CLAS 403) The development of the language from its Indo-European roots through Early Modern English and selected American dialects. Emphasis on the geographical, historical and cultural causes of linguistic change.

404A-3 Medieval Allegory, History and Romance. Three popular Medieval genres as represented by major texts of the early through the late Middle Ages, exclusive of Chaucer, including works such as *Dream of the Rood*, *Sir Orfeo*, *Sir Gawain and the Green Knight*, *Piers Plowman*, *The Book of Margery Kempe* and selections from *Lawman's Brut* and *Malory's Le Morte d'Arthur*.

404B-3 Medieval Lyric, Ballad and Drama. Lyric, ballad and drama from the early through the late Middle Ages, including translations of the *Old English Wife's Lament*, *Husband's Message*, *Wanderer*, and *Seafarer*, as well as Middle English religious and love lyrics and the Robin Hood ballads, with special emphasis on the great plays of the fifteenth century and the rebirth of drama in the Western World.

405-3 Middle English Literature: Chaucer. Major works including *Troilus and Criseyde* and selections from *The Canterbury Tales*.

412-3 English Non-Dramatic Literature: The Renaissance. Topics vary, but usually lyric poets, especially 17th-century metaphysical poets such as Donne, Herbert and Marvell.

413-3 English Non-Dramatic Literature: The Restoration and Earlier Eighteenth Century. Major works of Dryden, Pope, and Swift, and the non-dramatic specialties of Behn, Addison and Steele.

414-3 English Non-Dramatic Literature: The Later Eighteenth Century. Major poets from Thomson to Blake, and major prose writers, with emphasis on Johnson, Boswell and their circle.

421-3 English Romantic Literature. Wordsworth, Coleridge, Byron, Shelley, Keats, other writers of the era.

422-3 Victorian Poetry. Tennyson, Browning, Arnold and other poets in England.

423-3 Modern British Poetry. Major modernists (Yeats, Eliot, Pound); with selected works of Auden, Owen, Thomas, Heaney and others.

424-3 Native American Verbal Art. (Same as ANTH 424) This class examines the oral traditions (story telling, poetry, song, chant, etc.) of Native American Peoples. This class focuses on the ways that Native American verbal art as presented/represented by outsiders as well as on formal features and forms of Native American verbal art. Attention is paid to the place and structure of verbal art in Native societies. This class focuses on the broad spectrum of verbal art in North America.

425-3 Modern Continental Poetry. Representative poems by major 20th century poets of France, Italy, Germany, Spain,

Russia, and Greece.

426-3 American Poetry to 1900. Trends and techniques in American poetry to 1900.

427-3 American Poetry from 1900 to the Present. The more important poets since 1900.

433-3 Religion and Literature. Introduce students to the study of religious meaning as it is found in literature.

436-3 Major American Writers. Significant writers from the Puritans to the present. May be repeated only if topic varies and with consent of the department.

437-3 American Literature to 1800. Representative works and authors from the period of exploration and settlement to the Federal period.

445-3 Cultural Backgrounds of Western Literature. (Same as CLAS 445) A study of ancient Greek and Roman literature, Dante's *Divine Comedy*, and Goethe's *Faust*, as to literary type and historical influence on later Western writers.

446-3 Caribbean Literature. Representative texts from drama, poetry, and fiction that have shaped black diaspora aesthetics in the Caribbean, with special reference to black literature of the North American continent.

447-3 African Literature. Selected works of poetry, drama, and fiction by modern African authors.

448A-3 Irish Literature Survey. (Same as CLAS 448A) An introductory survey in historical context of the literature of Ireland, including Gaelic literature in translation from the early Christian era (400 AD) to the late 18th century; the first two centuries of Irish literature in English (18th and 19th century); and the Celtic Twilight and the Irish Literary Renaissance.

448B-3 Irish Literature. Major works, authors, genres, periods, or movements within Irish Literature. Topics will vary (i.e., Irish Women Writers, Joyce and Yeats, *The King Tales*, 19th Century Irish Writers, the Celtic Twilight, Contemporary Irish Poets, etc.), providing in-depth study in particular areas within the 16 centuries of Irish Literature.

451-3 Eighteenth Century English Fiction. The novel from Defoe to Jane Austen. Including works by Fielding, Richardson and others.

452-3 Nineteenth Century English Fiction. The Victorian novel: from 1830, including works by the Brontës, Dickens, George Eliot, Thackeray and others.

453-3 Modern British Fiction. Major writers (including Conrad, Joyce, Woolf and Lawrence), with selected fiction from Mid-Century and later.

455-3 Modern Continental Fiction. Selected major works of Europe and authors such as Mann, Silone, Camus, Kafka, Malraux, Hesse.

458-3 American Fiction to 1900. Trends and techniques in the American novel and short story.

459A-3 American Prose from 1900 to Mid-Century: The Modern Age. Representative narratives from the turn of the century to the post-World War II period.

459B-3 American Prose from Mid-century to the Present: The Postmodern Age. Representative narratives from the post-World War II period to the present.

460-3 Elizabethan and Jacobean Drama. Elizabethan drama excluding Shakespeare: such as Elizabethan playwrights as Greene, Peele, Marlowe, Dekker; and Jacobean drama: such as Jacobean and Caroline playwrights as Jonson, Webster, Mar-

ston, Middleton, Beaumont and Fletcher, Massinger, Ford, Shirley.

462-3 English Restoration and 18th Century Drama. After 1660, representative types of plays from Dryden to Sheridan.

464-3 Modern British Drama. Major writers (including Shaw and Synge), with selected works of later dramatists such as Churchill and Bond.

465-3 Modern Continental Drama. The continental drama of Europe since 1870; representative plays of Scandinavia, Russia, Germany, France, Italy, Spain and Portugal.

468-3 American Drama. The rise of drama, with emphasis on the 20th century.

469-3 Contemporary Topics in Drama. Varying topics on cross-national and cross-cultural 20th-century drama with focus on theoretical issues.

471-3 Shakespeare: The Early Plays, Histories, and Comedies. Such plays as *A Midsummer Night's Dream*, *The Merchant of Venice*, *The Taming of the Shrew*, *Henry IV Part I*, *Henry V* and *Much Ado about Nothing*. Satisfies CoLA Writing-Across-the-Curriculum requirement for English majors.

472-3 Shakespeare: The Major Tragedies, Dark Comedies, and Romances. Such plays as *Hamlet*, *Macbeth*, *Othello*, *King Lear*, *Measure for Measure*, *The Winter's Tale* and *The Tempest*.

473-3 Milton. A reading of a selection of the minor poems, of *Paradise Lost*, *Paradise Regained*, *Samson Agonistes*, and the major treatises.

481-3 Young Adult Literature in a Multicultural Society. Introduction to the evaluation of literary materials for junior and senior high school, with emphasis on critical approaches and the multicultural features of schools and society. Restricted to enrollment in English degree program or consent of department.

485A-3 Teaching Writing and Language in the Secondary School. Introduction to strategies for teaching English in the secondary school with emphasis on writing and language. Introduction to assessment of writing perception and skills. Assessment and tutoring of child from the community in writing. Ideally, course should be taken two semesters prior to student teaching. Restricted to: Admittance to Teacher Education Program through CoEHS.

485B-3 Teaching Reading and Literature in the Secondary School. Introduction to strategies for teaching English in the secondary school with emphasis on critical reading skills and various genres of literature, including contemporary adolescent literature. Introduction to assessment of reading perception and skills. Assessment and tutoring of child from the community in reading. Ideally, course should be taken the semester prior to student teaching. Restricted to: Admittance to Teacher Education Program through CoEHS.

489-3 One-to-One Teaching Practice and Theory. Perspectives on one-to-one teaching practices and collaborative theory in hands-on Writing Center experience. Prerequisites: Minimum grade of "B" in both ENGL 101 and ENGL 102 (or their equivalent). Special approval needed from the instructor.

490-3 Expository Writing. Advanced composition with emphasis on a variety of rhetorical strategies. Prerequisite: ENGL 290, 390 or equivalent.

491-3 Technical Writing. Introduction to technical commu-

nication across the curriculum; open to entire university community. Prerequisite: At least one of the following: ENGL 290, 291, 391, or equivalent.

492A-3 Creative Writing Seminar: Fiction. Advanced work in the writing and study of fiction, including readings, revisions, and workshopping. Prerequisites: ENGL 351 and ENGL 381B, or consent of instructor.

492B-3 Creative Writing Seminar: Poetry. Advanced work in the writing and study of poetry, including readings, revisions, and workshopping. Prerequisites: ENGL 352 and ENGL 382B, or consent of instructor.

492C-3 Creative Writing Seminar: Literary Nonfiction. Advanced work in the writing and study of literary nonfiction, including readings, revisions, and workshopping. Prerequisite: ENGL 384, or consent of instructor.

493-3 to 9 (3 per topic) Special Topics in Literature and Language. Topics vary and are announced in advance; both students and faculty suggest ideas. May be repeated as the topic varies.

493H-3 to 9 (3 per topic) Special Topics in Literature and Language. Topics vary and are announced in advance; both students and faculty suggest ideas. May be repeated as the topic varies. Prerequisite: ENGL 101 and 102 or 120H with a grade of C or better.

494-3 Cultural Analysis and Cinema. Cultural Studies exploring various and selected topics in European and American Cinema. A \$10 screening fee is required.

495-3 A Survey of Literary Criticism. Introduction to the history of criticism and major recent schools of literary criticism and theory.

498-3 to 9 Internship. For English majors only. Student may take up to nine semester hours to receive credit for internships that may be available at SIU Press, Special Collections, University Museum, Coal Center, Writing Center, Computer Lab and other faculty or unit-sponsored projects. Prerequisite: Written approval from department & academic unit and enrollment in English degree program or consent of department.

499-1 to 6 (1 to 3) Readings in Literature and Language. For English majors only. Prior written departmental approval required. May be repeated as the topic varies, up to the maximum of six semester hours. Restricted to enrollment in English degree program or consent of department.

English Faculty

Amos, Mark A., Associate Professor, Ph.D., Duke University, 1994.

Anthony, David J., Associate Professor, Ph.D., University of Michigan, 1998.

Appleby, Bruce C., Professor, *Emeritus*, Ph.D., University of Iowa, 1967.

Benedict, Pinckney, Professor, M.F.A. (Creative Writing) University of Iowa Writers' Workshop, 1988.

Bennett, Paula B., Professor, *Emerita*, Ph.D., Columbia University, 1970.

Bogumil, Mary L., Associate Professor, Ph.D., University of South Florida, 1988.

Boulukos, George E., Associate Professor, Ph.D., University of Texas at Austin, 1998.

Brunner, Edward J., Professor, Ph.D., University of Iowa, 1974.
Chandler, Anne K. Associate Professor, Ph.D., Duke University, 1995.

Cogie, Jane, Associate Professor, Ph.D., University of Iowa, 1984.

Collins, K. K., Professor and *Distinguished Teacher*, Ph.D., Vanderbilt University, 1976.

Dively, Ronda L., Associate Professor, D.A., Illinois State University, 1994.

Donow, Herbert S., Professor, *Emeritus*, Ph.D., University of Iowa, 1966.

Dougherty, Jane Elizabeth, Associate Professor, Ph.D., Tufts University, 2001.

Fanning, Charles, Professor, *Emeritus*, Ph.D., University of Pennsylvania, 1972.

Fox, Robert Elliot, Professor, Ph.D., SUNY at Buffalo, 1976.

Goodin, George V., Associate Professor, *Emeritus*, Ph.D., University of Illinois, 1962.

Griffin, Robert P., Associate Professor, *Emeritus*, Ph.D., University of Connecticut, 1965.

Haruf, Kent S., Professor, *Emeritus*, M.F.A., University of Iowa, 1973.

Howell, John M., Professor, *Emeritus*, Ph.D., Tulane University, 1963.

Humphries, Michael L., Associate Professor, Ph.D., The Claremont Graduate School, 1990.

Jones, Rodney G., Professor, *Emeritus*, M.F.A., University of North Carolina at Greensboro, 1973.

Jordan, Judy, Associate Professor, M.F.A. (Poetry), University of Virginia, 1995; M.F.A. (Fiction), University of Utah, 2000.

Joseph, Allison, Associate Professor, M.F.A., Indiana University, 1992.

Klaver, Elizabeth T., Professor, Ph.D., University of California at Riverside, 1990.

Kvernes, David M., Assistant Professor, *Emeritus*, Ph.D., University of Minnesota, 1967.

Lamb, Mary E., Professor, *Emerita*, Ph.D., Columbia University, 1976.

Lawson, Richard A., Professor, *Emeritus*, Ph.D., Tulane University, 1966.

Little, Judy Ruth, Professor, *Emerita*, Ph.D., University of Nebraska, 1969.

Lordan, E. Beth, Professor, M.F.A., Cornell University, 1987.

McClure, Lisa, Associate Professor, D.A., University of Michigan, 1988.

McEathron, Scott, Associate Professor, Ph.D., Duke University, 1993.

McNichols, Edward L., Assistant Professor, *Emeritus*, M.A., University of Detroit, 1958.

Molino, Michael R., Associate Professor, Ph.D., Marquette University, 1992.

Netzley, Ryan, Associate Professor, Ph.D., Pennsylvania State University, 2002.

Perillo, Lucia Maria, Associate Professor, *Emerita*, M.A., Syracuse University, 1986.

Peterson, Richard F., Professor, *Emeritus*, Ph.D., Kent State University, 1969.

Rudnick, Hans H., Professor, *Emeritus*, Ph.D., University of Freiburg, Germany, 1966.

Schonhorn, Manuel S., Professor, *Emeritus*, Ph.D., University of Pennsylvania, 1963.

Shapiro, Joseph, Assistant Professor, Ph.D., Stanford University, 2011.

Weshinskey, Roy K., Assistant Professor, *Emeritus*, M.A., Southern Illinois University, 1950.

Williams, Tony, Professor, Ph.D., University of Manchester, 1974.

Zimra, Clarisse, Associate Professor, *Emerita*, Ph.D., University of Washington, 1974.

Environmental Economics

(SEE AGRIBUSINESS ECONOMICS)

Environmental Management

(SEE GEOGRAPHY AND ENVIRONMENTAL RESOURCES)

Environmental Resources

(SEE GEOGRAPHY AND ENVIRONMENTAL RESOURCES)

Environmental Science

(SEE PLANT, SOIL AND ENVIRONMENTAL MANAGEMENT)

Environmental Studies (Minor)

Welcome to Environmental Studies (ENVS)! Open to all Majors: you can add some “green” to any degree. The Environmental Studies minor is an excellent complement to any major, and serves to enhance your career opportunities. You earn an Environmental Studies minor through 15 credit hours of approved courses that draw from the expertise of faculty and departments across campus. The goal is to broaden your perspective, while allowing you to follow your individual interests. You will expand your viewpoint and gain new skills for environmental analysis. For example, you can learn more about environmental ethics and media, ecology and wildlife; environmental education and policies; green buildings and organizations. The possibilities to widen your knowledge base are nearly endless. This minor helps unify the theme of environmental studies, while creating individual paths for student success.

The Environmental Studies minor is built around one core course, three topic courses (Environment, Society, Skills), and one unifying final course.

Core Course.....3
 GEOG 300I

Topic Courses - take one from each topic.....9

Topic 1 - **Environment:**

BIOL 307; CSEM 443; FOR 201; GEOG 104, 303I; GEOL 220, 221; HORT 238, 328A, 462, 469; PLB 200, 301I; ZOOL 312I.

Topic 2 - **Society:**

ANTH 370, 410K; FOR 285, 325; GEOG 100, 320, 429; HED 488; HIST 457; MGMT 474; PHIL 375; POLS 340; SOC 386; CMST 412.

Topic 3 - **Skills:**

ARC 231, 314I; CP 440; FOR 420, 423; GEOG 310I; JRNL

301, 396; KIN 416; MKTG 304; REC 301; RTD 463; TRM 440.

Final Unifying Course3
 GEOG 470.

See website for current course listing: www.environmental-studies.siu.edu.

Equine Science

(SEE ANIMAL SCIENCE)

Farm Management

(SEE AGRIBUSINESS ECONOMICS)

Fashion Design and Merchandising

(Major, Courses, Faculty)

The fashion industry is known for rapid change and is characterized by new technology, globalization and changing consumer desires. The fashion industry employs millions of people and reflects the health of a nation’s economy because of the millions of dollars spent by consumers for fashion goods. The fashion industry is composed of businesses that design, produce and sell a unique array of consumer goods known for seasonal changes in fabrics, colors and silhouettes. Fashion products are not exclusive to women’s apparel. Rather, fashion production and sales are organized into several different product categories: men’s, women’s and children’s apparel and accessories, cosmetics and fragrances, and home furnishings. A fashion career is for any individual who thrives on change.

The four-year curriculum in fashion design and merchandising offers the beginning level of education for those who intend to pursue a career in fashion. There are three specializations in the Fashion Design and Merchandising major: Fashion Design, Fashion Merchandising, and Fashion Stylist. Within each specialization, a structured sequencing of courses is included which provides for a gradual interactive development of required knowledge and skills. This preparation is combined with the University Core Curriculum courses to provide a comprehensive scholarly foundation for advancement.

A fast-paced atmosphere is created by the amount of information to be covered, the frequency of assignments, and the pressure of due dates. Successful students must be able to handle multiple projects simultaneously and manage their time wisely. While facilities are provided for use, cost for supplies, individual equipment and field trips necessary to the successful completion of the program are borne by the student. Due to variation in choice of individual materials used, it is impossible to predict the exact costs for each student. The Fashion Design and Merchandising program maintains the right to retain student work for exhibition or for records and accreditation purposes. Students are advised to assemble a photographic file of their work for their portfolios. All students in the fashion design and merchandising major are required to have a laptop computer at the beginning of the second semester freshman year.

Potential Occupations

Participation in work experience, internships, externships and volunteer activities is recommended to enhance the academic

curriculum. In addition, educational travel opportunities are provided allowing students to visit major fashion market cities with on-site business appointments. Graduates who pursue advanced studies can attain more responsible positions with the possibility of rising to top professional levels.

Graduates of the fashion design specialization are prepared to design clothing, accessories and other soft goods. Some designers are self-employed and design for individual clients. Other designers cater to specialty stores or department stores. Most fashion designers, however, work for apparel manufacturers creating and adapting fashions for the mass market. Some examples of careers in this area include, but are not limited to, manufacturer's representative, sales representative, production manager, inventory controller, stylist, apparel designer, textile designer, pattern maker, customer service representative, fashion illustrator, costing engineer, technical services, government or private researcher, and computer-aided design (CAD) manager.

Fashion merchandising professionals operate at the wholesale or retail level in the fashion industry. Career placement is very high and is complemented by the work experience component of the program. Careers in fashion merchandising include, but are not limited to, account representative, personal shopper, wholesale buyer, retail buyer, independent wholesaler, sales manager, visual merchandiser, inventory planning and distribution analyst, manufacturer's representative, customer service management specialist, retail sales and sales support manager, and showroom coordinator.

Fashion stylists work for companies such as designers, fashion houses, magazines, newspapers, retailers, online merchandisers, catalog publishers, television and film production houses, public relations firms, advertising agencies, and music producers. Fashion stylists may work as wardrobe consultants for agents, celebrities (e.g., in the sports or entertainment industries), or wealthy clients to prepare their clients for important events. Many stylists establish their own businesses as independent contractors. They give seminars or conduct classes with individuals, groups, or companies to provide information about fashion and accessories. Fashion stylists evaluate clients' physical attributes, lifestyle, and fashion style and recommend fashion choices that will assist clients to achieve and maintain their desired image. A fashion stylist has specific responsibilities for a photo shoot, fashion show, music video, film or event. Fashion stylists plan creative solutions to a design brief while working in teams composed of photographers, designers, lighting technicians, and set builders. They meet with directors or producers and gain a clear vision of the overall goal; they are then responsible for assembling apparel, accessories, props, and essentials for creating a desired image. Fashion stylists scout locations, create a mood by selecting and setting up appropriate props, fashions, accessories, and models to fit the theme. They coordinate colors and styles and ensure that everything is ready.

Fashion Design Specialization

In the fashion design specialization, students learn about all facets of the apparel and textile industries from raw materials to the consumer. This encompasses knowledge of textiles and fashion design from product development through promotion and distribution.

The curriculum focuses on fashion design, production and merchandising strategies to develop the skills necessary to work in the fashion industry. Courses provide instruction for students in all aspects of the industry including development and trends of national and foreign fashion; fibers, fabrics, and finishes basic to the selection, use and care of textiles; basic fashion production; current technology in computer-aided design; visual analysis of fashion; fashion sketching; pattern drafting; pattern grading; pattern-making techniques; draping; and history of fashion. In addition to knowledge of the fashion industry, students may obtain background and skills in art, history, journalism, theater, marketing, business management, production management, finance and accounting. A variety of opportunities are available to assess student learning in fashion design, production, and textiles, including comments on garments selected for the annual senior fashion show, senior portfolio review and evaluation from on-site field experience supervisors.

Fashion Merchandising Specialization

The fashion merchandising specialization offers in-depth study of the process of planning, negotiating, acquiring, selling and evaluating merchandise throughout the distribution channel. It is designed for students interested in product sales careers at the wholesale or retail level. Students acquire knowledge of merchandise, sales techniques, and trends in the market place and customer service. This specialization assumes a global perspective and is complemented by business courses to allow for career flexibility. In addition to knowledge of the fashion industry, students are encouraged to develop a background and related skills in art, marketing, or management. Because fashion production takes place worldwide, developing and/or enhancing writing and speaking skills in a second language such as Spanish, French, or Chinese is also encouraged.

Courses provide instruction to students in all aspects of fashion product sales – from product conception, sales floor visual merchandising plans, seasonal sales plan, and promotional campaigns. All courses include analytical skills necessary to interpret sales data and consumer behaviors. Fashion merchandising students are required to gain on-the-job work experience for course credit.

Fashion Stylist Specialization

The fashion stylist curriculum focuses on professional practices necessary to be successful as a fashion stylist. The different types of styling are covered and professional practices within each type are explained. The program is designed to include courses from across campus that will support the fashion curriculum. To allow students to customize their program to the particular types of styling in which they are interested, professional electives may be selected from specified classes in Cinema and Photography, Communication Studies, English, Journalism, Music, Radio, Television, & Digital Media, Sociology, and Theater. A wide range of projects are included in classes to provide students experience with different types of styling.

The fashion stylist specialization is designed so students can easily transfer into the program and within two to three years can earn a B.S. in Fashion Design and Merchandising with a Fashion Stylist specialization. Customized academic plans can be developed for licensed cosmetologists. Please contact the program director or advisor for further information.

Selective Admission and Grade Requirements

Prospective students attending another college or university prior to transferring to Southern Illinois University Carbondale should concentrate on completing courses articulated or approved as substitutes for Southern Illinois University Carbondale’s University Core Curriculum requirements. Prior to taking courses that appear to equate to the professional sequence, the applicant should consult with a program representative.

If a student receives a grade of *F* three times in the same course, the course cannot be taken again. Students cannot repeat FDM Prefix courses in which they received a grade of C or better.

Bachelor of Science Degree in Fashion Design and Merchandising, College of Applied Sciences and Arts

University Core Curriculum Requirements 38-41
 As per University requirements for baccalaureate degrees, but must include AD 207A, B, C (select two)
Requirements for Major in Fashion Design and Merchandising 79
 Core requirements33
 The following courses are required of all Fashion Design and Merchandising majors: 101, 102, 172, 241, 281, 330, 340, 441, 442, 462, (431 or 432 or 433)
 Specialization requirements (see below)46
Total 120

Fashion Design Specialization

Requirements for Fashion Design Specialization 36
 To include 111, 112, 121, 251, 252, 272, 311, 351, 352, 451, 452, (431 or 432 or 433))
 Art and Design (Select) 6
 Professional electives 4
Total 46

Fashion Merchandising Specialization

Requirements for Fashion Merchandising Specialization 18
 To include 282, 381, 482, 392 (or approved substitute), 491, 496
 Accounting 220 3
 Management 3
 Psychology 323 (Prerequisite: Psychology 102)..... 3
 Marketing 304, 305, 363, 401 plus 3 additional hours in Marketing 15
 Professional Electives 4
Total 46

Fashion Stylist Specialization: 4-Year Option

University Core Curriculum Requirements38-41
 As per University requirements for baccalaureate degrees
 Humanities: select two: AD 207A, B, C
 Fine Arts: select one: THEA 101 or CP 101 or MUS 103
 Multicultural: select one: MUS 203 or CMST 201
Requirements for Major in FDM 79
 Core requirements.....33
 The following courses are required of all Fashion Design and Merchandising majors: FDM 101, 102, 172, 241, 281, 330, 340, 441, 442, 462, (431 or 432 or 433)
Specialization Requirements (see below)46
Total.....120

Fashion Stylist Specialization

Requirements for Fashion Stylist Specialization.....46
 To include FDM 121, (432 or 433 or 431), 232, 282.....12
 AD 110 Intro to Drawing I..... 3
 Select from professional electives to equal 31 credits...31

Fashion Design Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
FDM 101, 112	3	3
FDM 102, 121	3	3
FDM 111, 172	3	3
AD 110, ENGL 101	3	3
UCOL 101, UCC MATH or higher	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
FDM 311, 252	3	3
FDM 251, 272	3	3
FDM 241, 340	3	3
ENGL 102, Core Human Health	3	2
Social Science, Science I	3	3
<i>Total</i>	15	14

THIRD YEAR	FALL	SPRING
FDM 281, 441	3	3
FDM 351, AD Selection	3	3
FDM 431/432/433, AD 207A/B/C	3	3
CMST 101, Science II	3	3
Social Science, Multicultural	3	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
FDM 330, 442	3	3
FDM 352, 452	3	3
FDM 431/432/433, 462	3	3
FDM 451, Professional Elective	3	4
Fine Arts, AD 207A/B/C.....	3	3
<i>Total</i>	15	16

Fashion Merchandising Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
FDM 101, 172	3	3
FDM 102, ENGL 102	3	3
ENGL 101, CMST 101	3	3
MATH 108, AD 207A/B/C	3	3
UCOL 101, PSYC 102	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
FDM 330, 340	3	3
FDM 241, 282	3	3
FDM 281, Science I	3	3

ACCT 220, AD 207A/B/C	3	3
Social Science, Multicultural Core	3	3
<i>Total</i>	15	15

THIRD YEAR	FALL	SPRING
FDM 381, 392	3	3
FDM 431/432/433, FDM 441	3	3
MKTG 304, MKTG 401	3	3
PSYC 323, MKTG 305	3	3
Science II, MGMT 304	3	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
FDM 491, 442	3	3
MKTG 363, FDM 462	3	3
MKTG Elective, FDM 492	3	3
Human Health, FDM 482.....	2	3
Fine Arts, Professional Elective.....	3	4
<i>Total</i>	14	16

Fashion Stylist Specialization Suggested Curricular Guide: 4-year Option

FIRST YEAR	FALL	SPRING
FDM 101, 121	3	3
FDM 102, 172.....	3	3
ENGL 101, CMST 101	3	3
AD 110, UCC MATH	3	3
UCOL 101, ENGL 102	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
FDM 241, 232	3	3
FDM 281, 340	3	3
Professional Electives	3	3
Professional Elective, Human Health....	3	2
Social Science, Science I	3	3
<i>Total</i>	15	14

THIRD YEAR	FALL	SPRING
FDM 431/432/433, 441	3	3
Fine Arts, FDM 462	3	3
AD 207A/B/C, Professional Elective	3	3
Science II, Professional Elective	3	3
Professional Electives	3	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
FDM 330, 282	3	3
FDM 431/432/433, 442	3	3
AD 207A/B/C, Multicultural Core	3	3
Social Science, Professional Elective	3	4
Professional Electives	3	3
<i>Total</i>	15	16

Courses (FDM)

101-3 Careers in Fashion. Explores the wide range of careers and key activities at each level of the fashion industry; raw materials manufacturing, product development, apparel manufacturing, retailing, and promotion.

102-3 Basic Principles of Clothing Design. Course content will include aesthetic, cultural, historical, psychological and social aspects of the basic elements and principles of clothing design. Restricted to major in Fashion Design and Merchandising.

111-3 Fashion Production I. Beginning skills in fitting, construction, and pattern and fabric usage. Restricted to major in Fashion Design and Merchandising. Studio Fee: \$36.

112-3 Fashion Production II. Intermediate skills in fitting, construction, and pattern and fabric usage. Prerequisites: FDM 111. Restricted to major in Fashion Design and Merchandising. Studio Fee: \$36.

121-3 Fashion Illustration. Introductory illustration course concentrating on developing skills necessary to create fashion illustrations and working drawings. Focus on designing apparel for women, men, and children. Prerequisite: AD 110.

172-3 Visual Communication in Fashion Design and Merchandising. Beginning skills in Adobe Illustrator and Adobe Photoshop for fashion rendering of story boards, trend boards, and product design. Prerequisite: FDM 101, FDM 102. Restricted to FDM major.

232-3 Client-Based Wardrobe Styling. Consulting and working with a client in the capacity of a wardrobe stylist, including fit, clothing selection for a variety of body types, clothing selection for specific occasions and events, personalization of style/image. Prerequisite: FDM 101, 102, 172. Restricted to Fashion Design and Merchandising majors.

241-3 Textiles I. Introduction to the study of textiles with focus on fiber, fiber properties, legal and environmental issues in the textile industry. Restricted to majors in Fashion Design and Merchandising and Interior Design. Studio Fee: \$36.

251-3 Flat Patternmaking and Drafting. Drafting and fitting basic patterns; making sloper; making styles through flat pattern manipulation and drafting; testing and refining patterns to provide perfect fit. Prerequisite: FDM 112. Restricted to major in Fashion Design and Merchandising. To be taken concurrently with FDM 311. Studio Fee: \$36.

252-3 Draping. Application of draping principles and techniques. Prerequisite: FDM 112, 121, 251, 311. Restricted to major in Fashion Design and Merchandising. Studio Fee: \$36.

258-1 to 30 Work Experience. Credit granted for past work experience while employed in business, industry, labor, government service or military organizations. Credit determined by departmental evaluation. Prerequisite: completion of 12 semester hours of Fashion Design and Merchandising courses with C or better. Restricted to major in Fashion Design and Merchandising or consent of instructor and school director.

259-1 to 60 Occupational Education. A designation for credit granted for past occupational educational experiences related to the student's educational objectives. Credit will be established by school director evaluation. This credit may only be applied at the 100- and 200-level for the fashion design and merchandising degree unless otherwise determined by the director.

272-3 Computer-Aided Apparel Design. Hands-on experience in computer patternmaking and grading. Prerequisite: FDM 251. Restricted to major in Fashion Design and Merchandising. Studio Fee: \$36.

281-3 Fashion Promotional Strategies I. The study of promotional techniques unique to the fashion industry. Emphasis is placed on methods used at the point-of-sale to sell merchandise to the final consumer. Promotional methods to include: sales floor layouts and design, personal selling and specialized customer service department. Prerequisite: FDM 101, 102. Restricted to major in Fashion Design and Merchandising.

282-3 Fashion Event Planning. The study of event planning, emphasis placed on fashion/stylist related events. Planning includes selecting and sourcing clothing, accessories, and other props, budgeting, establishing dates, selecting and reserving event sites, acquiring permits, working with vendors, and assessing the client's image and communication needs. Prerequisite: FDM 281. Restricted to Fashion Design and Merchandising majors.

311-3 Fashion Production III. Advanced skills in fitting, construction, patterning, and fabric usage. Introduction to apparel line development. Prerequisite: FDM 112. Restricted to major in Fashion Design and Merchandising. To be taken concurrently with FDM 251. Studio Fee: \$36.

330-3 Fashion Forecasting and Trend Analysis. Perform in-depth analysis of current and future trends in lifestyle, business, ready-to-wear, art, and other cultural, economic, marketing, political factors. Study techniques and procedures for identifying and forecasting fashion trends based on research and analysis. Prerequisite: FDM 101, 102. Restricted to Fashion Design and Merchandising majors.

340-3 Textiles II. Advanced course in textiles focused on textile product performance due to the following factors: yarn classifications, fabrication methods, special finishes, dyeing and printing techniques. Prerequisite: FDM 241. Studio Fee: \$36. **351-3 Advanced Patternmaking.** Advanced patternmaking and draping skills applied to original designs. Prerequisite: FDM 121, 251, 252, 272, 311. Restricted to major in Fashion Design and Merchandising. Studio Fee: \$36.

352-3 Experimental Custom Apparel Design. Development of apparel to meet aesthetic, structural and functional needs; problem solving for exceptional proportions, rehabilitation, activity, performing arts, new technology, materials and environment. Prerequisite: FDM 121, 251, 252, 311. Restricted to major in Fashion Design and Merchandising. Studio Fee: \$36.

381-3 Fashion Merchandising Mathematics. A comprehensive introduction to the financial management of merchandising fashion goods: merchandising and retailing concepts, managerial planning and decision-making processes, and mathematical formulas used in retail operations. Prerequisites: MATH 139, ACCT 220 with a grade of C or better.

382-3 Fashion Merchandising Mathematics II. Focus on corporate level buying office practices such as sales analysis, seasonal sales plans, open-to-buy, and inventory control. Other topics include market trip planning, vendor negotiations, and participation on product development teams. Prerequisite: FDM 381. Restricted to major in Fashion Design and Merchandising.

392-1 to 6 Field Study. Study of, and tours to apparel manu-

facturers, markets, museums, retailers, testing laboratories, textile mills, trade associations and other areas of interest within the softgoods industry. Variable credit with a maximum of six hours. Prerequisite: nine hours in Fashion Design and Merchandising. Restricted to junior standing, major in Fashion Design and Merchandising.

398-1 to 3 Special Problems. Independent study for qualified students in Fashion Design and Merchandising. Restricted to major in Fashion Design and Merchandising or consent of instructor and school director.

431-3 Ethnic Dress. The study of ethnic dress in non-western cultures, with attention to aesthetics, symbolism and uses of ethnic dress. Cultures studied may vary with each offering. May be repeated for credit.

432-3 Historic Clothing: Western Cultures. Development of clothing in Western civilization to 1850. Consideration of social, economic, aesthetic factors and technical innovations influencing clothing.

433-3 History of Western Costume, 1860 to Present. Evolution of Western costume from 1860 through the present time. Emphasis on the interrelationship between costume, social, political, economic, and technical changes.

441-3 Fashion Product Analysis. Examines how quality and value of apparel products are visually evaluated by industry and consumers. Prerequisite: FDM 101, 241.

442-3 Apparel and Textile Economics. Emphasizes the issues and importance of the role the United States' softgoods industry plays in the global economy. Not for graduate credit. Prerequisite: FDM 340. Restricted to major in Fashion Design and Merchandising.

451-3 Senior Fashion Design Studio I. Design a line, write garment specifications and sequence of operations, determine work flow and calculate production costs. Prerequisites: FDM 121, 251, 252, 311. Restricted to major in Fashion Design and Merchandising. Mandatory Pass/Fail. Studio Fee: \$36.

452-3 Senior Fashion Design Studio II. Business principles of apparel design, including systems, forms and logistics of money and materials. Functions and responsibilities of the fashion designer. Career opportunities in the fashion industry. Prerequisite: FDM 121, 251, 252, 311, 451. Restricted to major in Fashion Design and Merchandising. Mandatory Pass/Fail. Studio Fee: \$36.

462-3 Fashion Motivation. Psychological motivation for wearing clothing, societal functions of clothing, cultural differences in dress. Prerequisite: FDM 102.

481-3 Contemporary Issues in Fashion. A forum geared toward seniors and graduate students in fashion design and merchandising that focuses on current issues in the softgoods industry. May re-enroll for a maximum of six credits.

482-3 Fashion Merchandising. Focus on the entire process of fashion merchandising: strategic planning; branding; trend forecasting; consumer research; product development; buying, pricing, and costing; product sourcing or manufacturing; retail operations; and presentation to the consumer. Prerequisite: FDM 381.

490-1 to 4 Readings. Supervised reading for qualified students in the area of Fashion Design and Merchandising.

491-3 Personnel Issues in Fashion Retailing. Identification and examination of personnel matters and the job search pro-

cess in the fashion retail workplace. Not for graduate credit. Prerequisite: FDM 101. Restricted to junior standing, and major in Fashion Design and Merchandising.

492-1 to 9 Field Experience. Supervised work experience in an approved position in the fashion industry. Clock hours/credit to be individually arranged. Restricted to junior standing and major in Fashion Design and Merchandising. Mandatory Pass/Fail.

493-1 to 5 Advanced Occupational Skills. Modern occupational practice in fashion design and merchandising for experienced professionals seeking advanced techniques.

494-1 to 4 Workshop. Current work education issues for teachers, supervisors and administrators.

495-2 to 12 Instructional Internship. Internship in approved education and/or training centers. Intern instructor will increasingly assume responsibilities for preparing, presenting and guiding occupational learning in fashion design and merchandising.

496-2 to 12 Professional Internship. Provides a supervised experience in a professional setting in the fashion industry. Activities must be related to the student's academic program and career objectives. Reports and assignments are required to be completed by the student. Mandatory pass/fail.

497-1 to 6 Practicum. Application of work education skills and knowledge. Cooperative arrangements with corporations and professional agencies to study under specialist. Prerequisite: twenty hours in specialty.

498-1 to 5 Special Problems. Investigation of work education problems in fashion design and merchandising.

Fashion Design and Merchandising Faculty

Cho, Siwon, Assistant Professor, Ph. D., Virginia Tech, 2008.

Kidd, Laura K., Associate Professor, Ph.D., Iowa State University, 1994.

Lee, Seung-Hee, Associate Professor and Program Director, Ph.D., The Ohio State University, 1998.

Workman, Jane, Professor, *Emerita*, Ph.D., Purdue University, 1982.

Finance (Department, Major, Courses, Faculty)

The financial implications of decisions in both business and government are becoming more complex. Within the firm, financial considerations permeate research, engineering, production, and marketing. Within governmental activities, sophisticated financial techniques are becoming increasingly important. The financial executive thus takes a key role in the successful management of both business and governmental operations.

The finance curriculum offers three areas of specialization to meet the varied interests of students: (1) financial management, (2) financial institutions and (3) investments. The financial management program provides the background for a career in the financial operations of business firms and public institutions. The financial institutions specialization is designed for those interested in the operations of financial intermediaries and financial markets. The investments concentration is designed for those interested in Security Analysis and Portfolio Management. Certain courses may require the purchase of additional materials.

A major in Finance requires students to earn a minimum grade of *C* in each of the courses taken to satisfy the requirements for the Finance major*(as described below), and students must earn a minimum 2.0 grade point average for those major courses.

The Capstone Option for Transfer Students

The Capstone Option is available to students who have earned an Associate in Applied Science (AAS) degree or have the equivalent and who have a cumulative 2.0/4.0 GPA on all accredited coursework prior to the completion of the AAS, as calculated by SIU. The Capstone Option reduces the University Core Curriculum requirements from 41 to 30 hours, therefore reducing the time to degree completion. See Chapter 3 for more information on this option. Students who apply for the Capstone Option will work with the College of Business Advisement Office for approval of the Capstone Option and will complete a personal contract for a degree completion plan.

Technology Fee and Differential Tuition

The College of Business assesses College of Business majors a technology fee of \$6.00 per credit hour for Fall and Spring semesters up to twelve semester hours and Summer up to six semester hours. The technology fee is being phased out and will be subsumed under the differential tuition surcharge (see item below). Consequently, students will be charged either the technology fee or the differential tuition surcharge but not both.

Starting Fall 2008, the College of Business has implemented a differential tuition surcharge of 15% of applicable tuition for declared College of Business majors that are new students. The differential tuition surcharge will be assessed at the in-state tuition rate. If students are charged the differential tuition surcharge, the technology fee (in above item) will not be assessed. Starting Fall 2008, the College of Business has implemented a "minor program fee" for other than College of Business majors that is equal to 15% of 15 credit hours of applicable tuition for declared College of Business minors. This fee is applicable for new students.

Bachelor of Science Degree in Finance, College of Business

<i>University Core Curriculum Requirements</i>	41
<i>Professional Business Core</i> (See Chapter 4)	45
<i>Requirements for Major in Finance*</i>	27
*Minimum grade of <i>C</i> required for all classes in major area.	
Finance 331, 341, 361, Accounting 321 or 331	12
Specialization (choose one)	15
Financial Management:	
FIN 462, 463 and three of the following: 432, 433, 434, 449, 464, 469, 495	
Financial Institutions:	
FIN 449; Select four: 432, 433, 434, 462, 464, 469 495 or	
FIN 320 and 322; Select three: 432, 433, 449, 464, 495	
Investments:	
FIN 432, 433 and three of the following: 434, 449, 462, 463, 464, 469, 495	
<i>Approved Electives</i>	7
<i>Total</i>	120

Finance Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
UCC Science.....	3	3
UCC Fine Arts, UCC Human Health ...	3	2
UCOL 101, PSYC 102/SOC 108	3	3
MATH 108 ¹ , 140.....	3	4
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
ACCT 220, 230	3	3
ECON 241, 240.....	3	3
CMST 101, UCC Humanities.....	3	3
MATH 139, FIN 270 ²	3	3
ENGL 291, ACCT/FIN/MGMT 208.....	3	3
<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING
UCC Humanities, MGMT 304.....	3	3
FIN 330, 331.....	3	3
UCC Multicultural, FIN 341	3	3
MKTG 304, BUS 302	3	2
ACCT 321/331, FIN 361.....	3	3
Approved Elective ¹	-	2
<i>Total</i>	15	16
FOURTH YEAR	FALL	SPRING
MGMT 318, 481.....	3	3
MGMT 345, 300-400 CoB Prefix Elec ...	3	3
FIN ³	6	6
FIN ³ , Approved Elective ¹	3	2
<i>Total</i>	15	14

¹120 semester hours are required for graduation. Approved electives should be selected in consultation with academic advisor to meet this requirement.

²The combination of Finance 280 (Business Law I) and Finance 380 (Business Law II) may be substituted for Finance 270 and is highly recommended for Accounting majors.

³Major option or Major specialization.

Finance Minor

A minor in Finance consists of a minimum of 12 semester hours.

Requirements for a minor in Finance 12

- Finance 330
- Specialization: (choose one)
 - Financial Institutions:
 - FIN 331, 341 and 449
 - Financial Management:
 - FIN 361, 462 and 463
 - Investments:
 - FIN 331, 432 and 433

Prerequisites for these classes must also be satisfied. An advisor within the College of Business must be consulted before selecting this field as a minor.

A minor from the College of Business requires students to

earn a minimum grade of C in each of the courses taken to satisfy the requirements for their minor, and students must earn a minimum 2.0 grade point average for those minor courses.

Courses (FIN)

200-3 Personal Finance. (University Core Curriculum) An introduction to the problems of personal financial asset management, including income and expense budgeting. Emphasis also placed on consumer credit, insurance, investments, home ownership, and taxation. Will not count toward a major in finance.

208-3 Business Data Analysis. (Same as ACCT 208 and MGMT 208) Uses of data in policy formulation are discussed. Emphasis is placed on the conversion of raw information into statistics, which are useful to the decision-maker. Problems stress solution to questions typically raised in businesses. Prerequisite: MATH 139.

270-3 The Legal and Social Environment of Business. An examination of the legal, social, and political forces that influence business and businessmen. Particular attention to the role of law as an agency of social control in the modern business society. Restriction: sophomore standing or higher.

280-3 Business Law I. Legal problems arising from situations involving contracts and agency and business organizations. Not pass/fail for College of Business majors.

310-3 Insurance. Fundamentals of insurance and risk management including a study of selected insurance contracts and alternative methods of controlling risk exposures. Restrictions: junior standing or higher; departmental approval required.

320-3 Real Estate. Problems of real estate ownership, management, financing, and development. Restrictions: College of Business majors, junior standing or higher; or departmental approval required.

321-3 Real Estate Finance. A study of the instruments, techniques, and institutions of real estate finance; sources of and methods for obtaining funds for real estate investments; mortgage risk analyses. Prerequisite: FIN 320. Restrictions: College of Business majors, junior standing or higher; or instructor or departmental approval required.

322-3 Real Estate Appraisal. The techniques and art of real estate valuation using market comparison, cost, and income approaches. Includes appraisal principles, procedures, and applications. Restrictions: College of Business majors, junior standing or higher; or instructor or departmental approval required.

323-3 Real Estate Law. A survey of legal principles applicable to real property, including the following: conveyances, titles, land descriptions, rights and duties of ownership, and the law of real estate brokerage. Prerequisite: FIN 320. Restrictions: College of Business majors, junior standing or higher; or instructor or departmental approval required.

330-3 Introduction to Finance. Study of issuance, distribution, and purchase of financial claims including the topics of financial management, financial markets, and financial investments. Prerequisites: ACCT 220, ACCT 230, ECON 240, ACCT/FIN/MGMT 208, MATH 139, and MATH 140. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required.

331-3 Investments. Survey of the problems and procedures of investment management; types of investment risks; investment problems of the individual as well as the corporation.

Prerequisite: FIN 330 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required.

341-3 Financial Markets. Operations of capital markets. Sources and uses of funds of financial institutions. Prerequisite: FIN 330 with a grade of C or better. Restricted to business major or minor, junior standing or consent of department.

350-3 Small Business Financing. Financing problems involved in raising venture capital, debt type funds, expansion funds, and government sponsored funding. Budgeting, working capital management, and fixed asset planning are covered. Prerequisites: ACCT 220, ACCT 230 and ECON 240. Restrictions: College of Business majors, junior standing or higher; or departmental approval required.

361-3 Management of Business Finance. The principal problems of managing the financial operations of an enterprise. Emphasis upon analysis and solutions of problems pertaining to policy decisions. Prerequisite: FIN 330 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required.

380-3 Business Law II. Legal problems arising from situations involving sales, commercial paper, secured transactions, suretyship, and bankruptcy. Restrictions: College of Business majors, junior standing or higher; or departmental approval required.

432-3 Options and Futures Markets. Study of modern concepts and issues in financial options and futures markets. Emphasis on risk management in financial institutions, and applications in corporate finance and funds management. Prerequisite: FIN 331 with a grade of C or better and FIN 361 or concurrent enrollment. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required.

433-3 Portfolio Theory and Management. Examination of modern concepts relating to management of security portfolios. Topics include security analysis, Markowitz Portfolio Theory, efficient market hypothesis, portfolio performance measurement, risk, and portfolio construction. Prerequisite: FIN 331 with a grade of C or better, and FIN 361 or concurrent enrollment. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required.

434-3 Risk Management. This course includes a survey and application of various risk management techniques with an emphasis on commodity risk management. Topics include: pricing theories of futures and options, examination of firm risk, and the use of a trading room to simulate risk management techniques. Prerequisite: FIN 432. Restrictions: College of Business majors, junior standing or higher; or departmental approval required.

449-3 Management of Financial Institutions. Principal policies and problems which confront top management. Emphasis on liquidity, loans, investments, deposits, capital funds, financial statements, organization structure, operations, personnel, cost analysis, and public relations. Not for graduate credit. Prerequisite: FIN 330 and FIN 341 with a grade of C or better in both courses. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required.

462-3 Working Capital Management. Liquidity analysis and

management with focus on managing cash, marketable securities, accounts receivable, inventory, banking relationships and short-term financing. Students may choose to be associated with Corporate Treasury Management Program and may be eligible to pursue CTP certificate. Prerequisite: FIN 361 or concurrent enrollment. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required.

463-3 Forecasting and Capital Budgeting. Long-term forecasting techniques used in business; alternative approaches to capital structure decisions, cost of capital measurement; and performance measurement for investment decisions including mergers and leasing; explicit consideration of certainty, risk, and uncertainty in investment analysis; theory and applications in private and public sectors. Prerequisite: FIN 361 or concurrent enrollment. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required.

464-3 International Financial Management. Examine decision-making in International Finance by studying issues encountered when investments and business operations cross national boundaries. Topics include foreign exchange markets, parity conditions, exchange rate exposure and hedging, global financing, multinational capital budgeting, working capital management and international portfolio diversification. Not available for students with credit for BA 582. Prerequisite: FIN 361 or concurrent enrollment. Restrictions: College of Business majors, junior standing or higher; or departmental approval required.

469-3 Financial Analysis and Security Valuation. Study of the corporation's financial problems and their causes and solutions. Emphasis given to the impact of these financial problems on how the market values securities. Topics include liquidity and leverage analysis, analysis of profitability, and other financial analysis tools. Not available for students with credit for BA 536. Prerequisite: FIN 361. Restrictions: College of Business majors, junior standing or higher; or departmental approval required.

480-3 Problems in Labor Law. Social, economic, and legal evaluations of recent labor problems, court decisions, and legislation. Concern is on long-run legislative impact on manpower planning, dispute settlement, and utilization of employment resources. Restrictions: College of Business majors, junior standing or higher; or departmental approval required.

491-1 to 6 Readings in Finance. Readings in classical and current writing on selected topics in various areas in the field of finance not available through regularly scheduled courses. Not for graduate credit. Consent of department chair required. Mandatory Pass/Fail. Restrictions: College of Business majors, junior standing or higher, and an outstanding record in Finance. Special approval needed from the department.

495-1 to 15 Internship in Finance. Designed to provide an opportunity to relate certain types of work experience to the student's academic program and objectives. Approved internship assignments with cooperating companies in the fields of finance are coordinated by the faculty member. Not for graduate credit. Mandatory Pass/Fail. Restrictions: College of Business majors, junior standing or higher, and an outstanding record in Finance. Special approval needed from the department.

Finance Faculty

- Beardsley, Xiaoxin Wang**, Associate Professor, Ph.D., Pennsylvania State University, 2003.
- Davidson, Wallace N., III**, Professor, *Emeritus*, Ph.D., Ohio State University, 1982.
- Deng, Saiying**, Assistant Professor, Ph.D., Temple University, 2005.
- Elsaid, Hussein H.**, Professor, *Emeritus*, Ph.D., University of Illinois, 1968.
- Greene, Jason T.**, Professor, Ph.D., Indiana University, 1996.
- Liang, Claire**, Assistant Professor, Ph.D., University of Alberta, 2014.
- Mathur, Iqbal**, Professor, *Emeritus*, Ph.D., University of Cincinnati, 1974.
- McNutt, Jamie J.**, Associate Professor, Ph.D., Southern Illinois University Carbondale, 2005.
- Peterson, Mark A.**, Professor and *Chair*, Ph.D., Pennsylvania State University, 1996.
- Waters, Gola E.**, Professor, *Emeritus*, J.D., University of Iowa, 1957, Ph.D., Southern Illinois University, 1970.
- Zhao, Wanli**, Associate Professor, Ph.D., Temple University, 2007.

Financial Management

(SEE AGRIBUSINESS ECONOMICS)

Fire Service Management (Major, Courses)

The Bachelor of Science in Fire Service Management currently is offered only at off-campus locations and provides those with a fire science-related technical background with a two-year, upper division program of study that enhances the successful graduate's pursuit of a career in the fire service industry. The program is designed to provide practical course work in areas of management and supervision for fire service professionals. Admission to the program requires prior completion of a fire service related degree or prior formal training equivalent to a fire service related degree or prior fire service-related licensure or certification, or prior employment in a fire service-related field.

The Capstone Option is available for eligible students who meet the Capstone criteria outlined in Chapter 3. Those seeking the Capstone Option must meet all eligibility criteria, including the fire service-related degree with a 2.0 GPA or better, no later than the end of their first semester in the bachelor's degree program.

The Bachelor of Science in Fire Service Management is an ideal program of study for fire service professionals who have a prior, fire service-related degree or its equivalent or who have extensive work experience in the fire service industry. Successful graduates are prepared for career enhancing opportunities that include fire service related management and supervisory positions, the insurance industry, the fire equipment manufacturing industry and other related fields.

The Fire Service Management program has signed articulation agreements with numerous colleges. Check with the Fire Service Management Program for a current list. These agreements take advantage of the Capstone Option discussed in Chapter 3.

For additional information about this major, contact the Fire Service Management office at (618) 453-7277 or visit our webpage at www.asa.siu.edu/academics/off-campus-programs/programs/.

Bachelor of Science Degree in Fire Service Management, College of Applied Sciences and Arts

- University Core Curriculum Requirements* 30-41
- (Capstone Core Curriculum Requirements 30)
- Requirements for Major in Fire Service Management* 48
- Core Requirements: Fire Service Management 332, 360, 387, 388, 398, 423, and 425 21
- Fifteen hours from Fire Service Management 383, 390, 305, 421, and Technical Resource Management 316 15
- Twelve hours selected from Fire Service Management 301, 319, 350, 401 and 450 12
- Approved Career Electives* (Formal course work or its equivalent that is Fire Service-related and technical, managerial or supervisory in nature) 31-42
- Total* 120

Fire Service Management Suggested Curricular Guide

THIRD YEAR	FALL	SPRING
FSM 332, 383	3	3
FSM 360, 387	3	3
TRM 316, FSM 350	3	3
FSM 301, 388	3	3
<i>Total</i>	12	12

FOURTH YEAR	FALL	SPRING
FSM 390, 423	3	3
FSM 398, 421	3	3
FSM 305, 425	3	3
FSM 319 or 401, 450	3	3
<i>Total</i>	12	12

Courses (FSM)

258-1 to 30 Fire Service Work Experience. Credit will be granted via school evaluation of prior fire service management related job skills, management-worker relations and supervisory experience. Unless otherwise determined by the school director, this credit may be applied only to the approved career electives requirement of the fire service management degree. Restricted to Fire Service Management major.

259-1 to 60 Fire Service Occupational Education. Credit granted via school evaluation of past fire service management-related occupational education experience. Unless otherwise determined by the school director, this credit may be applied only to the approved career electives requirement of the fire service management degree. Restricted to Fire Service Management major.

301-3 Introduction to Fire Service Management Research. An introduction to library resources, electronic media resources and formal academic writing styles common to fire service management research. Introduction to basic theories,

concepts and practices pertinent to fire service management. May be independent study. Restricted to Fire Service Management major.

305-3 Developing a Personal Philosophy of Leadership.

This course will introduce and provide the participant with a deeper understanding of self as it relates to leadership philosophies, knowledge, skills, and abilities. Each participant will study and explore their core values, ethics, decision making, and begin to develop a personal philosophy of leadership. Through course presentations, dialogue, and learning activities, the participant will identify leadership roles in the community to include self, family, professional, and social. In addition, they will be able to define the difference between leadership and management. The participant will complete self assessments to gain insights into their personal leadership style and characteristics and participate in video and written case studies to further explore their understanding of leadership.

319-1 to 15 Occupational Internship. Each student will be assigned to a University approved organization engaged in activities related to the student's academic program and career objectives. The student will perform duties and services as assigned by the preceptor and coordinator. Reports and assignments are required to be completed by the student. Hours and credits to be individually arranged. Mandatory Pass/Fail.

332-3 Labor Relations for Fire and Emergency Services.

The student will gain a general understanding of the economic situation for fire and emergency services, of which labor management problems represent a subset. Students will develop a perspective of the evolution of labor relations in the United States and fire and emergency services economy and how the interaction of labor and management differs throughout the world. The collective bargaining section introduces the student to the techniques of collective bargaining in fire and emergency services.

350-3 Readings in Fire Service Management. The use of written and electronic media resources relevant to fire service management and the development of a fire service management research bibliography. The use of bibliographic resources to produce written comparative or persuasive research reports. May be independent study. Prerequisite: FSM 301. Restricted to Fire Service Management major.

360-3 Personnel Systems for Fire and Emergency Services.

This course examines relationships and issues in personnel administration and human resource development within the context of fire-related organizations, including personnel management, organizational development, productivity, recruitment and selection, performance management systems, discipline, and collective bargaining.

365-3 Grant and Proposal Writing for the Fire Service.

Comprehensive presentation of fire service grants from governmental, public and private funding sources. Course covers the funding application, approval process, and grant administration. Students will prepare a grant proposal with objective statement, study methodology, work programs/schedules and budget.

383-3 Data Interpretation. A course designed for students beginning their major program of study to examine data use in their respective professions. Emphasis will be placed upon an understanding of the basic principles and techniques involved

with analysis, synthesis and utilization of data.

387-3 Fiscal Aspects of Fire Service. An introduction to the fiscal problems encountered in the administration of fire service facilities.

388-3 Political and Legal Foundations of Fire and Emergency Services. This course examines the legal, political, and social aspects of the government's role in public safety, including the American legal system, fire department operations, employment and personnel issues, fire official's roles and legislative and political influences.

390-3 Governmental Aspects of the Fire Service. The role of subnational governments in the management of the fire services. The demographic and political environment in which the fire services operate. The duties, powers and obligations of governmental agencies relative to the operation of a fire department. Restricted to Fire Service Management major.

398-3 Risk Reduction for Fire and Emergency Services.

This course, designed for the mid level fire service manager, introduces the concept of risk management and examines its applicability in the fire service. Particular emphasis is placed on developing and implementing a fire service risk management program in career, paid on call and volunteer departments.

401-3 Applications of Fire Research in Fire and Emergency Services.

This course examines the rationale for conducting fire research, various fire protection research activities, and research applications, including the test standards and codes, structural fire safety, automatic detection and suppression, life safety, and firefighter health and safety. May be independent study. Not for graduate credit. Prerequisite: FSM 350.

402-3 Current Issues in Fire Service Management.

A review of the current problems affecting the fire service with particular emphasis on resource allocation, planning, and constraints. Not for graduate credit.

405-3 Leading Others. This course is the second in the continuing series of the Leadership and Management program. It is designed to provide the participant with the knowledge, skills, and abilities to effectively lead others.

421-3 Professional Development. Introduces students to the various elements involved in obtaining a position in their chosen fields. Topics included are: personal inventories, placement services, employment agencies, interviewing techniques, resumes, letters of application, references and employment tests. Each student will develop a portfolio, including personal and professional information related to career goals. Not for graduate credit.

423-3 Community Risk Reduction. This course examines the factors that shape fire risk and the tools for fire prevention, including risk reduction education, codes and standards, inspections and plans review, fire investigation, research, master planning, various types of influences and strategies. Not for graduate credit.

425-3 Fire and Emergency Services Governance and Administration.

The role of upper level fire and emergency services managers with a focus on the significant areas of fire and emergency department management. Emphasis is placed on understanding of major issues facing fire and emergency services managers and the management of theories, concepts, and practices that apply to these issues. Not for graduate credit.

450-3 Analytical Approaches to Public Fire Protection.

This course examines tools and techniques of rational decision making in fire departments, including databases, statistics, probability, decision analysis, utility modeling, resource allocation, cost benefit analysis, and linear programming. May be independent study. Not for graduate credit. Prerequisite: FSM 401.

Food and Nutrition

(SEE HOSPITALITY AND TOURISM ADMINISTRATION OR HUMAN NUTRITION AND DIETETICS)

Food Economics

(SEE AGRIBUSINESS ECONOMICS)

Food Policy

(SEE AGRIBUSINESS ECONOMICS)

Foreign Language and International Trade

(See Languages, Cultures, and International Trade)

Foreign Languages and Literatures

(See Languages, Cultures, and International Trade)

Forensic Science (Minor)

The Forensic Science minor is an interdisciplinary program of study. It is designed to provide undergraduates with a basic understanding of the ways forensic scientists evaluate physical evidence in criminal investigations, and explore the legal and ethical ramifications of this work. Students pursuing focused majors in preparation for employment or graduate studies in Forensics-related fields can use the minor to inform and broaden their studies on related issues. The program is also intended to develop critical knowledge and skills for evaluating forensic evidence in law, literature, and public media portrayals of forensic scientists.

It is strongly recommended that the SIUC Core Curriculum requirements be satisfied as follows: Social Sciences: ANTH 104; Human Health: PHSL 201 (or 310); Science Group I: CHEM 106; Science Group II: ZOOL 115 (or 118); Integrative Studies Multicultural: CCJ 203 or ANTH 202.

Forensic Science Minor

Required courses for the Forensic Science Minor amount to 15 hours, including 9 hours of required courses and 6 hours of electives (with no more than 4 of the minimum 6 hours of electives from a single discipline/department).

Required Core Courses: 9 hours: ANTH 231, CCJ 201, CHEM 173.

Electives: (note, some have prerequisites) 6 hours: AH 313; ANTH 240A/E, 440B, 441D, 455A, 455H, 465 (Internship in Forensics - must be arranged individually); BIOL 305; CCJ 290, 310, 330, 408; CHEM 439; PHIL 104, 340; PHSL 301; PLB 300; POLS 334; PSYC 305, 431, 440; SOC 372; ZOOL 394.

Forest Recreation (SEE FORESTRY)

Forestry

(Department, Major, Courses, Faculty)

Five specializations are offered within the major in forestry: Forest Resources Management, Forest Hydrology, Urban Forest Management, Forest Recreation and Park Management, and Wildlife Habitat Management and Conservation. University Core Curriculum requirements and a core of professional courses are similar for each specializations. Students majoring in the Department of Forestry may not take courses specifically required in the various specializations for pass/fail credit. The specializations are accredited by the Society of American Foresters, 5400 Grosvenor Lane, Bethesda, MD, 20814, (301) 897-8720.

Available to the Department of Forestry for teaching and research in addition to resources present on campus are the following: the Crab Orchard National Wildlife refuge; the Shawnee National Forest; a number of state parks and state forests; conservation areas and federal reservoirs. Collectively, these comprise more than a million acres of forestland, all in the vicinity of the University.

The curricula of the Department of Forestry prepare graduates for employment with local, state and federal natural resource agencies, as well as private industry. In addition, many graduates continue their education in advanced masters and doctoral programs. Federal agencies employing our graduates include the Forest Service, Natural Resources Conservation Service, Fish and Wildlife Service, National Park Service, Bureau of Reclamation, Bureau of Land Management, Environmental Protection Agency, Tennessee Valley Authority, and the Army Corps of Engineers. There are also employment opportunities in state government with agencies such as fish and game commissions, departments of natural resources and conservation, and forest services. At the local level, there are opportunities with urban forest and park systems. Private agencies have included Ducks Unlimited, the Nature Conservancy, the National Audubon Society and the American Forestry Association. Forestry graduates often are employed by private forestry consulting firms and by private industries such as Weyerhaeuser Co., International Paper Co., Georgia Pacific Corporation, and New Page Corporation.

Bachelor of Science Degree in Forestry, College of Agricultural Sciences

FORESTRY MAJOR — FOREST HYDROLOGY SPECIALIZATION

The program in Forest Hydrology helps students develop knowledge and skills in integrated natural resource management in a watershed context with an emphasis on freshwater and forest resources. The goal of the Forest Hydrology specialization is to prepare individuals for water-related careers in federal and state government agencies, municipal/county watershed management, and environmental/engineering consulting firms. This specialization also prepares students for graduate study in natural resource management and hydrology. The specialization includes areas of study recommended and accredited by the Society of American Foresters and includes the course work

necessary to qualify as a hydrologist in a federal agency. Students in the specialization are required to participate in either the 4 week forest resource management or forest recreation and park management summer field camp to gain practical field experience. Summer camp fees for off-campus living expenses and transportation are not to exceed \$550 per student for the forest resource management camp or \$550 for the outdoor recreation resources management camp. Other courses in the program may require additional fees.

University Core Curriculum Requirements 41
Requirements for Major in Forestry with Forest Hydrology Specialization 79-82
Forestry Core: 100, 201, 202, 285, 310, 314, 325, 331, 351, 381, 411, 430..... 34
 Chemistry 140A, Science Requirement: (one of the following) Zoology 118, Plant Biology 200, or Biology 200B 8
 Agribusiness Economics 204 or Economics 240 (3)¹
 English 101, 102, (290 or 291), Communication Studies 101, Mathematics 108 or 109 or 141 (12)¹+3 or 4 =15 or 16
Summer Field Studies: Forestry 422C or Forestry 310C, 314C, 351C, 360C (summer camp) 6
 Forestry 402, 421 429, 452, (416 or 420) 13 or 14
 Geographic Information System (G.I.S.) Course 3 or 4
 Crop, Soil and Environmental Management 240 4
Forestry Electives (Course Selection): Agribusiness Economics 318, Forestry 220, 315, 350, 403, 405, 409, 415², 416², 420², 428, 431, 451, 452L, 454, 460, 470, 480, Geography and Environmental Resources 330, 425, 431, 433, 434, 471, Geology 327I², 470, 471, 474, Horticulture 441, 442, 443, 445, 446, 447, 448, 454, 468, Mathematics**150, 282, Physics** 203A, 203B, Plant Biology 445, Zoology 410, 411, 414, 415, 458, 466, 468.....14-17
Total 120-123

^{**} In order to qualify for employment as a federal hydrologist students must complete 6 credit hours of calculus and physics.
¹Hours included in total for University Core Curriculum requirements.
²Course may not be used to satisfy more than one requirement.
³Minimum hours required to bring total to 120.

Forestry Forest Hydrology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
FOR 100, CHEM 140A.....	1	4
FOR 202, CMST 101	3	3
FOR elective/UCOL 101 (FR or TR w<26 cr hr),		
MATH 108/109/141	3	3-4
ENGL 101, 102	3	3
BIOL 200B/PLB 200/ZOOL 118.....	4	-
<i>Total</i>	14	13-14
SECOND YEAR	FALL	SPRING
FOR 201, Fine Arts.....	3	3
FOR 285, 331.....	3	3
CSEM 240, Humanities.....	4	3
ECON 240/ABE 204.....	-	3
Human Health, Forestry Elective.....	2	2
ENGL 290 or 291	3	-
<i>Total</i>	15	14

THIRD YEAR	FALL	SPRING
FOR 325, 310	3	4
FOR 351, 314	4	3
Social Science, FOR 452	3	2
Forestry Elective, Humanities	2	3
Forestry Elective, Multicultural	3	3
<i>Total</i>	15	15

SUMMER CAMP	SUMMER
FOR 310C	1
FOR 314C	2
FOR 351C	2
FOR 360C	1
<i>Total</i>	6

OR

SUMMER CAMP	SUMMER
FOR 422C.....	6
<i>Total</i>	6

FOURTH YEAR	FALL	SPRING
FOR 411, 381	3	1
GIS Course, 402	3	3
FOR 429, 421	2	3
FOR 430, Forestry Elective	3	4
Forestry Elective, FOR 416/420	3	3-4
<i>Total</i>	14	14-15

Bachelor of Science Degree in Forestry, College of Agricultural Sciences

FORESTRY MAJOR — FOREST RESOURCES MANAGEMENT SPECIALIZATION

The program in Forest Resources Management includes instruction leading to careers in forest management and production, forest ecosystem management, and the forest products industries. The goal of the Forest Resources Management specialization is to develop individuals with sufficient understanding of the physical, biological and economic considerations required to make sound management decisions for forest sustainability. The specialization includes areas of study recommended and accredited by the Society of American Foresters. Emphasis is upon integrated resource management of natural and renewable resources, coordinating forest utilization methods and conservation practices, and sustaining our wild lands heritage. A summer camp during intersession is required after the junior year to give the student practical field experience. Field study costs per student for off-campus living expenses and transportation are not to exceed \$550 per student and must be borne by the student. Other costs for equipment and supplies, which are required for field study and certain other courses, are specified in course descriptions.

University Core Curriculum Requirements 41
Requirements for Forestry Major with Forest Resources

Management Specialization 79-80

Forestry Core: 100, 201, 202, 285, 310, 314, 325, 331, 351, 381, 411, 430..... 34

Chemistry 140A, Science Requirement:(one of the following)

Zoology 118, Biology 200B, Plant Biology 200 (8)¹

Agribusiness Economics 204 or Economics 240 (3)¹

English 101, 102, (290 or 291), Communication Studies 101, Mathematics 108 or 110 (12)¹ + 3 = 16

Summer Field Studies: FOR 310C, 314C, 351C, 360C .. 6

Forestry 315, 416 7

Geographic Information System (G.I.S.) Course..... 3-4

Crop, Soil and Environmental Management 240 4

Forestry Electives (Course Selection): Agribusiness Economics 318, Forestry 220, 350, 402, 403, 405, 409, 415², 418, 420, 428, 429, 431, 451, 452, 452L, 460, 470, 480, Biology 307, Geography and Environmental Resources 401, 471, Horticulture 420, Mathematics 282, Zoology 118, 410, 468, 469 18-21

Total 120-122

¹Hours included in total for University Core Curriculum requirements.
²Course may not be used for more than one requirement.
³Minimum hours required to bring total hours to 120.

Forest Resources Management Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
FOR 100, Forestry Elective	1	2
BIOL 200B/PLB 200/ZOOL 188, Humanities.....	4	3
ENGL 101, 102	3	3
FOR 202, CMST 101	3	3
FOR Elective/UCOL 101 FR or TR w<26 cr hrs, MATH 108 or 110	3	3
Total	14	14

SECOND YEAR	FALL	SPRING
FOR 201, 331.....	3	3
FOR 285, CSEM 240.....	3	4
CHEM 140A, Forestry Elective.....	4	2
ENGL 290/291, Social Science	3	3
ECON 240 or ABE 204	-	3
Forestry Elective	2	-
Total	15	15

THIRD YEAR	FALL	SPRING
FOR 325, 310.....	3	4
FOR 351, 314.....	4	3
Human Health, FOR 315	2	3
Forestry Elective, Fine Arts	2	3
Multicultural Diversity.....	3	-
Total	14	13

SUMMER CAMP	SUMMER
FOR 310C	1
FOR 314C	2
FOR 351C.....	2

FOR 360C	1
Total	6

FOURTH YEAR	FALL	SPRING
FOR 411, 381	3	1
GIS Course, FOR 416.....	3	4
FOR 430, Humanities	3	3
Forestry Electives	3	3
Forestry Elective.....	3	3
Total	15	14

FORESTRY MAJOR — FOREST RECREATION AND PARK MANAGEMENT SPECIALIZATION

The program in Forest Recreation and Park Management provides interdisciplinary training for management of the nation’s outdoor recreation heritage. The National Recreation and Park Association and the Society of American Foresters are among those organizations recommending the courses offered. The goal of the Forest Recreation and Park Management option is to prepare students for entry into professional careers in planning, managing, and administering public lands for outdoor recreation operated by a variety of agencies in diverse geographic and natural settings. The Forest Recreation and Park Management student travels through selected sections of the United States on a park and recreation field studies session to outdoor recreation and protected area facilities. The summer camp requires the student pay transportation and living expenses not to exceed \$550. Other courses in this program may also require additional fees.

University Core Curriculum Requirements 41

Requirements for Major in Forestry with Forest Recreation and Park Management Specialization 79-80

Forestry Core: 100, 201, 202, 285, 310, 314, 325, 331, 351, 381, 411, 430 34

Chemistry 140A, Science Requirement: (one of the following)

Zoology 118, Biology 200B, Plant Biology 200 (8)¹

Agribusiness Economics 204 or Economics 240 (3)¹

English 101, 102, (290 or 291), Communication Studies 101, Mathematics 108 or 110 (12)¹ + 3

Crop, Soil and Environmental Management 240, Horticulture 328A,B 8

Summer Field Studies: Forestry 422C (summer camp) .. 6

Forestry 220, 420, 421, 423 11

Geographic Information System (G.I.S.) course..... 3-4

Forestry Electives: Agribusiness Economics 318, Anthropology 300C, 402, 430A, 450B, Biology 307, Forestry 308, 315, 350, 401, 402, 403, 405, 409, 415, 416, 428, 429, 430, 431, 451, 452, 452L, 454, 470, 480, Geography and Environmental Resources 401, 471, Mathematics 282, Management 304, 350, Political Science 325, Psychology 307, Recreation 300, 303, 375, Sociology 386, Communication Studies 412, Zoology 410, 411, 468, 469 12-15

Total 120-121

¹Hours included in total for University Core Curriculum requirements.
²Course may not be used to satisfy more than one requirement.
³Minimum hours required to bring total to 120.

Forestry Forest Recreation and Park Management Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
FOR 100, Social Science	1	3
FOR 202, FOR 220	3	2
BIOL 200B/PLB 200/ZOOL 118, CMST 101.....	4	3
ENGL 101,102.....	3	3
FOR Elective/UCOL 101 FR or TR w<26 cr hr, MATH 108/110	3	3
<i>Total</i>	14	14

SECOND YEAR	FALL	SPRING
FOR 201, 331	3	3
CHEM 140A, CSEM 240	4	4
ECON 240/ABE 204	-	3
HORT 328A/B	4	-
FOR 285, ENGL 290/291.....	3	3
<i>Total</i>	14	13

THIRD YEAR	FALL	SPRING
FOR 351, FOR 310	4	4
FOR 325, 314	3	3
Human Health, Fine Arts.....	2	3
Humanities.....	3	3
Forestry Electives	3	3
<i>Total</i>	15	16

SUMMER CAMP	SUMMER
FOR 422C	6
<i>Total</i>	6

FOURTH YEAR	FALL	SPRING
FOR 411, 381.....	3	1
FOR 420, 421.....	3	3
GIS Course, FOR 423.....	3	3
FOR 430, Forestry Elective	3	3
Multicultural, Forestry Elective	3	3
<i>Total</i>	15	13

Bachelor of Science Degree in Forestry, College of Agricultural Sciences

FORESTRY MAJOR — URBAN FOREST MANAGEMENT SPECIALIZATION

The program in Urban Forest Management provides students with interdisciplinary training in the management of forest resources in urban areas and other settings where aesthetics and high human impacts are of primary concern. The specialization includes areas of study recommended and accredited by the Society of American Foresters with additional course work providing a background in arboriculture, landscape management and design, small business management, and municipal govern-

ment. Students are especially prepared for entry into careers in the green industry and municipal forest management and administration. A four-week summer camp, in conjunction with the Forest Resources Management specialization, is required following the junior year. Field study costs per student for off-campus living expenses and transportation are not to exceed \$550 per student and must be borne by the student. Other costs for equipment and supplies, which are required for field study and certain other courses, are specified in course descriptions.

University Core Curriculum Requirements 41
Requirements for Major in Forestry with Urban Forest Management Specialization 79-81

Forestry Core: 100, 201, 202, 285, 310, 314, 325, 331, 351, 381, 411, 430 34
 Chemistry 140A, Science Requirement: (one of the following)
 Zoology 118, Biology 200B, Plant Biology 200 (8)¹
 Agribusiness Economics 204 or Economics 240 (3)¹
 English 101, 102, Communication Studies 101, Mathematics 108 or 110 (12)¹

English 290 or 2913
 Geographic Information System, G.I.S. course3-4

Summer Field Studies: Forestry 310C, 314C, 351C, 360C or (resource camp) or Forestry 422C (summer camp)6
 Forestry 416/421, 428 5-6
 Crop, Soil and Environmental Management 240, Horticulture 328A, 328B, 434 11

Forestry Electives: Agribusiness Economics 318, Forestry 220, 308², 315, 403, 414, 420, 423, 430, 451, 452, 452L, 480, Geography 401², Horticulture 322, 325, 327, 420, 422, 428, 429, 442, 443, 447, 468, 475, Management 350, Mathematics 282, Political Science 213 14-17

Total 120-122

¹Hours included in total for University Core Curriculum requirements.

²Course may not be used to satisfy more than one requirement.

³Minimum hours required to bring total to 120.

Forestry Urban Forest Management Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
FOR 100, Forestry Elective.....	1	2
BIOL 200B/PLB 200/ZOOL 118, Social Science.	4	3
ENGL 101, 102	3	3
FOR Elective/UCOL 101 FR or TR w<26 cr hr, MATH 108/110	3	3
FOR 202, Humanities	3	3
<i>Total</i>	14	14

SECOND YEAR	FALL	SPRING
FOR 201, CSEM 240.....	3	4
FOR 285, FOR 331	3	3
CHEM 140A, ENGL 290/291.....	4	3
ECON 240/ABE 204	-	3
HORT 328A/B, Human Health	4	2
<i>Total</i>	14	15

THIRD YEAR	FALL	SPRING
FOR 325, 310.....	3	4
FOR 428, 314	2	3
FOR 351, Forestry Elective	4	3
Fine Arts, CMST 101.....	3	3
Multicultural Diversity.....	3	-
<i>Total</i>	15	13

SUMMER CAMP	SUMMER
FOR 310C	1
FOR 314C	2
FOR 351C	2
FOR 360C	1
<i>Total</i>	6

OR

SUMMER CAMP	SUMMER
FOR 422C	6
<i>Total</i>	6

FOURTH YEAR	FALL	SPRING
FOR 411, 381	3	1
GIS Course, FOR 416/421	3	3-4
FOR 430, Forestry Elective	3	3
Humanities, HORT 434	3	3
Forestry Electives	3	4
<i>Total</i>	15	14-15

Bachelor of Science Degree in Forestry, College of Agricultural Sciences

FORESTRY MAJOR — WILDLIFE HABITAT MANAGEMENT AND CONSERVATION SPECIALIZATION

The program in Wildlife Habitat Management and Conservation helps students develop knowledge and skills in integrated natural resource management with an emphasis on habitat management for wildlife. The goal of this specialization is to train individuals for wildlife and forestry-related careers in federal and state governmental agencies, non-governmental conservation organizations, and natural resource consulting firms. Students will also be well-prepared for entry into the profession of conservation police officer. In addition, this specialization readies students for graduate study in forestry and wildlife management. This specialization includes areas of study recommended and accredited by the Society of American Foresters and includes the course work necessary to qualify as a Certified Wildlife Technician or Certified Associate Wildlife Biologist with the Wildlife Society. Students in the specialization are required to participate in either the forest resource management or forest recreation and park management summer field camp to gain practical field experience. Summer camp fees for off-campus living expenses and transportation are not to exceed \$550 per student and must be borne by the student. Other costs for equipment and supplies, which are required for field study and certain other courses, are specified in course descriptions.

University Core Curriculum Requirements 41

Requirements for Forestry Major with Wildlife Habitat Management and Conservation Specialization (WHMS) 79-80

Forestry Core: 100, 201, 202, 285, 310, 314, 325, 331, 351, 381, 411, 430

34

Chemistry 140A; Biology 200A, 200B.....(8)¹+4=12

Agribusiness Economics 204 or Economics 240

(3)¹

Mathematics 108, English 290 or 291

(3)¹+3=6

Summer Field Studies: Forestry 310C, 314C, 351C, 360C or 422C

6

Forestry 405, 416, 451

10

Forestry Electives: Biology 307, Forestry 220, 315, 402, 403, 409, 415, 418, 420, 428, 429, 431, 452, 452L, 470, 480, Geology 471, Plant Biology 300, Zoology 410

0-5²

G.I.S. Requirement: Forestry 308

3

Crop, Soil and Environmental Management 240

4

Zoology 220, (461 or 467)**

8-11

Total

120-121

¹Hours included in total for University Core Curriculum requirements.

²Minimum hours required to bring total to 120.

** To qualify for certification as an Associate Wildlife Biologist ZOO 461 or 467 must be taken.

Wildlife Habitat Management and Conservation Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
FOR 100, ABE 318/MATH 282.....	1	3
FOR Elective/UCOL 101 FR or TR w<26 cr hr,		
Social Science	3	3
ENGL 101, 102	3	3
BIOL 200A, 200B.....	4	4
MATH 108, Human Health.....	3	2
<i>Total</i>	14	15

SECOND YEAR	FALL	SPRING
FOR 201, CCJ 203 (Multicult.).....	3	3
FOR 202, CSEM 240.....	3	4
FOR 285.....	3	-
ENGL 290/291, CMST 101	3	3
CHEM 140A, ZOOL 220	4	5
<i>Total</i>	16	15

THIRD YEAR	FALL	SPRING
FOR 325, 310.....	3	4
FOR 351, 314	4	3
FOR 331.....	-	3
ECON 240/ABE 204.....	3	-
ZOOL 469, Humanities.....	3	3
<i>Total</i>	13	13

SUMMER CAMP (Resource)	SUMMER
FOR 310C	1
FOR 314C	2
FOR 351C	2
FOR 360C	1
<i>Total</i>	6

OR

SUMMER CAMP (Recreation)	SUMMER
FOR 422C	6
<i>Total</i>	6

FOURTH YEAR	FALL	SPRING
FOR 405, 381	3	1
FOR 411, Humanities	3	3
GIS Course, FOR 451.....	3	3
FOR 430, 416	3	4
Fine Arts, FOR Elective/ZOOL 461/467	3	2-3
<i>Total</i>	15	13-14

Courses (FOR)

100-1 Introduction to Forestry. Students experience varied subject areas of Forestry including forest recreation, ecology, silviculture, wildlife habitat restoration, hydrology, wildland fire, forest products, natural ecosystems and conservation. Special emphasis is given to the diversity of careers in Forestry. Required field trip transportation fee not to exceed \$50 per course registration.

125-3 Forestry and Natural Resource Conservation. Introduction to the field of forestry and natural resource conservation. Special emphasis will be placed on the key fields of study including ecosystem science, wildlife habitat relationships, forest recreation, and urban forestry. The following course related performance goals would be expected from you at the conclusion of the course: 1. Describe the forest regions of the world, 2. Describe the key concepts wildlife habitat relationships, 3. Describe the primary types of ecosystem services in natural areas, 4. Describe the factors that affect participation in forest recreation, 5. Understand commonly used natural resource data, 6. Describe commonly used forest practices, 7. Describe the key concepts urban forests, and 8. Describe common careers in the forest management profession.

201-3 Ecology of North American Forests. This course introduces concepts of biology, physiology, ecology, and silvics important to the growth, development, and sustainability of trees and forest ecosystems. Emphasis includes understanding how trees are influenced by: the physical environment (atmosphere, light, water, topography, fire, soils, etc.); the biological, physiological, and genetic potential of tree species; and interrelationships with other organisms including wildlife, fungi, and humans. Requires field trip transportation fee not to exceed \$20 per course registration.

202-3 Tree Identification Laboratory. Field and Laboratory identification of native and exotic trees, shrubs and woody vines using leaf, twig, bark and fruit characteristics. Requires field trip transportation fee not to exceed \$50 per course registration.

220-2 Introduction to Forest Recreation. Trends in outdoor recreational use of wild lands and natural areas with emphasis on state and federal parks and forests. Introductory concepts in recreation resources management, visitor impact assessment and environmental interpretation.

230-3 Introduction to Water Resources. Introduction to

the distribution, management, and quality of water resources. Emphasis on the hydrologic cycle, the watershed as a unit of management, water supply and treatment, and the functions of aquatic ecosystems including rivers, streams, aquifers, lakes, ponds, and wetlands.

285-3 Social Influences on Forestry. Study of the human dimensions of natural resource management. Exploration of the ethical and historical negotiations of the human-nature relationship. Examination of the role of public opinion in conservation and sustainable resource decision making. Exposure to environmental justice, political ecology, ecological economics, and the influences of media, science and technology.

308-3 Introduction to Mapping and Geographic Information Systems. Integrated use of mapping, aerial photographs, and field information to evaluate resources in the development of land management plans. Topics range from aerial photo interpretations, to GIS database management and vegetation mapping. Course will include classroom presentations, field trips and lab exercises. Requires field trip and supplemental expenditures not to exceed \$50 per course registration. Prerequisites: FOR 201 & 351 or consent of instructor.

310-4 Practices of Silviculture. Detailed study of classical concepts and recently developed techniques utilized in silviculture treatment of forests. Major emphasis to be placed upon establishment, thinning, timber stand improvement, and regeneration of forests. Prerequisite: FOR 331. Requires field trip and supplemental expenditures not to exceed \$40 per course registration.

310C-1 Silviculture Field Studies. Methods of determining volume and quality of forest products, forest resource inventory procedures, growth, and productivity studies. Co-requisites: FOR 314C, FOR 351C, and FOR 360C. Prerequisite: FOR 310, FOR 331 or consent of instructor. Requires field trip and supplemental expenditures not to exceed \$110 per course registration. Summer camp fees and costs are outlined in the Forestry major-Forest Resources Management Specialization.

311-3 Resources Photogrammetry. The science and art of obtaining reliable measurement by means of photographs, detection of disease, insects, and fire invasion by remote sensors; and delineation of resources boundaries through interpretation.

313-3 Harvesting Forest Crops. Emphasis is given to lumber sale layouts, sale contracts, and harvest engineering methods. Consideration is given to the environmental impacts of harvesting. Prerequisite: FOR 310 or consent of instructor. Requires field trip transportation fee not to exceed \$25 per course registration.

314-3 Forest Health. Detailed study of the factors that influence forest health, including abiotic stress, diseases, insects, and invasive plants. Special emphasis will be placed on the identifications of the signs and symptoms of the factors that affect forest health and the appropriate management techniques to mitigate these factors. Prerequisite: FOR 201, 331 or consent of instructor.

314C-2 Forest Protection Field Studies. The prevention and suppression of forest fires, the recognition and control of insect and disease organisms and other destructive agents in the forest. Co-requisites: FOR 310C, FOR 351C, and FOR 360C. Prerequisites: FOR 314, FOR 315, and FOR 331 or consent of instructor. Requires field trip and supplemental expenditures

not to exceed \$220 per course registration. Summer camp fees and costs are outlined in the Forestry major-Forest Resources Management Specialization.

315-3 Fire in Wildland Management. Fire as a phenomenon in wildland management. Topics covered are fire prevention, detection, suppression, behavior, effects, use, and economics. Major emphasis is on fire control and fire ecology. Prerequisite: FOR 331 or consent of instructor. Requires field trip transportation fees and supplemental expenditures not to exceed \$50 per course registration.

320C-1 Forest and Wildlands Recreation Field Studies. Recreation of forest and adjacent lands with emphasis on parks and national forests. Administration; interpretation; trends in use and development. Offered at summer camp only. Prerequisite: FOR 220. May require supplemental expenditures not to exceed \$35 per course registration. Summer camp transportation fees and cost are outlined in the Forestry Major description - Forest Resources Management Specialization.

325-3 Forest Resource Policy and Administration. Policy formation and implementation, including the roles of special interest groups and public values. Examination of federal natural resource policies, conservation leaders who influenced policy, and current applications of policy in management.

331-3 Forest Ecosystems. Forest Ecosystems covers topics including community concepts; competition; tolerance; disturbance; succession; carbon balance; diversity; and the ecological and social aspects of ecosystem management relating to the structure, energy flow, and dynamic interrelationships of the biotic and abiotic forest environment to understand and sustainably manage forest ecosystems and habitat over time. Prerequisite: FOR 201.

341-3 Forestry Practices. The fundamentals of integrated resource management of timberlands. Management systems, tree stand measurements. Planting and harvesting methods, multiple-use aspects of forest lands. Field trips. Emphasis on small forest ownerships. Not for graduation credit in forest resources management.

350-3 Wood as a Raw Material. Structure, identification, and properties of wood. Important species, significance of properties to end-use and significance of wood to the environment.

351-4 Forest Measurements. Introductory measurement, statistical and data processing concepts; volume, growth, and yield of forest products; methods of sampling forest resources. Prerequisite: MATH 108 or 110 or 141. Requires field trip transportation fees and supplemental expenditures not to exceed \$50 per course registration.

351C-2 Forest Resources Measurements Field Studies. Methods of determining volume and quality of forest products, forest resource inventory procedures, growth, and productivity studies. Co-requisites: FOR 310C, FOR 314C, and FOR 360C. Prerequisite: FOR 351 or consent of instructor. Requires field trip and supplemental expenditures not to exceed \$110 per course registration. Summer camp fees and costs are outlined in the Forestry major - Forest Resources Management Specialization.

360C-1 Forest Industries Field Studies. A study of primary and secondary forest product processing in the central hardwood region. Co-requisites: FOR 310C, FOR 314C, and FOR 351C. Requires field trip and supplemental expenditures not

to exceed \$110 per course registration. Summer camp fees and costs are outlined in the Forest major-Forest Resources Management Specialization.

381-1 Forestry Seminar. Presentation of topics pertinent to multiple-use management and utilization of forest resources. Restricted to senior standing.

391-1 to 4 Special Problems in Forest Resources. Independent research sufficiently important to require three hours per week of productive work for each hour of credit. Restricted to junior standing. Special approval needed from the chairperson.

401-3 Fundamentals of Environmental Education. (Same as AGRI 401 and REC 401) A survey course designed to help education majors develop an understanding of environmental education principles and teaching both inside and outside the classroom. Prerequisite: ten hours of biological science or ten hours of recreation and/or education, or consent of instructor. Requires field trip transportation fee not to exceed \$25 per course registration.

402-3 Wildland Hydrology. Fundamentals of hydrology as related to forest and wildland water resources will be emphasized. Considerations will include the hydrologic cycle with emphasis on soil and groundwater regimes, evapotranspiration, surface and subsurface runoff, and the quantity and timing of water yield. Offered spring semester odd years.

403-3 Agroforestry. This introductory, lecture-discussion course will examine the various agroforestry concepts, systems, technologies and practices. Focus will be on the potential use and benefits of agroforestry, which involves the deliberate combining of woody perennials with herbaceous/agronomic crops and/or animals, on the same land management unit, in some form of spatial arrangement and/or temporal sequence to produce desirable ecological and economical interactions among the different components. Prerequisite: coursework in forest ecology. Restricted to junior standing or permission of the instructor.

405-3 Forest Management for Wildlife. This course is designed to familiarize students with a scientific understanding of the theory and practice of forest management for wildlife. Students will gain knowledge of basic forestry management principles as they apply to wildlife; ecology and management of different types of forests for wildlife; and habitat requirements of forest birds, mammals, and herps and applicable forest management techniques. Restricted to Forestry, Zoology, Bio Science, Animal Science, or Environmental Science majors/minors; sophomore or higher, or with consent of instructor.

406-2 Landscape Ecology. (Same as FOR 506) (FOR 506-3, will have an additional lab requirement) Principles of landscape ecology in the context of forested systems. There is an emphasis on how spatial heterogeneity and human activities influence landscape patterns. Prerequisite: G.I.S. course or consent of instructor.

409-3 International Forest Resources Decision-Making. Examines management planning decision-making for multiple-use forests around the world. Reviews concepts useful for analyzing flow-resource problems, emphasizing systems approaches, introduces use of modern quantitative and qualitative methods to evaluate resource use alternatives. Case studies from around the world. Prerequisite: FOR 411.

411-3 Forest Resources Economics. Application of micro-

and macro-economic principles to forest timber and non-timber production; capital theory, benefit-cost analysis; and economics of conservation. Prerequisite or Co-requisite: Economics 240 or Agribusiness Economics 204.

412-2 Tree Improvement. Basic theories and techniques of obtaining genetically superior trees for forest regeneration. Restricted to senior standing.

413-2 Summer Ecology of Forest Wildlife. This course is designed to familiarize students with a scientific understanding of the ecology and management of forest wildlife species during the summer months. In this intensive, one-week summer course, students will engage in laboratory, lecture, and field modules intended to inform students about forest wildlife communities and common research and management methods. Students will gain considerable hands-on experience conducting field- and laboratory-based methods useful for studying and managing forest wildlife and their habitat.

414-3 Information Management. The collection of physical, biological, and social variables in the field of forestry through sampling survey. The procedures of data manipulation and calculation and the presentation of graphs and tables.

415-3 Urban Ecosystem Management. An introduction to fundamental concepts and processes associated with urban environments. Emphasis is on physical, chemical, and biological stresses imposed on landscapes and water resources influenced by land use conversion and subsequent urban sprawl. Restricted to junior standing or consent of instructor. Requires field trip transportation fee not to exceed \$30 per course registration.

416-4 Forest Resource Management. The application of business procedures and technical forestry principles to manage forest properties. Emphasis on integrated resource management for tangible and intangible benefits. Prerequisite: FOR 351, completion of Forest Resource summer camp series or consent of instructor. Requires field trip transportation fee and supplemental expenditures not to exceed \$40 per course registration.

417-2 Forest Land-Use Planning. Principles of location theory as a basis for determining land use; supply of forest land; population pressure and demand; conservation principles; determination of forest land values; institutional factors influencing forest land-use; forest taxation; special taxes, and capital gains. Taught in alternate years. Prerequisite: FOR 411 or consent of instructor.

418-2 Marketing of Forest Products. The role of marketing in the forest industries; review of economic principles; product policy, planning the product line, pricing, marketing channels, marketing programs, marketing organization, and marketing research as influences on the marketing of lumber, wood products, pulp, and paper. Taught in alternate years. Prerequisite: FOR 411 or consent of instructor.

420-3 Park and Wildlands Management. The management of state and federal parks and recreation areas. A systems approach toward management and decision-making will be emphasized. Requires field trip transportation fee and supplemental expenditures not to exceed \$40 per course registration.

421-3 Recreation Land-Use Planning. Principles and methods for land-use planning of park and recreation environments with emphasis on human dimensions of natural resource research. Focus on planning process and types of information to

gather and organize. Application in group field projects. Prerequisite: FOR 220, 420, or consent of instructor. Requires field trip transportation fee not to exceed \$25 per course registration.

422C-6 Park and Wildlands Management Camp. A study of park conditions, visitors, and management practices at selected county, state, and federal park systems in the U.S., including the federal wilderness preservation system. Prerequisite: FOR 220 or consent of instructor. Requires field trip and supplemental expenditures not to exceed \$550 per course registration. Summer camp fees and costs are outlined in the Forestry major - Forest Recreation and Park Management Specialization.

423-3 Environmental Interpretation. (Same as AGRI 423 and REC 423) Principles and techniques of natural and cultural interpretation. Two hours lecture, three hours laboratory. Prerequisite: ten hours biological science or ten hours of recreation. Requires field trip transportation fee not to exceed \$40 per course registration.

428-2 Urban Forestry. An introduction to principles and practices useful in the management of trees and forests in populated settings. Emphasis is placed on the development of comprehensive management strategies consistent with the biological, physical, economic and social constraints of the urban environment. Restricted to junior or senior standing or permission of the instructor.

429-2 Watershed Management Field Laboratory. A field intensive laboratory course focused on hydrological and biological methods used to manage watersheds and assess watershed health. Laboratory topics include stream gauging, soil water and ground water sampling, channel morphology, stream benthos measurements, and water quality analysis of stream and lake ecosystems. Requires field trip transportation fee not to exceed \$30 per course registration.

430-3 Wildland Watershed Management. Emphasis is placed on the principles, technical problems, procedures, alternatives, and consequences encountered in managing wildland watersheds for the production of quality water in harmony with other uses.

431-3 Regional Silviculture. Designed to evaluate the various silvicultural practices as they are commonly employed in various regions of the United States. Offered alternate years. Prerequisite: FOR 310.

451-3 Natural Resources Inventory. This course is designed to familiarize students with a scientific understanding of major topics in wildlife ecology and management, with a special focus on Forestry majors and natural resource inventory techniques. Students will gain knowledge of the history of the field of wildlife management, primary wildlife management principles and practices, ecological theory pertinent to wildlife populations and habitats, and current important issues/problems regarding wildlife management and natural resource inventory. Restricted to Forestry, Zoology, Bio Science, Animal Science, or Environmental Science majors/minors; or consent of instructor.

452-2 Forest Soils. Characterization and fundamental concepts of forest soils and their relationships to forest communities and forest management practices. Emphasis is on the chemical, biological and physical properties of soils as related to forests and forest management. Requires field trip transportation fee not to exceed \$25 per course registration.

452L-2 Forest Soils Laboratory. Companion laboratory for

FOR 452. Emphasis is on methods to characterize and evaluate the chemical, physical, and biological properties of forest soils. Requires field trip transportation fee not to exceed \$25 per course registration. Offered spring semester, even years.

453-2 Environmental Impact Assessment in Forestry. Methods of assessing the environmental impact of land-use systems on forest resources and assessing the impact of forest management systems on environmental quality are presented. Case studies culminating in the preparation of environmental impact statements are emphasized. Restricted to senior standing in a natural resource major. Requires field trip transportation fee not to exceed \$25 per course registration.

454A-2 Forest Ecology Field Studies-Boreal. A study of forest communities, soils, and site conditions. Course requires a field trip of about 10 days. Each trip is two semester credits; a maximum of 6 credits may be applied toward graduate credit. Restricted to senior standing in natural resources or biological sciences, courses in tree identification, forest ecology, and soils. Special approval needed from the instructor. Requires field trip transportation fee not to exceed \$300 per course registration.

454B-2 Forest Ecology Field Studies-Lake States. A study of forest communities, soils, and site conditions. Course requires a field trip of about 10 days. Each trip is two semester credits; a maximum of 6 credits may be applied toward graduate credit. Restricted to senior standing in natural resources or biological sciences, courses in tree identification, forest ecology, and soils. Special approval needed from the instructor. Requires field trip transportation fee not to exceed \$300 per course registration.

454C-2 to 8 Forest Ecology Field Studies-Southern Appalachians. A study of forest communities, soils, and site conditions. Course requires a field trip of about 10 days. Each trip is two semester credits; a maximum of 6 credits may be applied toward graduate credit. Restricted to senior standing in natural resources or biological sciences, courses in tree identification, forest ecology, and soils. Special approval needed from the instructor. Requires field trip transportation fee not to exceed \$300 per course registration.

454D-2 to 8 Forest Ecology Field Studies-Southern Pine. A study of forest communities, soils, and site conditions. Course requires a field trip of about 10 days. Each trip is two semester credits; a maximum of 6 credits may be applied toward graduate credit. Restricted to senior standing in natural resources or biological sciences, courses in tree identification, forest ecology, and soils. Special approval needed from the instructor. Requires field trip transportation fee not to exceed \$300 per course registration.

460-2 Forest Industries. Analysis of raw material requirements, the processes and the products of forest industries. The environmental impact of each forest industry will also be discussed.

470-2 Wilderness Management, Policy, and Ethics. Study of current management philosophy and practice in America's wilderness. Analysis of current wilderness policy and its historical evolution. Discussion of the evolution of the wilderness idea and the individuals that have influenced it. Weekend field trip required. Offered alternate (even) years. Restricted to senior standing. Required field trip transportation and materials fee not to exceed \$80 per course registration.

471-3 Interdisciplinary Approaches to Environmental Is-

ues. Application of concepts for the biological, physical and social sciences, economics, humanities and law, are used to understand the interdisciplinary complexities of environmental issues. Students will develop and demonstrate problem-solving skills as part of a team analyzing a regional environmental issue. Team-taught seminar style discussions. Prerequisite: Plant Biology 301I and admission to Environmental Studies minor program.

480-3 Natural Resource Conflict Management. Examines the role and methods of stakeholders in influencing natural resource policies. Emphasis on applied methods, techniques and strategies for conflict resolution, especially collaborative decision making and persuasion theory. Restricted to junior standing or consent of instructor.

490A-2 Resources Management Consortium. Intensive field course in resources management decision making. Student serves as team member in solving resource problems in forestry, wildlife management, recreation, and interpretation at Land Between the Lakes. Enrollment is limited to six. Course taught at Land Between the Lakes. Not for graduate credit. Special approval needed from the instructor. Requires transportation, room and board fee not to exceed \$150 per course registration.

492-1 to 4 Special Studies for Honor Students. Research and individual problems in forestry. Not for graduate credit. Prerequisite: a 3.0 minimum grade point average. Special approval needed from the department chair.

494A-1 to 6 Practicum-Forest Environmental Assessment. Supervised practicum in a professional setting. Emphasis on administration, supervision, teaching and program leadership in community, school, park, forest, institution, and public or private agencies. Students should enroll according to their curriculum specialization. Special approval needed from the instructor.

494B-1 to 6 Practicum-Outdoor Recreation Resource Management. Supervised practicum in a professional setting. Emphasis on administration, supervision, teaching and program leadership in community, school, park, forest, institution, and public or private agencies. Students should enroll according to their curriculum specialization. Special approval needed from the instructor.

494C-1 to 6 Practicum-Forest Resources Management. Supervised practicum in a professional setting. Emphasis on administration, supervision, teaching and program leadership in community, school, park, forest, institution, and public or private agencies. Students should enroll according to their curriculum specialization. Special approval needed from the instructor.

Forestry Faculty

Akamani, Kofi, Assistant Professor, Ph.D., University of Idaho, 2011.

Burde, John H., III, Professor, *Emeritus*, Ph.D., University of Arizona, 1975.

Carver, Andrew D., Professor, Ph.D., Purdue University, 1998.

Chilman, Kenneth C., Associate Professor, *Emeritus*, Ph.D., University of Michigan, 1972.

Groninger, John W., Professor, Ph.D., Virginia Polytechnic Institute and State University, 1995.

- Holzmueller, Eric J.**, Associate Professor, Ph.D., University of Florida, 2006.
Mangun, Jean C., Associate Professor, *Emeritus*, Ph.D., Purdue University, 1991.
Nielsen, Clayton K. Professor, Ph.D., Southern Illinois University, 2001.
Park, Logan O., Associate Professor, Ph.D., Virginia Polytechnic Institute and State University, 2009.
Phelps, John, E., Professor, *Emeritus*, Ph.D., University of Missouri, 1980.
Roth, Paul L., Professor, *Emeritus*, Ph.D., Kansas State University, 1968.
Ruffner, Charles M., Professor, Ph.D., Pennsylvania State University, 1999.
Schoonover, Jon E., Associate Professor, Ph.D., Auburn University, 2005.
Willard, Karl W. J., Professor, Ph.D., Pennsylvania State University, 1999.
Zaczek, James J., Professor and *Chair*, Ph.D., Pennsylvania State University, 1994.

French

(See Languages, Cultures, and International Studies)

Futures Markets

(SEE AGRIBUSINESS ECONOMICS)

General Agriculture

(SEE AGRICULTURAL SYSTEMS)

Geographic Information Science

(SEE GEOGRAPHY AND ENVIRONMENTAL RESOURCES)

Geography and Environmental Resources

(DEPARTMENT, MAJOR, COURSES, FACULTY)

Geography and Environmental Resources is the study of place and space; the intersection of the physical environment and human activities; patterns of climate, land forms, soils and water. Majors earning a Bachelor of Science degree in Geography and Environmental Resources study the environment in the field, the computer laboratory, and the traditional classroom. Job opportunities for our degree are broad and diverse. For example, graduates of our program have careers that include: Recycling Coordinator, Social Studies Teacher, GIS Coordinator, Geospatial Intelligence Analyst, Environmental Educator, Cartographer, Emergency Manager, Natural Resource Consultant, Regional Planner, Water Quality Manager, among others.

SIU Carbondale’s Department of Geography and Environmental Resources focuses on environmental sustainability. Faculty expertise is in water resources, land use, climatology, and geospatial techniques. Our courses are taught by faculty with excellent national and international reputations in their fields. We take an integrated environmental problem-solving

approach in our courses. Our Environmental GIS Laboratory and Advanced Geospatial Analysis Laboratory train students to use current GIS and remote sensing technologies for environmental analysis. Many courses have labs to provide students with more personal attention. We also have an active mentoring program, through which every undergraduate has access to a faculty mentor.

Our undergraduate program is divided into two parts: Major Courses and Specialization. First, there are seven courses taken by all Geography and Environmental Resources majors to ensure that all of our students have an understanding of key concepts and tools used by professionals in the field. Then, students select one of three areas of specialization: 1) Environmental Sustainability is intended for students who want a broad background in the social and environmental sciences that relates to environmental planning and management, 2) Geographic Information Science is intended for students who are interested in applying geospatial technologies to geographic and environmental problems, or 3) Climate and Water Resources is for students interested in weather, climate and surface water resources.

Practical experience is an important part of our program. We have an active internship program that places students with local natural resource agencies. Students receive academic credit for these internship and cooperative work experiences. Our department provides several awards and scholarships for outstanding undergraduate majors. We welcome all students and invite them to participate in department activities. We have a diverse faculty and we actively promote diversity among our faculty, staff, and students.

GENV students need a solid Mathematics background to prepare them for advanced-level courses. We strongly recommend that GENV majors fulfill the University Core Curriculum requirement by taking MATH 108 College Algebra.

Bachelor of Science Degree in Geography, College of Liberal Arts

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements</i>	14
<i>Requirements for Major in Geography and Environmental Resources</i>	42
Geography and Environmental Resources Major Courses	
300I, 303I, 401, 433, and 404 or 412	15
Two of the following: 100, 103, 104, 304, 310I, 320, or 330	6
Specialization (one of the following).....	21
<i>Environmental Sustainability</i>	
320, 422, 424; and four additional GEOG classes at the 400-level	
<i>Geographic Information Science (GIS)</i>	
406, 408, 416, 420 and three additional GEOG classes at the 400-level	
<i>Climate and Water Resources</i>	
330, 431, 434, 439 and three additional GEOG courses at the 400- level	
Electives	23
Total	120

**Geography and Environmental Resources
Suggested Curricular Guide for Major
Requirements**

FIRST YEAR	FALL	SPRING
ENGL 101, 102 ¹	3	3
MATH ¹	3	-
CMST 101 ¹	-	3
GEOG 104 ²	-	3
UCOL 101G	3	-
GEOG 100 ³ , 310I	3	3
FL ⁴	4	4
<i>Total</i>	16	16
SECOND YEAR	FALL	SPRING
UCC Humanities	3	3
UCC Fine Arts, Health	3	2
UCC Multicultural	3	-
GEOG 300I	-	3
GEOG 103 ² , 303I	3	3
GEOG 304 ⁵	3	-
ENGL Comp ⁴	-	3
<i>Total</i>	15	14

¹University Core Foundation Skills (MATH 108 preferred for GENV majors).

²University Core Disciplinary Studies Science Group.

³University Core Social Science.

⁴College of Liberal Arts requirement.

⁵College of Liberal Arts Writing Across the Curriculum.

**Suggested Curricular Guide for Environmental
Sustainability Specialization**

THIRD YEAR	FALL	SPRING
GEOG 401, 320	3	3
GEOG 4XX, 424	3	3
GEOG 4XX	-	3
Electives	9	6
<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
GEOG 412, 433	3	3
GEOG 422, 4XX	3	3
GEOG 4XX	-	3
Electives	8	6
<i>Total</i>	14	15

**Suggested Curricular Guide for Geographic
Information Science Specialization**

THIRD YEAR	FALL	SPRING
GEOG 401, 404	3	3
GEOG 406, 420	3	3
GEOG 4XX	3	3
Electives	6	6
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
GEOG 416, 433	3	3
GEOG 4XX, 408	6	3
GEOG 4XX	3	-
Electives	3	9
<i>Total</i>	15	15

**Suggested Curricular Guide for Climate and Water
Resources Specialization**

THIRD YEAR	FALL	SPRING
GEOG 401, 431	3	3
GEOG 330, 4XX	3	3
GEOG 434, 4XX	3	3
Electives	6	6
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
GEOG 412, 433	3	3
GEOG 439, 4XX	3	3
Electives	9	8
<i>Total</i>	15	14

Geography and Environmental Resources Minor

A minor in geography and environmental resources consists of 15 credit-hours from a combination of the core courses and any one of the specializations.

GIS Minor

The Undergraduate GIS Minor enables students to focus on the fundamentals of geospatial techniques and analytical skills. This minor meets the needs of the expanding job opportunities for undergraduate students. This minor ensures that students understand earth-map relationships; understand principles of cartography; know the technical aspects of remote sensing and have competence in visual interpretation and digital processing and analysis of imagery; understand the basic representation and modeling of spatial data in GIS. Further, they will demonstrate an understanding of GIS concepts, database management, and the process of decision-making in the GIS context and obtain yield basic skills of spatial analysis and modeling and the analytical capabilities of ESRI's ArcGIS and ERDAS IMAGINE. Finally, they will be competent in planning, developing, and implementing a major GIS project.

Course Requirement: The program requires students to complete 18 credit hours of undergraduate level coursework, as follows: GEOG 310I, 401, 404, 406, 416, 428.

Sustainability Minor

The Undergraduate Minor in Sustainability enables students to expand their knowledge and understanding of the long-term sustainable use of the earth's resources, including water, land use and food systems, climate change, urban sustainability, and "green" energy. This minor meets the needs of the expanding job opportunities in environmental sustainability.

Course Requirement: students must maintain a 2.7 GPA in the certification courses. The program requires students to com-

plete at least 15 credit hours of coursework, as follows: GEOG 300I, 320, and 424, and two of the following : GEOG 421, 422, 425, 426, 429, 431, 435, 436, 439, 454, 480, 481.

Courses (GEOG)

100-3 Environmental Conservation. (University Core Curriculum) Human activity has changed every place on planet Earth. This course explores how and where these changes take place, and practical ways people can interact with the environment in a more sustainable manner. Themes to be explored include: biodiversity, global climate change, human population growth, and sustainability of food, soil, and water resources. Through lectures, discussions, and field trips students will investigate and map patterns integral to understanding environmental conservation issues. Lab fee: \$20.

103-3 World Geography. (University Core Curriculum) [IAI Course: S4 900N] Examination of the world's major geographic patterns, the diversity of environments, cultures and economic activities, differences between developing and developed nations, interdependence of nations and regions through communication and trade and in-depth assessment of representative environmental issues.

104-3 Weather, Climate, and Society. (University Core Curriculum) A scientific introduction to the physical processes responsible for weather and climate and the application of fundamental scientific skills to address aspects of weather and climate that are of particular importance to society at large. Lab fee: \$20.

300I-3 Geography, People and the Environment. (University Core Curriculum) The goal of this course is to understand complex contemporary environmental problems using case studies. The problems we will study are "wicked"; they are difficult to formulate exactly, and they have no simple technological solutions. The class aims at teaching how to use a variety of perspectives to understand complex problems, and how to analyze coupled human and natural systems across time and space. We will study four case studies such as deforestation, but you will acquire the methodological knowledge to assess other wicked problems. We will emphasize 1) a science-based systems approach; 2) the role of geography as a linchpin discipline that spans the social and physical sciences; 3) the importance of interdisciplinary perspectives; 4) issues of collaboration, institution building, and policy development.

303I-3 Physical Geography. (University Core Curriculum) [IAI Course: P1 909L] This course explores how biogeography, geomorphology and climatology interact in shaping the Earth's environments. Case studies from North, Central, and South America illustrate how the physical environment plays a dynamic role in human lives. On-campus field trips, labs, and student projects stress application of core concepts. Lab Fee: \$20.

304-3 Geography of Globalization. Evolution of the world economic system over time and space emphasizing the recent rapid increase in economic interdependency among nations, regions, and urban and rural areas. Changing global patterns of production and trade in nature resources, manufactured goods, services, information, and economic control are emphasized. This course satisfies the CoLA Writing-Across-the-Curriculum requirement.

310I-3 Introduction to Geographic Information Systems. (University Core Curriculum) An interdisciplinary course that provides students the skills and knowledge to use geospatial technologies such as geographic information systems (GIS), global positioning systems (GPS), and remote sensing. Applications drawn from diverse fields: environmental science, ecology, social sciences and others. Course includes lectures, discussions, interactive and hands-on computer exercises and projects. Lab fee: \$20.

312-3 Introduction to GPS, LiDAR, and Radar Applications. This course provides the practical skills, knowledge, and understanding of quantitative measurement tools in the field of environmental and geospatial applications. The course focuses on the basic concepts and applications of GPS (Global Positioning System), LiDAR (Light Detection and Ranging), and Radar systems. Use of the GPS, a way of accurately determining positions on the earth has grown exponentially and is currently used in mapping, navigation, surveying, agriculture, construction, vehicle tracking and recovery, archaeology, biology, cell phones and automobiles. The course also introduces fundamental concepts of accuracy assessment and appropriate use of these data products. Students will also master the basic skills needed to leverage these data sources and information products in the context of application domains. Course component includes lectures, labs, and field work.

320-3 Introduction to Environmental Sustainability. The course provides students with an introduction to the philosophy and tools of environmental sustainability, with an emphasis on the integration of the ecological, economic and social aspects of sustainability. The aim of the course is to provide students with practical examples of the methods used to design, implement and assess environmental sustainability at multiple management levels. The course examines issues and case studies with a local through global perspective. Prerequisites: None.

330-3 Meteorology. A focus on physical processes underlying weather, and application of fundamental scientific skills, both mathematical and interpretive. Topics covered include atmospheric composition and structure, earth-sun geometry, atmospheric stability, clouds and precipitation, atmospheric pressure and motion, wind systems, mid-latitude weather systems, severe weather, and forecasting. Weekly lab meeting emphasizes application of meteorological concepts. Lab fee: \$20.

361-3 Regional Geography of the United States. A survey of environmental, economic, and historical factors and problems in the development of the United States and its regions. Analysis of population trends, assessment of economic activities, and analysis of transportation networks from a geographic perspective are introduced. Some attention is given to the United States in the world economy.

401-3 Geographic Information Systems. (Same as GEOG 502) An overview of geographic information systems (GIS)-related topics, including GIScience (theoretical foundation), GIS technology (software training), and GIS applications (real-world solutions). Provides basic principles, concepts and applications of GIS in the context of GIScience - a basic research field, which seeks to redefine geographic concepts and their use. The theoretical foundations of GIS are informed by three basic areas: cognitive models of geographic concepts, computational and implementations of geographic models, and the interaction

between GIS and society. Recommended: GEOG 310I or CE 263. Lab fee: \$20.

404-3 Spatial Analysis. (Same as GEOG 504) This spatial analysis course is an introduction to statistical methods for geographers. The course provides an overview of the application of spatial data analysis techniques, with a concentration on spatial statistical theories, concepts and approaches in the general context of the emerging fields of geographic information system (GIS) and science (GISci). The main focus of this course is on how techniques for the analysis of spatial data can effectively be applied in a GIS environment, with a particular emphasis on the study of spatial patterns, distributions, and associations. Prerequisite: GEOG 401. Lab fee: \$20.

406-3 Introduction to Remote Sensing. (Same as GEOG 506) An introduction to the fundamentals of remote sensing as applied to environmental management. This course will examine the theoretical and practical aspects associated with the use and analysis of aerial photography and satellite imagery. These include how remote sensing data are acquired, displayed, analyzed and how information on our environment can be extracted from such data. Students will be introduced to manual interpretation and digital image processing techniques of remotely sensed imagery. Students will have the opportunity to gain hands-on experience using image processing software. Lab fee: \$30.

408-3 Advanced Remote Sensing. (Same as GEOG 508) Advanced techniques in the analysis of remotely sensed data. Emphasis is placed on digital image processing using state of the art technology. Students will be expected to develop individual problem-driven projects that use the knowledge, tools and techniques that are developed in this course. Prerequisite: GEOG 406 with a minimum grade of C. Lab fee: \$30.

412-3 Applied Geographic Statistics. Introduction to basic statistical methods and skills related to the application of statistics to problems in geography. Lectures are supplemented with meetings in computer labs to stress the applied aspects of the course. Topics covered include descriptive statistics, time series analysis, probability, confidence intervals, hypothesis testing, correlation and regression, and spatial statistics.

416-3 Cartographic Design. (Same as GEOG 516) Introduction to the concepts and principles of map design and automated cartographic techniques used to promote the understanding of a map as a powerful communication model. Examines techniques for the representation, manipulation, display, and presentation of spatial data using computer mapping techniques and graphics software. Team based projects will address a geographic problem and produce a professional final map. Prerequisite: GEOG 401 with a minimum grade of C. Lab fee: \$20.

417-3 GIS Programming & Customization. An intro to computer programming principles and their application in a Geographic Information Systems environment. GIS scripting language principles will be introduced and students will learn the structure of ArcObjects, the program organization of ESRI and ArcGIS products as well as the use of Visual Basic application to manipulate the basic mapping objects. Coursework will involve developing a more advanced program using an extension of choice. Prerequisite: GEOG 401 or consent. Lab fee: \$20.

419-3 Enterprise GIS Planning and Implementation. Students will gain both theoretical and practical understanding of

the design process of enterprise GIS; be able to assess the scope of a system and address data and technology requirements of that system; become exposed to a host of the state-of-the-art tools and concepts in enterprise GIS; and learn skills for hardware, software and computer networking issues. Students are expected to have a basic working knowledge of ArcGIS and ArcIMS. Prerequisite: GEOG 401 or consent. Lab fee: \$20.

420-3 Advanced Geographic Information Systems (GIS) Studies. (Same as GEOG 520) This course focuses on six emerging themes of geographic information science: geospatial ontologies, enterprise GIS, GIS design, geographic data mining and knowledge discovery, geographic data structure and algorithms, 3D imaging and visualization. A seminar approach will be adapted to organize the class into five groups to capture skills in computer programming, cognitive science, database design and systems, computational and mathematical knowledge, and 3D imaging and visualization. Five studio exercises to provide hands-on training and practice will be conducted in the GIS laboratory. Students will be expected to develop individual problem-driven projects that use the knowledge, tools, and techniques that are developed in this course. Prerequisite: GEOG 401 with a minimum grade of C. Lab fee: \$20.

421-3 Urban Sustainability. Sustainability of urban areas is viewed from a geographical perspective to focus on the complex relationships among environmental, sociocultural, economic, and political phenomena. Considerable time is devoted to identifying, analyzing and explaining selected urban problems and their sustainable solutions.

422-3 Environmental and Energy Economics. (Same as GEOG 422H, GEOG 522) Economics of renewable and nonrenewable natural resources management and environmental policy. Topics covered include: static and dynamic efficiency, market efficiency and market failures (market power, externalities and public goods), the economics of nonrenewable resource extraction, renewable resources management (with a focus on forests and water), mechanism design choices and their implementation in the real world, and the role of the private and public sectors in research and development.

424-3 Sustainable Development. Analysis of the human, economic, technological, environmental and political dimensions of sustainable development focusing on public and private sector institutions that manage renewable and non-renewable natural resources. Emphasis is sustainable development as applied to: (a) population, (b) energy and the atmosphere, and (c) agricultural impacts on soil and water resources.

425-3 Water Resource Management. The purpose of this course is to provide the student with an overview of concepts, theory, and policies in water resource management and a deeper understanding in at least one topic within water management. This is accomplished through instructor led lectures, assigned readings, and in class exercises that teach the student about the concepts that underpin water management during the first half of the semester. Then in the second half of the semester, each of the students selects the water management topic and teaches the class about the subject through lecture and discussion of keystone papers in their selected water management topic.

426-3 US Environmental Policy. This course investigates the US system of environmental regulation: the background of

social and environmental movements that influence US policy and the agencies involved in US environmental regulation. Emphasis is on US regulations and US participation in global environmental policies. Overall, the focus is on spatial variations in environmental regulations; or the geography of environmental quality.

428-3 GIS Portfolio/GIS Capstone Project. (Same as GEOG 528) Independent development and implementation of a major GIS project based on analysis of spatially referenced data sets to produce digital products and to solve real world problems. Data obtained from multiple sources, including downloads from online sources, field-collected data, and published map data. A project portfolio and a poster approved by the instructor must be submitted for successful completion. Prerequisite: GEOG 401 or 406, or consent of instructor. Lab fee: \$20.

429-3 Geography of Local and Organic Food. A discussion of geographic topics in local and organic food and farming. This includes: spatial distributions, landscapes, policy influences, organic agricultural productivity, food safety, consumer concerns, organic farmers' decision making, organic marketing, local food systems, and organic certification.

430-3 Environmental Systems Analysis. Exploration of the major environmental systems relevant to planning. Topics include concepts of systems and system behavior; basics of systems analysis and modeling environmental systems; environmental fluxes of energy and materials (e.g., hydrologic cycle, carbon cycle, energy budgets, erosion and sediment transport, role of biosphere in organizing fluxes); environmental variability.

431-3 Climatology. Contemporary view of climatology as an interdisciplinary science which focuses on advanced understanding of the physical processes that drive the climate system and the development of skills related to climate prediction and assessment of human impacts on global and regional climate. Prerequisite: GEOG 330 with a minimum grade of C.

433-3 Field Methods in Geography. Quality geographic research depends on obtaining reliable data through an informed research design. Exploring both social and environmental processes, students will actively participate in developing and conducting investigations. Using the SIU Carbondale campus and surrounding region as a laboratory, lab exercises will include human geography, geomorphology, climatology and biogeography. Analytical techniques will include introductory statistics and mapping. Prerequisite: GEOG 303I with a minimum grade of C. Not for graduate credit. Restricted to junior and senior majors in Geography and Environmental Resources or consent of instructor. Lab fee: \$20.

434-3 Water Resources Hydrology. Microclimatic factors which affect the hydrologic events of various climatic regions are treated extensively. Methods of estimating geographic variations in hydrologic relations to climatic and microclimatic especially evapotranspiration, are compared and evaluated. Consequences of alternative land uses on climate and hydrology are considered regionally.

435-3 Energy Planning. Regional and national differences in energy supply and demand are reviewed followed by a study of current energy resources, the range of demands and environmental impacts. National and international planning strategies for dealing with changes in energy demand and supply are

explored and assessed for present and future implementation probability.

436-3 Natural Hazards. This course develops the skills and perspectives needed to effectively manage natural and technological disasters. Major themes include risk analysis, hazard mitigation and preparedness, response and recovery of the economic and social infrastructure in areas impacted by earthquakes, floods, drought, toxic material releases and other catastrophic events. Geographic training places a geographer at the forefront of developing hazard management solutions for society.

439-3 Global Climate Change. This course examines the major environmental, social and policy, issues relevant to global climate change, including natural and anthropogenic causes, environmental pollution, land use/land cover change, extinction and biodiversity issues, and potential climate change-related impacts on human health.

452-3 Environment and Population. Introduction to population geography. Emphasis is on the relationships between population trends, resource use patterns and environmental impacts. Topics include methods and data used to describe and predict populations, theories of population and policy issues that relate to the interaction between population, quality of life and environmental quality. Prerequisite: GEOG 320 or consent of instructor.

454-3 Conservation and Environmental Movements. Emphasizes the ways in which humans view and interact with the environment. Conservation literature and the works of influential environmentalists are studied. Specific theories and environmental movements which help to explain society's current perception and use of the environment are studied.

456-3 Geographic Visualization. (Same as GEOG 556) This course will provide an overview of geographic visualization with a concentration on the theories, concepts and approaches of information visualization. Lectures and laboratory exercises will focus on the practical issues of exploratory data analysis (EDA), cartographic design process, web cartography, data quality and generalization, thematic mapping, map animation and multimedia applications. The course will provide students with a working knowledge of commercial software commonly used for graphic-based applications. Students are expected to utilize their hands on experience gained from the lab exercises to further enhance their proficiency in graphic software. Two hours of seminar and classroom presentations, two hours of studio exercises each week. Lab fee: \$30.

457-3 American Environmental History. (Same as HIST 457) An exploration of the attitudes toward and the interaction with the natural resource environment of North America by human settlers. Coverage from the Neolithic Revolution to the present.

458-3 Applied GIS. This course provides practical GIS applications and draws from special topics in data visualization and environmental applications. The topic on data visualization includes an overview of techniques for visualizing large-scale datasets and is inspired by concepts from information visualization. Topics in environmental applications consist of risk assessment, digital elevation model processing, and watershed delineation and hydrological modeling. Students taking this course will distinctively learn: (1) how to visualize geographic

data; (2) how to use different environmental risk assessment methods; (3) how to assess, detect, and characterize environmental risks and potential threats; and (4) how to create meaningful visualization scenes to support environmental decision-making. Active learning experiences will be achieved through the use of classroom lectures, lab exercises, group tasks, and presentations. Prerequisite: GEOG 401 or GEOG 310I or consent of instructor. Lab fee: \$20.

470-3 Contemporary Issues in Environmental Studies. Background, current, and future issues linking social responses to scientifically relevant environmental issues. Students learn about the multiple geographic, social and ecological factors that influence environmental citizenship and participation. Topics include conservation/preservation, green jobs, environmental non-governmental organizations, policy influences, and environmental education. Lectures, guest lectures and seminar style discussions. Students develop and demonstrate skills in problem solving, communication, and professionalism.

471-3 Environmental Impact Analysis. Techniques of assessing the impact of human activities on the environment, including weighting schemes, cost-benefit analysis, linear programming, ecological impact assessment. Emphasis is on placing NEPA and EIS writing in legal, economic, and environmental perspective.

480-2 to 6 Internship in Geography. Supervised field work in private or public organization dealing with environmental management or GIS. A report or professional poster on the work is required at the end of the semester. Courses may be repeated, but no more than 3 credit hours of either 480 or 481 may be applied to an undergraduate major or graduate degree. Restricted to students majoring in Geography and Environmental Resources or minoring in Environmental Studies. Special approval needed from the department.

481-3 to 12 Cooperative Work Experience in Geography. Placement of advanced undergraduate or graduate student in private or public organization for one or more semesters in paid career-related position. Student gains professional experience, under faculty and on-site supervision. A report or professional poster on the work is required at the end of the semester. Three credit hours of either 480 or 481 may apply toward requirements for a Geography undergraduate major or graduate degree. Restricted to students majoring in Geography and Environmental Resources or minoring in Environmental Studies. Special approval needed from the department.

487A-1 Honors in Geography-Honors Tutorial. Must be spread over the last two years of the undergraduate's career. May be taken in either A, B, C, or B, A, C sequence. Special approval needed from the department.

487B-2 Honors in Geography-Honors Reading. Must be spread over the last two years of the undergraduate's career. May be taken in either A, B, C, or B, A, C sequence. Special approval needed from the department.

487C-3 Honors in Geography-Honors Supervised Research. Must be spread over the last two years of the undergraduate's career. May be taken in either A, B, C or B, A, C sequence. Prerequisite: GEOG 487A & B or consent of department.

490-2 to 4 Readings in Geography. Supervised readings in selected subjects. Restricted to geography majors.

Geography and Environmental Resources Honors Program

The Geography and Environmental Resources Honors Program is a program within the major that is designed to recognize the outstanding scholarship of our top students and reward them with additional challenging and stimulating course options. Participation in the GENV Honors Program is contingent upon a student's admission to the University Honors Program (UHP). The UHP requirements are found at: <http://www.siu.edu/~honors/>. Honors students in our major should meet with the department Chair to discuss their interests and determine their course schedules.

Honors courses in Geography and Environmental Resources are: open to GENV majors; have prerequisites as listed by course number in the next section below; and have special assignments as arranged with each instructor.

Honors Courses

422H-3 Economics in Environmental Management. (University Honors Program) (Same as GEOG 422, GEOG 522) Economics of renewable and nonrenewable natural resources management and environmental policy. Topics covered include: static and dynamic efficiency, market efficiency and market failures (market power, externalities and public goods), the economics of nonrenewable resource extraction, renewable resources management (with a focus on forests and water), mechanism design choices and their implementation in the real world, and the role of the private and public sectors in research and development.

424H-3 Sustainable Development. (University Honors Program) Open to undergraduates. Available for Honors credit by special arrangement. Not for graduate credit.

431H-3 Climatology. (University Honors Program) Open to undergraduates. Available for Honors credit by special arrangement. Prerequisite: GEOG 330, or consent.

433H-3 Field Methods in Geography. (University Honors Program) Open to undergraduates. Available for Honors credit by special arrangement. Prerequisite: GEOG 303I with a minimum grade of C. Restricted to junior and senior majors in Geography and Environmental Resources or consent of instructor.

439H-3 Global Climate Change. (University Honors Program) Open to undergraduates. Available for Honors credit by special arrangement.

480H-3 to 6 Internship in Geography. (University Honors Program) Open to undergraduates. Available for Honors credit by special arrangement. Restricted to Geography major or consent.

Geography Faculty

Baumann, Duane D., Professor, *Emeritus*, Ph.D., Clark University, 1968.

Duram, Leslie A., Professor, Ph.D., University of Colorado at Boulder, 1994.

Dziegielewski, Benedykt, Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1983.

Horsley, Doc, Assistant Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1974.

Lieber, Stanley R., Professor, *Emeritus*, Ph.D., University of Iowa, 1974.

Perk, H. F. W., Lecturer, *Emeritus*, A.B., University of California at Los Angeles, 1951.

Remo, Jonathan, Assistant Professor, Ph.D., Southern Illinois University Carbondale, 2008.

Schoof, Justin, Associate Professor and *Chair*, Ph.D., Indiana University, 2004.

Secchi, Silvia, Associate Professor, Ph.D., Iowa State University, 2000.

Sharpe, David M., Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1968.

Wagner, Audrey Lecturer, M.S., Southern Illinois University, 2009.

Wang, Guangxing, Associate Professor, Ph.D., University of Helsinki, Finland, 1996.

Weinert, Julie, Senior Instructor, Ph.D., Ohio State University, 2008.

Geographic Information Science

(SEE GEOGRAPHY AND ENVIRONMENTAL RESOURCES)

Geology (Department, Major, Courses, Faculty)

Geology is the study of the Earth and encompasses a broad range of topics including Earth's history, composition, physical and chemical processes and the evolution of life. It has a unique perspective of time and scale, extending billions of years in the past and to global-wide events. Because of man's interaction with many Earth systems, geology is an environmental science that is vital to the resolution of such problems as climate change; groundwater supply and pollution; prediction and mitigation of earthquake, flooding and volcanic hazards; and natural resource discovery and utilization. Students majoring in geology acquire knowledge of value to many science and non-science professions.

The geology degree programs consist of a set of core courses that provide a foundation of geological principles and specialization tracks and elective courses that students choose to design a curriculum relevant to their interests. Many courses have a laboratory component where a hands-on, practical problem-solving approach to learning is emphasized. Students are introduced to basic and specialized computer programs and instrumental techniques used to gather and interpret data. Field trips to geological sites or field-based projects are regular features of several courses. Most classes for geology majors are small enough for students to receive individual attention and enjoy close contact with faculty in the classroom.

In the field of geology a student may work toward either a Bachelor of Arts or Bachelor of Science degree.

The Bachelor of Arts degree requires a major in geology but is a flexible program, permitting a student to combine education in geology with courses in other areas, such as other sciences, management or pre-law. A minor is optional. Having obtained a Bachelor of Arts degree, students may continue their education toward a Master of Science degree in geology.

The Bachelor of Science degree requires a core of Geology courses and courses in biology, chemistry, mathematics, phys-

ics and science electives. This degree requires a specialization to be obtained in one of the following: Geology, Environmental Geology, Geophysics, or Resource Geology. The specializations allow students to pursue specific career goals in the field of geology and related areas. The summer field course, usually taken between the junior and senior years, is part of the geology core. It is taught at a permanent field camp in the Beartooth Mountains near Red Lodge, Montana. Students desiring to do graduate work or to become a professional geologist will ordinarily pursue the Bachelor of Science degree.

Bachelor of Arts Degree in Geology, College of Science

<i>University Core Curriculum Requirements</i>	41
<i>College of Science Academic Requirements</i>	(6) ¹ + 10-12
Mathematics 108 and 109 or 111	(3) ¹ + 1-3
Physical Sciences-Completed with the Geology Major Biological Sciences (Not University Core Curriculum Courses)	(3) ¹ + 3
Supportive Skills (choose from the following):	6
Computer Science 200 or 201 or 202 or Engineering 222, English 290, 291 or 491, Mathematics 282 or 283, two semester sequence of a foreign language offered at SIU	
<i>Requirements for Major in Geology</i>	(3) ¹ + 38-41
Geology 220 or 222, 221, 223, 224, 302, 310, 315, 325 and 450 or 454	(3) ¹ + 24-27
Chemistry 200, 201, 202, 210, 211, 212	10
Physics 203A, 253A or 205A, 255A	4
<i>Electives to make a total of 120 hours</i>	26-31
<i>Total</i>	120

Bachelor of Arts in Geology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
GEOL 220 or 222, 223 ¹	4	-
GEOL 221, 224	-	4
UCOL 101S, ENGL 101	3	3
CHEM 200, 201, 202; 210, 211, 212	5	5
MATH 108 ² or 111, 109 ³	3-5	3
UCC Human Health	-	2
<i>Total</i>	15-17	17

SECOND YEAR	FALL	SPRING
GEOL 310, 315	4	4
PHYS 203A, 253A	4	-
Biological Science	-	3
CMST 101	-	3
UCC Social Science	3	3
ENGL 102	3	-
UCC Humanities	-	3
<i>Total</i>	14	16

THIRD YEAR	FALL	SPRING
GEOL 302, 325	4	4
Biological Science ⁴	4	-
UCC Fine Arts, Multicultural	3	3

UCC Humanities.....	-	3
Elective	4	3
GEOL 450 ⁵	-	2
<i>Total</i>	15	15

SUMMER OF THIRD YEAR

GEOL 454 ⁶	6
<i>Total</i>	6

FOURTH YEAR	FALL	SPRING
Elective	10-12	10-12
Supportive Skills.....	3	3
<i>Total</i>	13-15	13-15

¹Subs for Geology 111/112.
²Subs for UCC Mathematics 110 or 101.
³Not required if Mathematics 111 taken.
⁴Subs for UCC Biology.
⁵Not required if Geology 454 taken.
⁶Not required if Geology 450 taken.

Bachelor of Science Degree in Geology, College of Science

<i>University Core Curriculum Requirements</i>	41
<i>College of Science Requirements</i>	(6) ¹ + 10-12
Mathematics 108 and 109 or 111	(3) ¹ + 1-3
Physical Sciences-Completed with the Geology Major Biological Sciences (Not University Core Curriculum Courses)	(3) ¹ + 3
Supportive Skills (choose from the following):	6
Computer Science 200 or 201 or 202 or Engineering 222, English 290, 291 or 491, Mathematics 282 or 283, two semester sequence of a foreign language offered at SIUC	
<i>Requirements for Major in Geology</i>	(3) ¹ + 58-59
Required Core Courses: Geology 220 or 222; 221, 223, 224, 302, 310, 315, 325, 454	(3) ¹ + 27
Mathematics 150	4
Chemistry 200, 201, 202, 210, 211, 212	10
Physics 203A,B; 253A,B or 205A,B; 255A,B	8
Required Curriculum Specialization	9-10
<i>Geology Specialization</i>	9
For students interested in all aspects of the geological sciences. This general specialization allows a student to choose courses that best match his or her interests. Students select three 400-level geology courses approved by their Department advisor.	
<i>Environmental Geology Specialization</i>	9-10
For students interested in geology as it relates to environmental problems such as groundwater contamination, flooding, earthquakes and landscape stability. Students should select three courses from the following options: Geology 418, 421, 434, 470 and 471, 474, 476, 478	
<i>Geophysics Specialization</i>	9
For students interested in tectonics, geophysics of the earth, earthquakes and geophysical aspects of environmental geology and petroleum or mineral exploration. Students should select three courses from the following options: Geology 435, 436, 437, 466	

<i>Resource Geology Specialization</i>	9
For students interested in geology as it relates to the origin, characteristics, and utilization of energy and mineral resources such as coal, petroleum and metals. Students should select three courses from the following options: Geology 418, 419, 420, 421, 480, 482	
<i>Electives in Geology, Science, Mathematics or Technology to make a total of 120 hours</i>	8-14
<i>Total</i>	120

¹Numbers in parenthesis are hours which may be substituted into the University Core Curriculum.

Bachelor of Science in Geology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
GEOL 221, 224	-	4
GEOL 220 or 222, 223 ¹	4	-
UCOL 101S, ENGL 101	3	3
CHEM 200, 201, 202; MATH 109 ³	5	3
CHEM 210, 211, 212.....	-	5
MATH 108 ² or 111,	3-5	-
UCC Human Health	-	2
<i>Total</i>	15-17	17

SECOND YEAR	FALL	SPRING
GEOL 310, 315	4	4
PHYS 203A, 253A	4	-
PHYS 203B, 253B	-	4
CMST 101	3	-
MATH 150	-	4
ENGL 102.....	3	-
UCC Humanities.....	-	3
<i>Total</i>	14	15

THIRD YEAR	FALL	SPRING
GEOL 302	-	4
GEOL 325	4	-
GEOL Specialization	3-4	3
Biological Science ⁴	3	3
UCC Social Science	3	3
UCC Fine Arts	-	3
<i>Total</i>	13-14	16

SUMMER OF THIRD YEAR

GEOL 454.....	6
<i>Total</i>	6

FOURTH YEAR	FALL	SPRING
GEOL Specialization	3	-
Geology/Science/Math/Tech Elective	5	6
Supportive Skills.....	3	3
UCC Multicultural, UCC Humanities ..	3	3
<i>Total</i>	14	12

¹Subs for Geology 111/112
²Mathematics 108 may be used for Core Curriculum Mathematics
³Not required if Mathematics 111 taken
⁴Substitutes for Core Curriculum Biology

Geology Minor

A minor consists of 16 hours, determined by consultation with the geology advisor.

Courses (GEOL)

Courses with a laboratory may require purchase of a laboratory manual and a supply fee. Courses requiring field trips may have a field trip cost of approximately \$8 to \$150.

111-2 Geology and the Environment. (University Core Curriculum Course) [IAI Course: P1 908] Examines human interaction with geologic processes and hazards, including earthquakes, volcanoes, landslides and flooding; occurrences and availability of geologic resources, such as energy, water and minerals; and human impacts on the environment including global warming, waste disposal, and pollution. Two lectures per week. Must be taken concurrently with or upon completion of Geology 112 or 113. If Geology 111 is dropped the laboratory course must also be dropped.

112-1 Geology and the Environment Laboratory Learning. (University Core Curriculum) [IAI course: P1 908L] Laboratory to accompany Geology 111. Hands-on and inquiry-based learning in topics such as earth materials, topographic maps, stream dynamics, floods, coastal processes, landslides, groundwater, earthquakes, volcanoes, and human impacts on the environment. One laboratory session per week. Must be taken concurrently with or upon completion of Geology 111. Lab fee: \$10.

113-1 Field Geology of Southern Illinois and Vicinity. (Advanced University Core Curriculum Course) Class will highlight the geological history and geological processes that have shaped southern Illinois and its surroundings, using the field as a natural laboratory. Schedule will include up to 7 Saturday field trips to nearby parks and outcrops, with a possible weekend trip outside of Illinois. Prerequisite: This class must be taken concurrently or following completion of GEOL 111, 220, 221, or 222. If GEOL 111, 220, 221, or 222 are dropped, then GEOL 113 must also be dropped. Activities fee: \$150.

121-2 The History of the Earth. (University Core Curriculum Course) Geological processes shape the surface of our planet over millions of years. These forces provide the ever changing conditions for life. Fossils are "footprints" in time which recorded those changes, giving us the opportunity to unravel Earth's past. This class will study the story of Earth's geological and evolutionary past events. Two lectures per week. Must be taken concurrently with or upon completion of GEOL 124 or GEOL 113. If GEOL 124 or GEOL 113 is dropped then GEOL 121 must be dropped.

122-2 Natural Hazards and Catastrophes. (University Core Curriculum Course) The Earth is shaped by dynamic geological forces such as earthquakes, volcanoes, and floods. While these phenomena construct the landscapes around us, they can be extremely destructive when in contact with human civilization and/or infrastructure. This class examines the natural forces capable of catastrophic impact on society providing a greater understanding of the sometimes violent geologic processes that shape the planet along with their human impact. Two lectures per week. Must be taken concurrently with or upon completion of GEOL 123 or GEOL 113. If GEOL 123 or GEOL 113 is dropped then GEOL 122 must be dropped.

123-1 Natural Hazards and Catastrophes Laboratory.

(University Core Curriculum Course) Laboratory to accompany GEOL 122. This lab examines natural processes associated with hazard and catastrophe in human history and modern society, such as earthquakes, volcanoes, landslides, and floods. Labs provide a greater understanding of the processes and driving forces shaping the planet along with their human impact while fostering skills of scientific inquiry. One laboratory session per week. Must be taken concurrently with or upon completion of GEOL 122. If GEOL 123 is dropped then GEOL 122 must be dropped. \$10 Lab Fee.

124-1 History of the Earth Laboratory. (University Core Curriculum Course) Laboratory to accompany GEOL 121. Inquiry based laboratory sessions teaching the concepts of deep time, plate tectonics, evolution and the fossil record, biostratigraphy, rise and fall of the dinosaurs, evolution of mammals and humans. One laboratory session per week. Must be taken concurrently with or upon completion of GEOL 121. If GEOL 124 is dropped then GEOL 121 must be dropped. \$10 Field Trip Fee.

128-2 The Dinosaurian World. (University Core Curriculum Course) An introduction to Dinosaurs and the world in which they lived, and died. Topics will include Mesozoic continents; Plants of the Mesozoic; Dinosaur paleoenvironments; Dinosaur origins; Dinosaur biology; Dinosaur fossilization; Dinosaur hunters and Dinosaur extinction. Must be taken concurrently with or upon completion of GEOL 129 or GEOL 113. If GEOL 129 or GEOL 113 is dropped then GEOL 128 must be dropped.

129-1 DinoLab. (University Core Curriculum Course) A physical science lab that provides hands-on and inquiry based learning in geologic concepts necessary to fully understand dinosaur paleontology and paleobiology. Must be taken concurrently with or upon completion of GEOL 128, The Dinosaurian World. If GEOL 128 is dropped then GEOL 129 must be dropped. \$10 Lab Fee.

220-3 The Dynamic Earth. (Advanced University Core Curriculum Course) [IAI Course: P1 907] Introduction to the materials which form the Earth and the dynamic processes that change them. Three lectures per week. One Saturday field trip required. With 223 satisfies University Core Curriculum Science Group I requirement in lieu of 111 and 112. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field Trip Fee not to exceed \$25.

221-3 Earth Through Time. (Advanced University Core Curriculum Course) [IAI Course: P1 907] Concepts and methods of interpreting earth history. Development of earth's major features and environment systems. Emphasis on ancient environments and life forms, major changes in paleoclimate, paleocommunities and biodiversity. With 224 satisfies University Core Curriculum Group I Science requirement in lieu of Geology 111 and 112. Field trips required. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field Trip Fee not to exceed \$15.

222-3 Environmental Geology. (Advanced University Core Curriculum course) A study of the environment from a geological perspective. A critical study of geological hazards (earthquakes, floods), earth resources (minerals, water), proper land use (waste disposal), and other environmental concerns. Three lectures per week. One Saturday field trip required. Prerequisite: with 223 satisfies University Core Curriculum Science

Group I requirement in lieu of 111 and 112. Lab fee: \$5.

223-1 Introductory Geology Laboratory. (Advanced University Core Curriculum Course) Understanding the earth's processes, materials and environment through hands-on laboratory and field experience. One three-hour session per week. Prerequisite: completion of, or concurrent enrollment in, 220 or 222, with 220 or 222 satisfies University Core Curriculum Science Group I requirement in lieu of 111 and 112. Lab fee: \$10.

224-1 Earth Through Time Laboratory. (Advanced University Core Curriculum Course) Concepts and methods of interpreting earth's history. One two-hour laboratory per week. Weekend day field trip required. Prerequisite: completion of or concurrent enrollment in 221. With 221 satisfies University Core Curriculum Group I Science requirement in lieu of Geology 111 and 112. Lab fee: \$10.

302-4 Fundamentals of Structural Geology. An introduction to structural geology including a study of the forces involved in the deformation of the earth's crust, with special emphasis on the recognition and interpretation of the resultant geologic features. Laboratory required. Up to 3 one- or two-day field trips may be required on weekends. Prerequisite: GEOL 220 or 222; 223; MATH 109 or 111. Recommended: Physics 203 or 205, or concurrent enrollment. Field trip fee: \$80.

310-4 Mineralogy. Introduction to the internal structure morphology and chemistry of crystals. Study of the properties, chemistry, occurrence and identification of rock-forming and economically important minerals. Rudiments of the use of a petrographic microscope and the optical properties of common rock-forming minerals. Up to 3 one- or two-day field trips may be required on weekends. Prerequisite: GEOL 220 or 222; 223; CHEM 200, 201 recommended. Lab fee: \$15.

315-4 Petrology. Introduction to the classification, nature, origin and processes of igneous, sedimentary and metamorphic rocks. Hand specimen and thin-section analysis of rocks. Lecture-laboratory. Up to 3 one- or two-day field trips may be required on weekends. Prerequisite: GEOL 310. Lab fee: \$15.

325-4 Sedimentology and Stratigraphy. An overview of the relationship between tectonics and climate, and the origin of sedimentary rocks; the course outlines: the plate-tectonics setting of sedimentary basins, their geometry, and subsidence mechanisms; the relationship between sediment supply, basin subsidence, and global sea-level change in determining the sequence stratigraphy of sedimentary-basin fill; and principles of interpretation of environment of deposition within a sequence stratigraphic framework. Lab and field trips required. Prerequisite: GEOL 220 or 222, 221, 223, 224. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field trip fee not to exceed \$60.

327I-3 The World's Oceans. (University Core Curriculum: Students with a catalog year prior to Summer, 2012 only) The world's ocean comprises up to 80% of the earth's surface. It plays a significant role in global climate, contains mineral resources and harbors a wealth of plant and animal life. "The World's Oceans", through the scientific method, will provide a greater understanding of the processes and components of the oceans and their importance to our everyday life. The course will include lectures, discussion sessions, readings and exercises from the text, laboratory exercises and short field excursions.

328I-3 Dinosaurs and the Age of Reptiles. (University Core

Curriculum: Students with a catalog year prior to Summer, 2012 only) What we know about dinosaurs - their fossils, morphologies, origin, types, relatives, relationships, lifestyles, distributions (in time, in space, in paleoenvironments, biotic associates and extinction; and how we know it - interdisciplinary application of basic scientific concepts of geology, paleobiology, paleoecology and paleoenvironmental analysis.

329I-3 Geomythology. (University Core Curriculum Course) Natural disasters have been the source of countless myths and legends throughout human history. This course will examine ways in which regional geology influenced ancient civilizations, and explore the possibility that some of their myths and legends preserve a record of actual geologic events. This class will include lectures, discussions, media sources and readings. An introductory geology course is recommended but not necessary. Prerequisite: GEOL 111, 220, 221 or 222 recommended.

330I-3 The Planets. (University Core Curriculum: Students with a catalog year prior to Summer 2012 only) The geology of the planets and moons of the solar system, their origin and history, the origin of the universe and the solar system and the search for other planetary systems and life in the universe. The geologic processes of vulcanism, tectonism, weathering and meteorite impact on the various planets will be examined and compared. A main focus of the course will be examining the methods for discovering information about the solar system involving the interdisciplinary application of pertinent basic scientific concepts of geology, geochemistry, geophysics, meteorology and cosmology.

405-2 Science Writing and Scientific Communication. Course will teach "survival skills" in scientific reading, writing, communicating, and publishing for new graduate students. Topics will include database search, analysis of journal articles, abstracts, figures, and tables, Powerpoint presentations, proposals, posters, thesis writing, and preparation of journal submissions. Enrollment is open to graduate students in the sciences and is by permission of the instructor.

411-3 Volcanology. Study of volcanoes, their distribution, forms, composition, eruptive products and styles of potential hazards. Relationship of magmatic characteristic, eruptive style, and depositional products to the geologic framework is examined. Prerequisite: Geology 315.

412-3 Advanced Petrology. In-depth study of the rock forming processes. The relations of rock forming processes to petrographic analysis will be emphasized. Laboratories will deal with hand-specimen and thin-section analysis from selected rock suites with genetic modeling of the resulting data. Prerequisite: GEOL 310, 315.

413-3 Quantitative Methods of Geology. An introduction to quantitative methods in a geological and earth sciences context. Topics introduced include sampling plans for geologic studies, non-parametric test of geological data, comparisons of geological samples, analysis of sequential geological data. Laboratories will deal with numerical examples from all areas of geology. Restricted to advanced standing. Special approval needed from the instructor.

415-3 Optical Mineralogy. The optical properties of minerals and the use of the petrographic microscope for identification of crystals by the immersion method and by thin section. Lecture, laboratory. Prerequisite: GEOL 310, PHYS 203B or 205B.

416-3 The Geochemistry of Natural Waters. The purpose of this class is to provide students with a strong theoretical background in aqueous geochemistry, environmental geochemistry, and groundwater geochemistry for application in a wide range of research topics. The approach combines conceptual knowledge with quantitative skills in a cyclic fashion to build independent understanding and chemical intuition. Prerequisites: GEOL 310, CHEM 200, 201, 210, 211 or consent of instructor. Lab fee: \$15.

417-3 Isotope Geochemistry. Isotope fractionation in natural systems containing D/H, carbon, oxygen, nitrogen, and sulfur. Application of stable isotope studies to environmental processes, paleoclimatology, and geothermometry. Stable and radioactive isotopes as tracers in hydrologic processes, ore deposits, sedimentology, and in crust-mantle differentiation processes. Prerequisite: GEOL 310, Chemistry 200, 201, 210, 211, or equivalent.

418-3 Low Temperature Geochemistry. The application of chemical principles to geologic processes that occur on and near the earth's surface. Lecture, laboratory. Prerequisite: GEOL 310, Chemistry 200, 201, 210, 211 or equivalent.

419-3 Ore Deposits. Overview of the occurrence, geology and origin of metalliferous mineral deposits. Geologic principles and research techniques important to the understanding of mineral deposits. Introduction to exploration and mining methods. Lectures, laboratories and field trips required. Prerequisite: GEOL 302, 315 or consent of instructor. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field trip fee not to exceed \$60.

420-3 Petroleum Geology. The geological occurrences of petroleum including origin, migration and accumulation; a survey of exploration methods, and production problems and techniques. Laboratory study applies geological knowledge to the search for and production of petroleum and natural gas. Prerequisite: GEOL 221, 224.

421-3 Organic Geochemistry. The nature, origin and fate of natural and artificial organic materials in rocks and sediments. Topics include characterization of fossil fuels using biological marker compounds, petroleum source rock evaluation, and organic pollutants in the environment. Prerequisite: GEOL 325 or consent of instructor.

423-3 Geomicrobiology. (Same as MICR 423 and MBMB 423) The course will focus on the role that microorganisms play in fundamental geological processes. Topics will include an outline of the present understanding of microbial involvement of weathering of rocks, formation and transformation of soils and sediments, and genesis and degradation of minerals. Elemental cycles will also be covered with emphasis on the interrelationships between the various geochemical cycles and the microbial tropic groups involved. Prerequisite: Microbiology 301 and Chemistry 210 and 211. Recommended: GEOL 220, 221 or 222.

425-3 Invertebrate Paleontology and Paleoecology. (Same as ZOO 425) Concepts of paleontology and paleoecology. Emphasis on functional morphology, lifestyles and habitats of fossil invertebrates and algae. The nature and evolution of marine and coastal paleocommunities. The effects of extinction events on paleocommunities and biodiversity. Laboratory. Field trips required. Prerequisite: GEOL 325 or a biology course. Field trip

fee: \$95. Lab fee: \$5.

428-3 Paleoecology and Environments of Deposition. Characteristics, distribution, and classification of recent and ancient environments. Criteria for recognizing ancient environments. Sedimentological and paleoecological approaches. Recognition of ancient environments and environmental associations. Laboratory. Field trips required. Prerequisite: GEOL 425, 325, or concurrent enrollment. Field trip fee: \$85.

430-3 Planetary Geology. Study of the solar system and planet formation, focusing on formation, differentiation and secondary processes. Geologic histories and geological processes of other planets are examined and compared with our understanding of the Earth. Prerequisite: Geology 310.

435-3 Solid-Earth Geophysics. Earth's size, shape, mass, age, composition, and internal structure are reviewed in detail as understood from its volcanism, gravity and magnetic fields, seismicity, and motion of continents and ocean basins; plate tectonics. Up to 3 one- or two-day field trips may be required on weekends. Prerequisite: GEOL 302, MATH 150, or consent of instructor.

436-3 Applied Geophysics. Theory and practice of geophysics applied to exploration for natural resources including oil, minerals, coal, groundwater, and for archaeology, environmental, and meteorite impact sites and earthquake zones. Methods include seismic reflection, refraction, and surface waves also gravity, magnetic, and electrical. Up to 3 one-day field trips may be conducted on weekends. Recommend: GEOL 220 or 222, PHYS 203A/B or PHYS 253A/B. Prerequisite: MATH 150. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field trip fee not to exceed \$80.

437-3 Field Course in Geophysics. Use of geophysical equipment for collection, analysis and interpretation of seismic, gravity, magnetic, electrical, and other types of geophysical data. Field trips required. Prerequisite: GEOL 436 or consent. Field trip fee: \$115. Lab fee: \$10.

440-1 to 8 Advanced Topics in the Geological Sciences. Individual study or research or advanced studies in various topics. Restricted to advanced standing. Special approval needed from the instructor.

445-3 Museum Studies in Geology. History, nature and purpose of geology in museums relationships of geology to other museum disciplines, application of geologic methods to museum functions, preparation and preservation of specimens; nature, acquisition and utilization of geologic collections in museums; role of research in museums.

450-3 Introduction to Field Geology. Introduction to field techniques, principles of geologic mapping and map interpretation. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Prerequisite: GEOL 310.

451-1 to 12 Field Experience in Geology. Preparation for and participation in academically rigorous field trips guided by faculty members. Trips will be to areas of geological interest and will occur during official breaks within or between semesters. Expense will vary in proportion to distance traveled and duration of trip and will be determined before each trip. A student may only take a specific trip once for credit. Special approval needed from the instructor.

454-6 Field Geology. Advanced field mapping in the Rocky Mountains, including problems in stratigraphy, structure, petrology, paleontology, geomorphology, and economic geology. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Prerequisite: GEOL 302, 315, 325. GEOL 450 recommended.

466-3 Tectonics. Fundamentals of geodynamics applied to plate tectonics: mantle composition and rheology, deformation of the lithosphere, structural characteristics of plate margins, stability of triple junctions, diachronous tectonics, and orogenesis will be examined in detail. One 3-day field trip is required. Prerequisite: GEOL 302, MATH 150, or consent. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field trip fee not to exceed \$150.

470-3 Hydrogeology. Study of the distribution, origin, and movement of groundwater, and the properties of geologic materials that control groundwater flow and contaminant transport. Geology majors must also take GEOL 471 concurrently. Prerequisite: GEOL 220 or 222; or consent of instructor.

471-1 Hydrogeology Laboratory. Problem sets, laboratory experiments, and field exercises in hydrogeology. Majors must take concurrently with GEOL 470. Field trips required. Prerequisite: GEOL 220 or 222; or consent of instructor. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field trip fee not to exceed \$150.

474-3 Geomorphology. Study of erosional and depositional processes operating at the earth's surface and landforms resulting from these processes. Relationship of processes and landforms to the geologic framework is examined. Laboratory. Field trips required. Prerequisite: GEOL 220 or 222; 223. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field trip fee not to exceed \$60.

476-3 Quaternary Geology. Methods used to identify, map, date and correlate Quaternary deposits and interpret Quaternary history. Covers glacial, fluvial, coastal, lacustrine and eolian chronologies, oxygen-isotope records from ocean sediments and continental ice cores, volcanic activity, and Quaternary climate change. Field trips required. Prerequisite: GEOL 220 or 222; 221, 223, 224; or consent of instructor; GEOL 474 recommended.

478-3 Advanced Environmental Geology. Application of principles of geomorphology and Quaternary to environmental problems and geologic hazards. Lectures and case studies emphasize neotectonics, volcanic hazards, landslides and other mass movements, floods, river channel changes, and coastal erosion. Prerequisites: GEOL 220, GEOL 223. Field trips required. Expense will vary in proportion to distance traveled and locations visited and will be determined before each semester. Field trip fee not to exceed \$60.

480-3 Geology of Coal. Stratigraphy, sedimentation and structure of coal deposits; modern analogs; origin of splits and partings in coal seams; coal quality and rank; coal exploration and mining; methods of resource evaluation. Prerequisite: GEOL 220 or 222; 221, 223, and 224; or consent of instructor.

481-3 Sedimentary Basin Analysis. The use of stratigraphy, structure, sedimentology and geophysics to determine the paleogeographic evolution of sedimentary basins. Topics include

the study of the relationships between host strata and both primary and post-depositional non-renewable resources, plate tectonics and basin evolution and subsurface geologic methods. Special approval needed from the instructor. Lab fee: \$10.

482-3 Organic Petrology. Petrology and geochemistry of coals and dispersed organics; emphasis on applications to the coal and oil industries; origin of coal and source rock constituents; geochemical and petrographic changes with increased maturation. Prerequisite: GEOL 220 or 222; 221, 223, and 224; or consent of instructor.

483-3 Forensic Geology. An introduction to the use of geological materials and techniques in criminal investigation. Details from actual criminal cases will be used as examples in all the topics covered which include rock and mineral types, geological and topographic maps, fossils, sand, soil, spores and pollen, geological building materials, art fraud and gemstones. Techniques covered will include optical microscopy, scanning electron microscopy and x-ray diffraction. Lab fee: \$10.

484-3 Geologic Remote Sensing. Applications of remote sensing using aerial photographs, multi-spectral imagery, hyperspectral imagery, thermal infrared imagery, and radar imagery, in structural geology, stratigraphy, geomorphology, oil and mineral exploration, geologic hazard analysis and planetary exploration. Prerequisite: GEOL 220 or consent of the instructor. Lab fee: \$25.

490-1 to 3 Internship. Credit for supervised practical experience with an external geological agency or company; prior approval of the sponsoring agency and the department is required. Not for graduate credit. Prerequisite: minimum 2.70 cumulative GPA. Restricted to advanced standing.

Geology Faculty

Anderson, Ken B., Professor, Ph.D., University of Melbourne, Australia, 1989.

Conder, James A., Associate Professor, Ph.D., Brown University, 2001.

Crelling, John C., Professor, *Emeritus*, Ph.D., The Pennsylvania State University, 1973.

Esling, Steven Paul, Associate Professor and *Chair*, Ph.D., University of Iowa, 1984.

Ferre, Eric C., Professor, Ph.D., University of Toulouse, France, 1989.

Fifarek, Richard H., Associate Professor, *Emeritus*, Ph.D., Oregon State University, 1985.

Filiberto, Justin, Assistant Professor, Ph.D., Stony Brook University, 2006.

Ishman, Scott E., Professor, Ph.D., Ohio State University, 1990.

Leiticariu, Liliana, Associate Professor, Ph.D., Northern Illinois University, 2004.

Marzolf, John E., Associate Professor, *Emeritus*, Ph.D., University of California at Los Angeles, 1970.

Pinter, Nicholas, Professor, Ph.D., University of California, Santa Barbara, 1992.

Potter-McIntyre, Sally, Assistant Professor, Ph.D., University of Utah, 2013.

Rimmer, Sue, Professor, Ph.D., Pennsylvania State University, 1985.

Sexton, John L., Professor, Ph.D., Indiana University, 1974.

German

(See Languages, Cultures, and International Studies)

GIS (Minor)

(SEE GEOGRAPHY AND ENVIRONMENTAL RESOURCES)

Global Studies

(Minor)

The interdisciplinary Global Studies minor is designed to help undergraduates to develop a broader perspective on the world, to better understand other world cultures including their history and inter-relations, and to lay the foundation for life-long learning about global issues. The world is increasingly inter-dependent, in terms of economics, politics, migration, media, climate, and culture. More than ever, educated citizens need to understand current affairs occurring in distant parts of the world, and to do so from the perspective of different regions and cultures. The minor will help prepare students for a host of international-oriented careers.

Successful completion of the Global studies minor consists of satisfying the following course requirements:

- 6 courses (18 CHs), including 2 from A and 1 each from B, C, D, and E (additional courses and substitutions as approved).
- No more than 3 courses will be allowed from any one department.
- At least 2 courses must be at the 300- or 400-level.
- Any formal study abroad experience (3+ credits) may substitute for 1 course in the relevant regional area (B, C, D, or E). Only 1 such substitution is allowed.
- Note some courses have prerequisites (marked*), some are Core Curriculum courses (marked UCC).

A. Global/Comparative. AD 207A, 207C, 358; ANTH 104 (UCC), 208, 304 370; ARC 231 (UCC), 314I (UCC); ECON 302I (UCC), 329*; FL 301I (UCC); GEOG 100 (UCC), 103(UCC), 300I (UCC), 304*, 421, 424, 439; HIST 101A (UCC), 101B (UCC), 112 (UCC), 358I, 383, 447, 473, 488; JRNL 306I (UCC), 401; PHIL 103A,B (UCC); POLS 250, 270, 352I (UCC), 372I, 373*, 375, 480; SOC 304I, 307, 437, 438, 476; CMST 441*, 448*.

B. Africa. AD 458; AFR 135, 225, 310A, 314A, 314B, 320; ANTH 271, 310A, 310F, 410H, 430C; HIST 387A, 387B, 493; POLS 467.

C. Asia & Middle East. CHIN 370*, 470; EA 102, 300; HIST 380A, 380B, 381, 384, 385, 489; JPN 370*; PHIL 308I, 475, 476, 477, 478, 479; POLS 461.

D. Latin America & Carribean. ANTH 204 (UCC), 205, 206, 302, 310C, 310E, 310I, 430B,F; GEOG 303I; HIST 370A, 370B; PHIL 360; SPAN 370B*, 434*.

E. Europe. AD 207B; ANTH 310D; CLAS 270, 271; ENGL 302A, 302B, 425, 448, 455, 464, 465; FL 200A,B,C (UCC); FR 101A, 101B*, 440, 470*; GER 101A, 101B*, 337*, 370*; HIST 201, 205A, 205B, 337, 338, 406B, 410, 426, 442, 444; PHIL 482; POLS 458, 459*; SPAN 370A*.

See updated course lists at <http://cola.siu.edu/academics/undergraduate/global-studies/index.html>.

Grain Merchandising

(SEE AGRIBUSINESS ECONOMICS)

Health Care Management (Major, Courses)

The Health Care Management (HCM) major provides coursework and experience across the spectrum of health care supervision and management. Many Health Care Management graduates obtain supervisory and administrative positions in various health and medical facilities such as hospitals, nursing homes, public health departments or health insurance companies. The Bachelor of Science degree in Health Care Management accommodates beginning students as well as students who have professional preparation in health-oriented fields from colleges and universities, technical institutes, community colleges, proprietary institutions or military schools. Graduates of diploma programs also may be eligible for admission. Students in health care education build upon their background through a combination of major core courses, electives within HCM, approved electives and the SIU University Core.

Students in the major must meet with the HCM academic advisor to plan their courses of study. Prospective students may complete their University Core Curriculum requirements and career electives at approved institutions, provided that four-year school and residence requirements are met.

Completing courses at any accredited college or university may satisfy the 41-hour University Core Curriculum requirements; credit received through CLEP, USAFI, DANES; or through proficiency examinations. The Capstone Option is available to students who have obtained a business or health care-related Associate of Applied Science degree or its equivalent, and who have a GPA of at least 2.0 on a 4.0 scale (SIU calculation) on all work prior to the completion of the Associate of Applied Science degree. More information about the Capstone Option may be found in Chapter 3.

Students may apply for credit toward degree completion for previous work experience (HCM 258) or educational and occupational experience (HCM 259). Credit is established by the HCM Academic Review Committee. This committee meets once during the spring and once during the fall. No summer submissions are accepted. Application for credit should be made by contacting the HCM Academic Advisor no later than the end of the student's first semester or no later than after 12 semester hours of completed HCM coursework. Submissions not following these guidelines will not be considered.

Students may request Individual Study opportunities (HCM 299 or HCM 499) through the HCM Academic Advisor. Approval to supervise an Individual Study is at the discretion of the HCM Faculty member that typically teaches the class on-campus. Students need to submit their request for an Individual Study, in writing, to the HCM Academic Advisor by the 6th week of the semester PRIOR to the semester in which the student wishes to complete the Individual Study. The Academic Advisor will forward the student's request to the Program Director for distribution to the appropriate Faculty member for consideration.

In addition to University requirements, students must successfully complete **all** HCM core courses with a grade of C or

higher prior to completing their required HCM 422 internship. Students receiving lower than a C in any HCM core course can only repeat that course once with the exception of HCM 422 which cannot be repeated if failed unless special circumstances apply as determined by the HCM Academic Review Committee. Students must maintain a minimum GPA of 2.0 within the Health Care Management major for graduation. Students receiving a grade lower than a C twice in any individual core HCM course and those who fall below a 2.0 GPA for two subsequent semesters are immediately dropped from the HCM program due to lack of academic performance.

Students participating in internships may be required to undergo a criminal background check and drug screening. Students who do not satisfactorily pass the background check and drug screening may find it difficult to secure an internship in the field of health care and may be removed from the HCM program unless special circumstances apply as determined by the HCM Academic Review Committee. The Internship requirement cannot be waived. Students will initiate and complete the processes involved with internship site selection and applicable SIUC approval processes. Internship hours cannot begin until all approvals have been obtained from the faculty member overseeing the internship processes, the internship site, and SIUC. Any contact hours students participate in prior to the internship being appropriately approved cannot be counted toward the required 150 contact hours.

Petitions to request waiver of prerequisites for HCM 422 must be submitted no later than one semester PRIOR to when the student intends to complete their internship. No summer semester submissions are permitted. Submissions not following these guidelines will not be considered.

Bachelor of Science Degree in Health Care Management, College of Applied Sciences and Arts

<i>University Core Curriculum Requirements</i>	41
(Recommend ECON 240, PSYC 102, HED 101/HND 101/ KIN 101).	
<i>Required Prerequisite/Background Courses</i>	11-15
AH 105; ISAT 229; ACCT 210 or 220; ECON 240 (or equivalents).	
<i>Requirements for Major in Health Care Management</i>	48
Core Requirements: 320, 340, 360, 364, 365, 366, 375, 382, 384, 385, 388, 390, 410, 420, 421	
Internship: 422	3
<i>Electives</i>	16-20
(Health Care Management, Business and Administration, Finance, Psychology, or Information Technology are encouraged).	
<i>Total</i>	120

Health Care Management Suggested Curricular Guide

THIRD YEAR	FALL	SPRING
HCM 320, 340	3	3
HCM 360, 382.....	3	3
HCM 364, 365.....	3	3
HCM 384, 390	3	3
HCM 366, 420	3	3

<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
HCM 388, Approved Elective(s) 0-6	3	3
HCM 385, Approved Elective(s) 0-6	3	3
HCM 375, Approved Elective(s) 0-6	3	3
HCM 410, Approved Elective(s) 0-6	3	3
HCM 421, 422	3	1-12
<i>Total</i>	15	15

Minor

The minor in Health Care Management (HCM) is designed to prepare undergraduate students interested in health care management with the skills and knowledge to prepare for graduate study or work in the health care field. A minor requires 18 hours of HCM course work at the 300 level or above including both HCM 360 and HCM 364. A "C" or better is required in all HCM core courses taken, and at least 12 semester hours must be completed at SIUC. All prerequisites must be satisfied for classes selected.

Students must consult the HCM academic advisor in the School of Allied Health to declare a minor.

Certificate of Completion in Long Term Care

The Certificate of Completion in Long Term Care is designed for students with an interest in Long Term Care (LTC), who wish to sit for the Illinois Nursing Home Administrators Licensure Examination. As part of the eligibility requirements for this exam, students must complete the four courses below:

- HCM 364-Organizational Behavior in Healthcare Organizations *and*
- HCM 385-Health Care Finance *and*
- HCM 390-Human Resources in Healthcare *and*
- HCM 413-Long Term Care Administration *and*

In addition to the four HCM courses listed above, the student must also complete one of the following courses below:

- HED 440 *or* GRON 440-Health Issues in Aging
- REHB 405 *or* GRON 405-Introduction to Aging and Rehabilitation
- REHB 446 *or* GRON 446-Psychosocial Aspects of Aging

Note: Eligibility requirements, as published by the Illinois Department of Professional Regulation, are subject to change without notification.

Courses (HCM)

199-1 to 6 Individual Study. Provides first or second year students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Each student will work under the supervision of a program faculty member approved by the HCM Academic Review Committee. Restricted to HCM majors.

258-1 to 30 Work Experience Credit. Credit granted for management or supervisory experience in the health care industry. Credit may be applied only to the approved career electives requirement of the health care management degree. Credit is determined by the HCM Academic Review Committee. Restricted to HCM majors.

259-1 to 30 Occupational Education Credit. Credit granted for past occupational educational experiences related to the

student's educational objectives. May be applied only to the approved career electives requirement of the health care management degree. Credit is determined by the HCM Academic Review Committee. Restricted to HCM majors.

299-1 to 16 Individual Study. Provides third or fourth year health care management students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Each student will work under the supervision of a sponsoring program faculty member. Restricted to HCM major or minor.

320-3 Health Policy and Politics. A course focusing on the U.S. health policy-making process within the context of the political marketplace. Emphasis is on the ways in which health policy affects the determinants of health. Through real world cases in health policy, health care management students analyze the public policy environment and gain an understanding of how to exert influence and deal with the political environment. Restricted to HCM major/minor.

340-3 Managerial Epidemiology in Healthcare. Epidemiological principles pertinent to the delivery and management of healthcare services. Focus on how evidence and population based decisions are critical to effective delivery of patient care. Addresses emergency preparedness, bioterrorism threats, community outreach and campaigning, and how the practice of epidemiology is interwoven with various management functions such as marketing. Use of current healthcare-related case studies, examples, and regulatory/legislative concepts to reinforce the theoretic concepts of epidemiology into management applications within healthcare organizations. A writing-intensive course. Prerequisite: ENGL 101. Restricted to HCM major/minors.

360-3 U.S. Health Care Systems. (Same as RAD 480) A study of the major components which comprise the U.S. health care system. This course will focus primarily on basic terminology, history, settings, personnel, utilization of service, and managerial epidemiology. Restricted to SAH major, HCM majors/minors.

364-3 Organizational Behavior and Management in Healthcare Organizations. (Same as RAD 481) An evaluation of relationships in healthcare organizations. Study of the motivational factors of those focused on patient care vs. those focused on profits and how to modify behaviors to achieve proper balance. Environmental factors of the healthcare field are evaluated for their impact on the behavior and employee-management relations of healthcare professionals and patient care providers. Promotes effective planning and organizing within the complex and highly regulated healthcare industry and assures alignment of organizational goals with the missions/visions/values as related to quality of patient life and organizational success. Restricted to SAH major/minor or with consent of SAH Academic Advisor.

365-3 Statistics and Research for Health Care Professions. A course for students beginning a major in the health care professions. Students examine and apply data to their professions with an emphasis placed on the understanding of the basic principles, techniques, and applications involved with analysis, synthesis, and utilization of data. Focus will be placed on using data for empirical research. Prerequisite: UCC MATH 101 or higher. Restricted to SAH major/minor.

366-3 Health Information Management. This course provides a multi-disciplinary analysis of the strategic application of information technology, and the management of such, in health care organizations. Focuses on using information technology to analyze both clinical data and business results in the decision making processes within an overall organizational capacity. Challenges facing the health care industry in terms of information technology will be examined. Restricted to HCM majors/minors.

375-3 Analysis and Evaluation of Health Care Services. An examination of theory and practices in evaluation of health care programs. Special attention is given to identifying program objectives, measuring performance, and designing evaluation studies. Both qualitative and quantitative methods of analysis and evaluation are covered (quasi-experiments, cost-effectiveness analysis and participant observation). Prerequisite: UCC MATH 101 or higher and an approved stats course or HCM 365. Restricted to SAH majors/minors.

382-3 Health Care Economics. An analysis of the economics of health care in the United States and its effect on society and the health care profession.

384-3 Strategic Planning and Leadership in Health Care. A course that analyzes the fundamentals of strategic planning and leadership in health care organizations. Emphasis is placed on mission, vision, values, creating business plans and conducting SWOT analysis. The impact of leadership style on the strategic planning process is explored. Restricted to HCM majors/minors.

385-3 Health Care Finance. An introduction to the fiscal problems in health care organizations. Emphasis is placed on health care reimbursement, working capital, financial statements, accounting/monetary control of the health care industry. Prerequisite: UCC MATH 101 or higher and ACCT 210 or 220. Restricted to SAH major/minor or with consent of an SAH Academic Advisor.

388-3 Legal Aspects and Current Issues in Health Care. (Same as RAD 482) Principles of law and the U.S. legal system are applied, in part through case study and an exploration of current events, in the areas of health care management. Legal issues include malpractice, contracts, corporate liability, professional liability, patient rights, and the legal aspects of managed care. Restricted to HCM majors/minors.

390-3 Human Resources in Healthcare. Examines key factors that impact healthcare organizations and how effective policies and procedures can improve organizational efficiencies within the context of emerging health care models and legislation such as the HCOs, ACA, ACOs, PHOs, etc. The recruitment and retention of healthcare professionals in the midst of labor shortages of patient care providers will be addressed with an emphasis of linking outcomes to patient care and Joint Commission initiatives. Legal and ethical implications surrounding core competencies of varying patient care providers will be explored as well as credentialing, CEU's, licensing, nurse/patient ratios, unionization, and workforce planning based on epidemiological principles, etc. Restricted to SAH major/minor or with consent of SAH Academic Advisor.

410-3 Operations Management and Quality Improvement in Health Care. Examines the applications of operations management in the framework of health care organizations. Focus

will be placed on supply chain and inventory management, forecasting, queuing models, and capacity planning. Determinants to achieve quality management in health care facilities will be explored. Utilizes analytical methods of systematic monitoring and evaluation and the application of quality improvement initiatives. Includes impact on quality of accreditations, credentialing, liability, and governmental regulations. Not for graduate credit. Prerequisite: UCC MATH 101 or higher and an approved stats course or HCM 365. Restricted to SAH majors/minors.

413-3 Long Term Care Administration. A study of the principles of nursing home management and assisted living services which examines administrative and staffing functions relating to clients, community, public policy, programming, and state and federal laws, and financing. Restricted to junior standing and SAH major/minor or consent of SAH Academic Advisor. Not for graduate credit

420-3 Health Care Ethics, Coding, and Compliance. Exploration of the ethical issues surrounding the delivery of health care services. Students will apply ethical principles and decision making processes to a series of cases involving ethical dilemmas unique to the health care environment. Students will examine coding and compliance issues and carefully explore the external environment which governs and regulates their actions as future health care managers. Not for graduate credit. Restricted to SAH major/minors.

421-3 Professional Practice for Health Care Managers. Introduces students to the health care environment and the expectations of them as health care professionals. Emphasis is placed on professional development, professionalism, business correspondence and technical writing, patient-centered health care, customer relationship management, and networking. Resumes, internship site selection and related processes will be accomplished. Not for graduate credit. Restricted to HCM majors. Special approval needed from the academic advisor.

422-3 to 12 Health Care Management Internship. Students initiate, locate, and complete the student's portion of the University mandated requirements (including the MOU) for participating in an internship in a healthcare organization as outlined in the course syllabi and/or directed by the instructor. Students engage in activities related to the health care management field and their career objectives. Once internship is approved by the University, instructor, and Preceptor, each student will perform duties as assigned to complete a managerial/analytical project useful to the organization. Report logs and performance evaluations required. Hours and credit arranged individually with instructor. 1 credit hour = 50 contact hours. A minimum of 150 contact hours is required. No waiver of internship is permitted. Mandatory Pass/Fail. No repeat allowed on Fail. Not for Graduate Credit. Prerequisite: completion of all HCM core courses with minimum grade of C. Restricted to HCM majors.

460-3 Lean Six Sigma in Healthcare. An introductory course focusing on the Lean Six Sigma approach to improving quality in healthcare organizations. An exploration of error prevention, problem solving, problem detection, change management, and effective and efficient process improvement. Cases will be used to demonstrate how the approach can be applied specifically to the healthcare industry. Restricted to junior standing and SAH majors or minors.

461-3 Introduction to Physician Practice Operations. An introductory course designed to examine the different aspects of operating a physician's practice. Focus is placed on licensing and professional regulation; selection of HMOs, PPOs, and other managed care programs; medical records and regulatory compliance; community outreach required for building a medical practice, and practical development of templates for practice activities such as streamlined appointment scheduling and encounter forms. Not for graduate credit.

462-3 Healthcare Reform and the Affordable Care Act. An exploration of the history of US healthcare reform attempts and the landmark healthcare reform legislation known as the Affordable Care Act. Focus is on the impact of healthcare organizations, employers, insurers, individuals, and medical practice, as well as the impact on the economy. Changes to Medicare, Medicaid, long term care, abortion, dental care, mental health, and the delivery of care, Accountable Care Organizations (ACO's), will be examined. Not for graduate credit.

499-1 to 6 Individual Study. Provides third or fourth year health care management students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Each student will work under the supervision of a sponsoring program faculty member approved by the HCM Academic Review committee. Not for graduate credit. Restricted to HCM majors.

Health Education (Major, Courses, Faculty)

Health Education offers a community health education specialization within the health education major. Community health specialization is appropriate for those students planning to conduct health education and health promotion activities in non-classroom settings.

An overall 2.5 grade point average and completion of Health Education 101: Foundations of Human Health are required for admission in the undergraduate health education program. Additional prerequisites include completion of the university core English composition course(s) and Allied Health 241 or equivalent anatomy/physiology course.

Psychomotor and verbal skills are required for students enrolled in HED 334 and 434. If questions arise concerning a student's ability in these areas, an assessment will be made prior to the end of the first week of the semester to determine whether the student possesses the necessary skills to remain in the course. The first aid coordinator in the Department of Health Education and Recreation will make the final decision.

A student in the community health education specialization must have a 2.75 grade point average in the major before clearance to do an internship. A grade of C or better is required for all major courses in the undergraduate health education program.

Bachelor of Science Degree in Health Education, College of Education and Human Services

HEALTH EDUCATION MAJOR — COMMUNITY HEALTH EDUCATION SPECIALIZATION

University Core Curriculum Requirements 41
 Health Education 101 must be included in University Core Curriculum.

Requirements for Major in Health Education-Community Health Specialization 54
 Health Education 300, 312, 325, 326, 330, 334, 355, 407, 410, 413S, 414, 488, 490A,B, 491, 493
Allied Health 241 or appropriate anatomy and/or physiology course 3-4
Health Education or other Electives 21-22
Total 120

Community Health Education Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101,102.....	3	3
UCOL 101, HED 101	3	2
MATH 101, Core Humanities.....	3	3
CMST 101, Core Science	3	3
Fine Arts, Core Social Science.....	3	3
<i>Total</i>	15	14
SECOND YEAR	FALL	SPRING
HED 413S, 300.....	3	3
Core Science, AH 241 or substitute	3	3-4
Core Social Science, Multicultural.....	3	3
Core Humanities, HED 325.....	3	3
Electives	3	3
<i>Total</i>	15	15-16
THIRD YEAR	FALL	SPRING
HED 312, 326	3	3
Electives	3	3
HED 355, 410	3	3
HED 334, 330	3	3
Elective, HED 488	3	3
<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
HED 491	3	-
HED 407	3	-
HED 414	3	-
HED 493	3	-
HED 490A, B.....	-	12
Elective, Elective.....	3-4	3
<i>Total</i>	15-16	15

Courses (HED)

101-2 Foundations of Human Health. (University Core Curriculum) This course is designed to examine contemporary health-related issues for all dimensions of the individual - physical, mental, social, emotional and spiritual - through focus on health promotion and disease prevention. Emphasis is placed on maintaining or improving quality of life by developing personal and social skills (decision-making, communication, stress management, goal setting) across health education content areas, as well as identifying and accessing appropriate health-related resources.

200-3 Human Ecology. This course will explore a range of per-

sonal, social, economic, and environmental factors influencing health status and quality of life. Health determinants include biology, genetics, individual behavior, access to health services, and the physical/social environment. Interactive discussion will be integrated with laboratory experiences applying the scientific method to the study of health promotion and disease prevention.

300-3 Health Education: Foundations, Theory, and Practice. Provides a foundation to the health education profession. Includes an overview of historical, philosophical, theoretical, and research foundations; professional ethical issues; professional roles and responsibilities; and future directions. Enrollment limited to health education majors or those seeking health education endorsement.

311-3 Human Growth and Development. An overview of human development from conception through senescence. Designed for professional personnel who will be concerned with planning health programs for groups representing broad age ranges. Emphasis will be on physical, mental, and social dimensions of growth and development.

312-3 Emotional Health. Introduces knowledge and skills needed to acquire and maintain emotional health. A variety of individual and community issues that occur across the lifespan in our diverse, complex world will be examined.

325-3 Planning and Implementing Health Education Programs. Current theories and models related to planning and implementation of health education programs in various settings will be examined. Steps to program planning, including needs assessment, recruitment, developing program plans and implementation strategies will be discussed.

326-3 Evaluation in Health Education. This course covers the principles and methods for monitoring the implementation of health education and for assessing its impact. It also focuses on the development and selection of valid and reliable measures and the use of standardized scores and other appropriate statistics. Applications are completed in classroom and community settings.

330-3 Consumer Health. An overview of the health marketplace and the processes involved in becoming an intelligent consumer of health information, products, and services. Topics will include health-related advertising, fads, fraud, legislation, watchdogs, healthcare options, self-care, complementary and alternative medicine, drugs, devices, major health problems, nutrition, and physical activity.

334-3 First Aid and CPR. Provides students with first aid and cardiopulmonary resuscitation knowledge and skill competencies necessary to care for injuries and provide assistance in emergencies. A nationally recognized First Aid and CPR certification may be obtained with successful completion of the course. Purchase of first aid kits and protective equipment are necessary. Students will be required to pay a lab fee of \$15.

335-3 Construction Safety and Health. The course will introduce the student to principles of safety and health in the construction industry. The course will include identification of safety and health hazards, risk reduction measures, personal protection, and safety attitudes and training. Includes a study of the Safety and Health Regulations for Construction.

345-3 Emergency Planning and Response. This course focuses on key elements of emergency response plans, with par-

ticular emphasis given to holistic planning in both industrial and municipal settings, the relevance of hazard and risk assessment techniques to emergency response operations, personnel training, and multi-level coordination in both planning and operational phases of emergency response.

346-4 Motorcycle Rider Education Instructor Training. Provides prospective teachers with on-cycle teaching experience with beginner riders. Addresses program administration, scheduling, public information techniques, equipment procurement, evaluation and instructional technology. Certification as Motorcycle Rider Course Instructor can be obtained. Materials purchased from the Motorcycle Safety Foundation are required in this course. Special approval needed from the instructor.

351-3 Health Education in Early Childhood. A study of essential factors of health, nutrition, and safety as they apply to school environments of children birth to age eight. Emphasis will be given to nutritional needs, health routines, health appraisals, safety, hygiene, childhood illness, and social-emotional needs. Students will examine the relationship of the child, family, school, and community on the child's health and well-being.

355-3 Introduction to Community Health. Organization and administration in local, state, and national official and non-official health agencies, their purposes and functions, and an overview of methods for meeting community health needs and for solving community health problems.

402-3 Death Education. (Same as GRON 402) Designed to prepare educators to conduct learning experiences about death and dying in a variety of school, college, medical care, and community settings. Stress will be placed on developing brief, functional curricula and usable, imaginative, teaching-learning materials and on evaluating resource materials for use in educating at various levels of maturity.

403-3 Health Advocate Training. Provides students with knowledge and skills in the areas of peer health education, health advocacy, and referral. Instruction includes health care information from a wellness point of view. Prepares students for practicum in health advocate program. Credit will not count toward a master's degree in health education. Special approval needed from the instructor.

407-3 Substance Use Prevention. Designed to prepare educators to plan, implement and evaluate substance use prevention programs. Emphasizes incidence/prevalence, etiology, risk factors, short- and long-term effects of substance use. Key elements of effective prevention programs are reviewed. Meets requirements of Illinois state law concerning drug education.

410-3 Human Sexuality. (Same as WGSS 411) Provides detailed information on dimensions of sexuality; characteristics of healthy sexuality; anatomy and physiology; gender roles; relationships; sexually transmitted infections/diseases; contraceptive issues and concerns; sexual victimizations; and sexuality through the life cycle.

411-6 Emergency Medical Technician in the Wilderness. Placement of trained emergency medical technicians into a wilderness situation and having them adopt previously learned skills and newly developed skills. Prerequisite: HED 334 or 434.

412S-3 Driving Task Analysis: An Introduction. An introductory course that deals with the highway transportation system, traffic problems, the driving task, perception and im-

plementation of the driver education classroom program. Observation of a teaching environment is included. A valid driver's license is required.

413S-3 Injury Prevention and Safety. Introduces the concepts and topics of injury prevention and safety. Course areas include: school, farm, consumer, fire, home, traffic, occupational, recreational, and disaster.

414-3 Sexuality Education. Focuses on knowledge/skills needed to address complex issues of sexuality education. Discussion will include challenges/resources for all health education settings and related disciplines. Purposes/goals, the nature of sexuality education teachers/learners, and "best practice" will be covered. Emphasis on developing competencies essential for professional practice.

415-3 Health Counseling. This course teaches basic communication skills and intervention strategies for helping people make positive health related lifestyle changes. It is not a course in therapeutic counseling; it focuses on helping average people to function in the healthiest way possible.

420-1 to 3 Special Topics/Independent Study. An area of study to be determined by students in consultation with health education faculty that goes beyond the current health education course offerings. 1 to 3 credits; may be repeated twice for maximum of 6 hours. Special approval needed from the instructor.

430-3 Health and Injury Control in a Work Setting. (Same as IT 430) Assesses the health and injury control programs present in a work setting. Emphasis given to employee programs in health, wellness, and injury control that are effective. Field trips to work sites are included.

434-4 Advanced First Aid and Emergency Care. Meets the needs of those in positions where advanced first aid and emergency care is required. A nationally recognized First Aid and CPR First Responder certification may be obtained with successful completion of the course. Purchase of first aid kits and protective equipment are necessary. Prerequisite: HED 334 or consent. Students will be required to pay a lab fee of \$20.

435-2 Work Site Safety and Health Evaluation. This course covers methods of inspecting and evaluating health and safety hazards at a work site including analysis of specific job assignments. It also introduces the student to injury and incident investigation techniques. The course will include hands-on work site evaluation.

440-3 Health Issues in Aging. (Same as GRON 440) Course content includes demographic trends; physiological changes associated with aging; health care and consumer challenges; cultural differences; psychological effects of aging; housing; long-term care; retirement; care giving; and formal, informal, and community-based support systems.

441-3 Women's Health. The course deals with a wide variety of health concerns of American women as consumer in the current health marketplace. Major categories of topics include health products, health services, and sources of health information of particular interest to women. Emphasis is also placed on current health related issues of women. The major purpose of the course is to provide a basis for informed decision-making by the female consumer.

442S-3 Developing Vehicle Operational Skills: Driver Education Laboratory Experiences. Learning activities will

focus on preparing the prospective driver educator to conduct activities that develop operational skills for a novice driver. Emphasis is placed on laboratory organization and administration, maintaining a learning environment, developing laboratory instructional modules, and conducting learning experiences. Prerequisite: HED 412S.

443S-3 Developing Classroom Skills: Driver Education Classroom Experience. Learning activities will focus on preparing the prospective driver educator with the skills to teach in the driver education classroom with application to classroom organization, maintaining a safe learning environment, developing instructional modules, and conducting learning experiences. Prerequisite: HED 412S with a grade of C.

445-3 Advanced Driver Education Instructor Training. Prepares prospective instructors of advanced driving techniques. Emphasis is placed upon safe driving practices, vehicle dynamics, emergency vehicle operation, in-car response to simulated driving emergencies, and instructional techniques. Special approval needed from the instructor.

450-3 Health Programs in Elementary Schools. This course is designed to present key health-related concepts and skills to enable elementary teachers to deliver culturally-sensitive, developmentally-appropriate, standards-based instruction to elementary students. It will also provide an overview of coordinated school health programs and their relationship to academic achievement.

461-1 to 12 Health Education Workshop. A different focal theme each year; e.g., mood modifying substances, ecology, human sexuality, emotional and social health dimensions. Information, ideas, and concepts are translated into teaching-learning materials and approaches; continuing opportunity for interaction between prospective and experienced teachers.

470S-3 Highway Safety as Related to Alcohol and Other Drugs. Relationship between alcohol and other drugs and traffic accident causes. A review of education programs designed to minimize drug related accidents. Restricted to advanced standing or consent of instructor.

471-2 Health Education Instructional Strategies. This course is designed for graduate students who are teaching assistants in Health Education. The purpose of the course is to enhance professional skills of those who are responsible for teaching health education, general education, and first aid.

476-3 Stress Management. A study of the physiological, emotional and sociological stressors and their underlying mechanisms in states of disease and health. Particular emphasis is placed upon prevention and control of stress via self assessment techniques and proficiency in self control techniques such as biofeedback, autogenic training, meditation and progressive muscle relaxation.

480S-3 Traffic and Driver Education Program Development. Acquaints students with curriculum innovation, current philosophy, learning and teaching theories, and instructional designs. Students will develop learning packages and modules. Prerequisite: HED 443S or consent of instructor.

484-3 Preventing Violence in Educational Settings. Designed to prepare educators, administrators, and other professionals to plan, implement, and evaluate violence prevention, conflict resolution, and crisis intervention programs in educational settings. Incidence/prevalence, etiology, and risk/protec-

tive factors related to youth violence will be examined. Current theories and models related to program planning and implementation will be applied to design coordinated, integrated school/community programs. Based on current research, key elements of effective curricula and other program components will be reviewed.

485-3 Global Health. This course will present introductory principles and practices related to public health on a global basis. In this course we will analyze various public health aspects of global health, including: public health problems (chronic disease, infectious disease, injury, disability, malnutrition, etc.) affecting foreign countries, prevention and control efforts in foreign countries, United States involvement in global health problems, economic and social impact of global health problems, structure and function of health care systems, and the future of global health.

488-3 Environmental Health. This introductory course is designed primarily for health education students and is intended to provide a broad overview of key areas of environmental health as a public health discipline. This course contributes to students' understanding of the impact of environmental concerns in their role as public health educators.

489-3 Introduction to Biostatistics. An introduction to biostatistics; examination of theories of population projections; collection, organization, interpretation, summarization, and evaluation of data relative to public health happenings with emphasis on graphic presentation.

490A-2 to 12 Field Experiences in Schools, Community Health. Field observation, participation, and evaluation of current school or community health education or safety programs in agencies relevant to student interests. Prerequisite: all required health education courses. Special approval needed from the instructor.

490B-2 to 6 Advanced Field Experience in School, Community Health or Injury Prevention Education. Advanced field observation, participation and evaluation of current school or community health education or injury prevention programs in agencies relevant to student interests. Prerequisite: grade of B or better in HED 490A. Special approval needed from the instructor.

491-3 Health Teaching/Learning: School and Community. Teaching and learning strategies at secondary school levels and in other community group settings. Opportunities to examine and observe a variety of educational strategies applicable to health education.

493-3 Health Informatics. The application of technology to engage communities and individuals in behavior and environmental change processes. The course will focus on the use of technology to describe the magnitude of health problems and their sources; analyze risk factors; identify community strengths from which strategies may be defined and tools created to intervene, prevent problems, and promote health and well-being; and continuously evaluate, refine, and implement what works.

496-4 Industrial Hygiene. Provides a background in the recognition, evaluation, and control of toxic materials and hazardous physical agents in the work environment. Special approval needed from the instructor.

499-3 Rx: Education in Health Care Settings. Designed for

members and potential members of the health care team to explore educational concepts and strategies applicable to a variety of health care settings. Includes rights and responsibilities of consumer and professional, determinants of health behavior, contrasting models of health care, communication skills, media and materials and planning, implementing and evaluating educational programs. Open to medical and dental personnel, nurses, health educators, dietitians, therapists, pharmacists, social workers, and related professionals.

Health Education Faculty

Birch, David A., Professor, *Emeritus*, Ph.D., Pennsylvania State University, 1990.

Drolet, Judy C., Professor, *Emerita*, Ph.D., University of Oregon, 1982.

Fetro, Joyce V., Professor and Distinguished Teacher, *Emerita*, Ph.D., Southern Illinois University, 1987.

Kittleson, Mark J., Professor, *Emeritus*, Ph.D., University of Akron, 1986.

Lacey, Ella P., Associate Professor, *Emerita*, Ph.D., Southern Illinois University, 1979.

Miller, Kim H., Associate Professor, Ph.D., Southern Illinois University Carbondale, 2000.

Ogletree, Roberta J., Professor, H.S.D., Indiana University, 1991.

Rados, Robert, Instructor, Ph.D., Southern Illinois University Carbondale, 2003.

Ratnapradipa, Dhitinut, Associate Professor, Ph.D., University of Utah, 2001.

Rice, Brian, Clinical Instructor, M.S., Southern Illinois University, 1996.

Ritzel, Dale O., Professor, *Emeritus*, Ph.D., Southern Illinois University, 1970.

Vitello, Elaine, Professor, *Emerita*, Southern Illinois University Carbondale, 1977.

Welshimer, Kathleen J., Associate Professor, Ph.D., University of North Carolina, 1990.

Wilken, Peggy A., Clinical Assistant Professor, Ph.D., Southern Illinois University, 1995.

Zunich, Eileen M., Assistant Professor, *Emerita*, Ph.D., Southern Illinois University, 1970.

History (Department, Major, Minor, Courses, Faculty)

Students may pursue either a B.A. or a B.S. in History. A B.A. in History consists of thirty-six semester hours, and a B.S. in History consists of thirty-three semester hours. Students who plan advanced study in preparation for college teaching, law or other professional work are advised to take additional work in their proposed specialty. Students must consult with departmental advisors to choose a course of study that fits their needs, and they should also consult with college and career services advisors for assistance in determining their career goals.

Papers written in History 392 meet the College of Liberal Arts Writing-Across-the-Curriculum (WAC) requirement. A number of 400-level courses also meet the WAC requirement. Please consult course descriptions. Students who receive a grade of B or higher in 100-level (CORE) History courses may receive credit toward the major. Consult with an advisor.

All history majors must meet with the department's undergraduate advisor each semester to keep up to date the records of their progress toward the degree and to receive advance approval of their courses. A 2.0 average in the major and a C grade or better in History 392 are required for graduation. A 3.0 average in the major and completion of History 392 are required before the department will approve student teaching. If the student is taking History 392 when applying to student teach, a letter indicating satisfactory performance from the instructor is required.

Transfer students must report to the department prior to their first semester of attendance. The department will accept up to 18 credit hours in history taken at other accredited institutions. All transfer students must take at least 18 semester hours in history at Southern Illinois University Carbondale.

History Honors Program

Outstanding students enrolled in the University Honors Program may pursue an Honors Major in History. Course credit requirements are identical to those for a regular Bachelor of Arts degree (including 36 hours in History), except that at least eight classes must be honors classes. Usually, these are four UHON classes in the student's first two years of study and four History Honors classes as a junior and senior.

Honors courses in History include the following HIST 330H (Modern Britain), 406BH (Gender and sexuality in Modern Europe), 417H (Ritual and Revolt in Early Modern Europe), 418H (The Renaissance), 426H (Cities and Culture in Europe, 1870-1914), 427H (World War I), 447H (Culture and the British Empire), and 455H (The Conservative View in American History). All of these courses are cross-listed with the University Honors Program. In addition, students may receive Honors credit for other History courses through an Honors contract with the course instructor.

Students are also required to write an Honors thesis. Honors students can do this in one of three ways: by signing up for UHON 499 under the guidance of a departmental faculty member in their senior year, enrolling in HIST 499, or by taking a 500-level graduate colloquium/seminar series (pending instructor approval). This thesis can be part of a History Honors Major, but students who are not enrolled in University Honors may also write an Honors thesis.

Bachelor of Arts Degree in History, College of Liberal Arts

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements</i>	
(See Chap 4)	11
<i>Requirements for Major in History</i>	36
History 101A and 101B	6
History 207	3
History 300	3
History 301	3
History 392	3
History electives, 300 level or above distributed in at least two fields of history	18*
<i>Electives</i>	32
These may include courses required for teaching certification in Social Sciences.	
<i>Total</i>	120

*Students must complete a minimum of four courses at the 400-level. At least one 300 or 400-level course must be on a non-U.S. History topic.

Bachelor of Arts Degree in History, College of Liberal Arts Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101, CMST 101	3	3
Social Science	3	3
Humanities.....	3	3
ENGL 101, 102.....	3	3
Human Health, Fine Arts.....	2	3
<i>Total</i>	14	15
SECOND YEAR	FALL	SPRING
Science,	3	3
MATH 101, Multicultural.....	3	3
Foreign Language	4	4
HIST 101A, 101B.....	3	3
HIST 300, 301	3	3
<i>Total</i>	16	16
THIRD YEAR	FALL	SPRING
ENGL	3	-
HIST 207, 3XX/4XX	3	6
HIST 4XX	3	3
HIST 392	3	-
Electives	3	6
<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
HIST 4XX	3	3
HIST 3XX/4XX	-	3
Electives 300 or 400-level.....	12	10
<i>Total</i>	15	16

Bachelor of Science Degree in History, College of Education and Human Services (History Designation for the Illinois Social Sciences Teaching License)^{2,3}

In order to teach the social sciences in middle school, junior high, and high school levels, two options for Illinois licensure in social studies education with a designation in history are offered: a Bachelor of Science degree in Social Science Education and a Bachelor of Science degree in History Education. Teacher candidates pursuing the first option of a Social Science Major in the College of Education and Human Services will work toward a designation in history, and they will select an additional concentration in geography or political science. Teacher candidates working toward the second option will take additional coursework in history.

The goal for both programs of study is to prepare prospective social science teachers for the role of leadership in guiding middle school, junior, and senior high school students to live as effective citizens in a democratic society.

Content and professional coursework provide the foundation used in the social science methods course, where teaching meth-

ods and strategies are explored and experienced. A series of clinical experiences provide teacher candidates an opportunity to use the knowledge and skills acquired in their program. A cooperating teacher and a university supervisor will assist the student to blend knowledge and skills with the adolescent behavior and curriculum needs.

<i>University Core Curriculum Requirements</i>	41
To include Core Fine Arts (HIST 201 recommended); HIST 101A & B as Core Humanities; HIST 300; POLS 114; PSYC 102; GEOG 104 or GEOG 303I as Core Science I substitute.	
<i>Requirements for Major in History</i>	24 ¹
HIST 207	3
Two additional 300-400 level non-US history courses*.....	6
HIST 301	3
One additional 300-400 level U.S. history courses.....	3
HIST 367	3
HIST 392	3
One 300-400 level history elective	3
<i>Additional Requirements for the Social Science Teaching License⁵</i>	21
To include ANTH 104; ECON 113; GEOG 103, 300I; PHIL 307I; POLS 170 or 270; and SOC 108. Additional social science courses are recommended if a student's program permits; recommended electives would include ANTH 202; ECON 240, 241; POLS 213; PSYC 303; SOC 302, 303.	
<i>Professional Education Requirements</i>	30
EDUC 301, 302, 303, 308, 311, 313, 314, 319, 401	
<i>Additional Certification Requirements</i>	6
CI 360, 469	
<i>Total</i>	122

*At least one of these must be a 400-level course.

¹At least nine hours must be taken at the 400 level.

²This degree leads to Illinois licensure to teach social science - History.

³The Social Science teaching license allows a teacher to teach courses on the secondary level.

Bachelor of Science Degree in History, College of Education and Human Services Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101, CMST 101	3	3
POLS 114, MATH 101	3	3
HIST 101A, 101B	3	3
ENGL 101, 102.....	3	3
PSYC 102.....	3	-
Fine Arts.....	-	3
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
Sciences	3	3
Human Health	2	-
GEOG 300I, ANTH 104	3	3
ECON 113, GEOG 103	3	3
EDUC 311, 314.....	3	3
HIST 300, 301	3	3
<i>Total</i>	17	15

THIRD YEAR	FALL	SPRING
HIST 207, POLS 170/270.....	3	3
HIST 392, 367	3	3
HIST 4XX (non-U.S.) , CI 360	3	3
HIST 3XX/4XX, PHIL 307I.....	3	3
EDUC 313, 319.....	3	3
EDUC 301, 302.....	1	1
<i>Total</i>	16	16
FOURTH YEAR	FALL	SPRING
HIST 4XX, EDUC 401	3	12
HIST 3XX/4XX (non-U.S.)	3	-
CI 469	3	-
SOC 108	3	-
EDUC 308	3	-
EDUC 303	1	-
<i>Total</i>	16	12

History Minor

A minor consists of eighteen semester hours. The student is advised to balance courses between at least two of the three fields of American, European, or Third World history. Transfer students, in order to have a minor in history, must have taken at least nine semester hours in history at Southern Illinois University Carbondale. Core Curriculum history courses count toward the minor.

Courses (HIST)

101A-3 The History of World Civilization I-To Industrialization. (University Core Curriculum) A survey of various civilizations in the world from prehistory to the present with particular attention to non-western cultures.

101B-3 The History of World Civilization II-Since the Age of Encounter. (University Core Curriculum) A survey of various civilizations in the world from prehistory to the present with particular attention to non-western cultures.

110-3 Twentieth Century America. (University Core Curriculum) The history of the United States since 1900. Surveys cultural, social, economic and political development, with special emphasis on domestic pluralism and changing international roles.

112-3 The Twentieth Century World. (University Core Curriculum) The history of Europe, Asia, Africa and Latin America since 1900. Emphasis on political conflict, economic development, social change and cultural transformation in an increasingly integrated world.

201-3 Art, Music and Ideas in the Western World. (University Core Curriculum) [IAI Course: HF 902] The historical evolution of the visual arts, architecture and music in the context of society and literature, from ancient Greece to the present. It emphasizes the fundamental historical relationship of the different genres of human expression in Western culture.

202-3 America’s Religious Diversity. (University Core Curriculum) [IAI Course: H5 905] An introduction to the basic concepts and histories of the world’s religions and their place in American society. The purpose is to increase our understanding of cultural and religious diversity and how the various religious

traditions inform our world views.

205A-3 History of Western Civilization-From Ancient Times Through the Sixteenth Century. [IAI Course: S2 902] A brief survey of the major developments and trends in European history from ancient times through the 20th Century.

205B-3 History of Western Civilization-The Seventeenth Century to the Present. [IAI Course: S2 903] A brief survey of the major developments and trends in European history from ancient times through the 20th Century.

207-3 World History. (Advanced University Core Curriculum course) An investigation of select issues in societies of the world from pre-history through the 20th century, with a focus on primary source interpretation. Some sections of this course may be limited to History majors. Please consult with advisor and/or instructor.

212-3 Introduction to American Studies. (Same as ENGL 212) (University Core Curriculum) Offers interdisciplinary approach to the study of America and American selfhood, and thus to the central question, “What is an American?”. Texts range from novels and films to museums and shopping malls. Issues range from multiculturalism to abstract notions such as citizenship and authenticity. Fulfills central requirement for American Studies Minor.

300-3 The Origins of Modern America, 1492-1877. (Advanced University Core Curriculum course) [IAI Course: S2 900] A general survey of political, social, and economic development of the United States from 1492 to 1877. Satisfies the University Core Curriculum Multicultural requirement in lieu of 210.

301-3 Modern America from 1877 to the Present. (Advanced University Core Curriculum course) [IAI Course: S2 901] A general survey of the political, social and economic development of the United States from 1877 to the present. Satisfies the University Core Curriculum Social Science requirement in lieu of 110.

303-1 to 9 Topics in History. Topics will vary with instructor. May be repeated for a maximum of nine semester hours, provided registrations cover different topics.

311-3 The Ancient Near East and Mediterranean. A comparative study of ancient near eastern and classical civilizations of the Fertile Crescent and the Mediterranean Basin: Mesopotamia, Egypt, Palestine, Greece and Rome.

312-3 History of Italy. An examination of the major societies which have occupied the Italian Peninsula from the Roman era to the present, with emphasis on ancient times, the middle ages and Renaissance and the unification movement of the Nineteenth Century.

313-3 Ancient and Medieval Spain. Investigation into the societies and cultures of the Iberian Peninsula from the Roman conquest to the Inquisition. Focus on cultural interchange and conflict between pagans, Christians, Jews and Muslims.

315-3 Medieval Europe. The emergence of Europe from the Age of Constantine to the Black Death, with emphasis on the political, socio-economic, and cultural forces which were at work creating Europe.

320-3 Early Modern Europe. The development of Europe from the Renaissance through the Age of the French Revolution.

324-3 Women in Western Society: 1600 to Present. (Same

as WGSS 348) The legal, social, economic, and political position of women in Western society during the past 350 years are examined against the backdrop of industrialization, political democratization, world wars, and totalitarianism. Emphasis is on women in England, France, and the US.

325-3 War & Society: The U.S. and World War II. This course is designed to provide an in depth examination of the U.S. during World War II, analyzing the major events, issues, and figures prominent on the homefront and the battlefield. Particular emphasis will be paid to America's role as a global power in a global war.

328-3 History of France. A survey of main themes (social, cultural, economic, political) in French history from the middle ages to the present.

329-3 Nazi Germany. This course explores politics, culture, and society in National Socialist Germany. Themes include Adolf Hitler's rise to power, conformity and resistance under a dictatorship, propaganda, war and persecution, and the legacy of Nazism after World War II. Using a variety of media, including novels and films, the course asks how a modern, industrialized country could transform itself into what one historian has called "the racial state".

330-3 History of Britain. A survey of British history from the Roman conquest in 43 CE through to the modern day, focusing on political, economic, social, and cultural developments.

330H-3 Modern Britain. Survey of the history of the British Isles from Roman times to the present, with emphasis on the period after 1688. Students taking the course for Honor's credit will complete all assigned exams for the course as well as write a longer, more detailed original research paper (approximately 15-20 pages in length) on a topic of their choice pertaining to the course.

333-3 British Empire. A survey of the British Empire, from the loss of the American colonies to the onset of decolonization at the end of the Second World War. It focuses on the intersections between the histories of Britain and of its imperial possessions in Africa, Asia and the British West Indies. Special attention will be given to the role of the nation and of race, class, gender and sexuality in the making of the British Empire.

334-3 History of Modern Germany. This course considers the important historical and moral questions posed by modern Germany history. It begins with the unification of Germany and explores such themes as World War I, the Weimar Republic, national socialism, the Holocaust, East Germany and reunification.

337-3 Modern Russia. Russia from Peter the Great with main emphasis on 19th and 20th centuries. Emphasis on political history.

338-3 Eastern Europe. An historical survey of the East European area from the Baltic to the Balkans, with emphasis on the modern era.

340-3 International History of the Cold War. This course is designed to acquaint students with the themes, events and figures prominent in the Cold War era. The origins of the Cold War and the global ramifications of sustained tension among the rival powers will be discussed. The events and the people within the context of their times will be evaluated.

351-3 African-Atlantic Spirituality. (Same as AFR 351) This course explores the ways that African-Atlantic societies have

expressed the interaction of people in the visible world with the spiritual powers of the invisible world. The course begins with the ancient foundations of these spiritual systems and then examines the historical transformation of these systems in West Africa, Central Africa, and the Americas into the twentieth century.

352-3 Social History of the United States. The historical development of social interaction and relationships among America's various ethnic, religious, racial, economic and sexual groups. Covers colonial America to the present.

353-3 War and Peace in America since 1500. This course examines the varieties of warfare and the alternatives to war in America from the time of first meetings of Europeans, indigenous American populations, and Africans to the present. Subjects include the just and unjust war, the rules of war, the role of the military and alternative institutions to maintain peace, civil and foreign wars, the costs and benefits of war and peace.

354-3 The Contemporary United States. A survey of the social, economic, political and cultural changes in the United States since the end of World War II, focusing on such topics as the Cold War, changes in the lives of women and minorities, the Vietnam War, the social movements of the 1960s, the imperial presidency, and the Reagan revolution.

355-3 The Radical View in American History. A survey of American radicalism from the revolution to the present, with an emphasis on twentieth century movements for social change.

356-3 U.S. Women's History. (Same as WGSS 356) This course will survey the role of women in US history from colonial times to the present. Students will be introduced to contributions made by women to US society, politics and culture.

357-3 Women and Work in the United States. (Same as WGSS 357) An introduction to the diversity of women's experiences as workers in the home, the household economy, and the labor market segregated by race, ethnicity and gender.

358I-3 Introduction to Peace Studies. (University Core Curriculum) (Same as CP 358I) Introduces students to Peace Studies as an interdisciplinary field, focusing on the history, theory, and practice of alternatives to violence. Considers the structural and systemic reasons for violence and war; the history of peace movements; the role of media in escalating violence and providing solutions. Lecture-discussion format with presentations by speakers from a variety of disciplines. No prerequisites.

359-3 The United States in the 1960s. Examines the roots, events, ideas and legacies of the 1960s through readings in history and literature, and through films and music. Focus will be on the social protest movements of the era and their impact on American society. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement.

360-3 American Rural History. (Same as WGSS 360) An examination of America's rural history from the 17th to the 20th centuries, focusing especially on social and economic relationships and attitudes, the role of ethnicity and gender, environmental and technological issues, agrarian radicalism and governmental activities.

361-3 Race and History in the United States. (Same as AFR 360) This account of racial attitudes and race relations begins with the 16th century European racial experience and covers subsequent developments in the U.S. to the present time. The

problem of race is treated in its several dimensions, but principal emphasis falls upon the historical consequences of Caucasian confrontations with blacks, Hispanics, and native Americans.

362A-3 Black American History to 1865. (Same as AFR 311A) The role of blacks and contribution in the building of America and their ongoing fight for equality.

362B-3 Black American History Since 1865. (Same as AFR 311B) The role of blacks and contribution in the building of America and their ongoing fight for equality.

364-3 The Great Depression in the United States. Causes and effects of the Great Depression and of governmental measures for relief, recovery, and reform during the years 1929-1942.

365-3 American Immigration. A history of American immigration and ethnicity from colonial times to the present, with primary attention upon the peoples of the United States and the diverse lands from which they have come.

366-3 American Indian History. A survey of American Indian history from the Paleolithic age to the present. Emphasis upon interactions and relationships among cultural groups during pre-colonial, colonial and modern era.

367-3 History of Illinois. The history of the state from 1818 to the present.

368-3 American Religious History. (Advanced University Core Curriculum course) A chronological and thematic history of religion in America focusing on (1) the diversity of American religions from the religions of the Amerindian to the development of new religious movements, and (2) the unity of American religion mediated through mainstream Protestantism and civil religion. Satisfies University Core Curriculum Multicultural requirement in lieu of 202.

370A-3 History of Latin America-Colonial Latin America. An introduction to the political, economic, social, and cultural development of Latin America from Pre-Columbian times to the present.

370B-3 History of Latin America-Independent Latin America. An introduction to the political, economic, social, and cultural development of Latin America from Pre-Columbian times to the present.

380A-3 History of East Asia to 1600. A broad survey of the history of China, Korea and Japan from early times to present.

380B-3 History of East Asia Since 1600. A broad survey of the history of China, Korea and Japan from early times to present.

381-3 History of Modern India. Survey of Indian history from the time of the Mughals to the present day with an emphasis on the British colonial period between 1765 and 1947, its impact on India, and the Indian struggle against British rule.

383-3 Islamic Civilization. Course introduces Islamic history, culture and civilization from the rise of Islam in Arabia in the seventh century to the early nineteenth century. Topics include the formation of the Islamic community, the fundamental teachings of Islam, Islamic expansion, Sunni and Shi'i Islam, Sufism and popular Islam, Islamic law and Islamic political thought, the position of women in Islamic thought and practice, Islamic science, art and culture, contact and confrontation between Islam and the West, Islam in borderlands, and the Abbasid, Safavid and Ottoman Islamic civilizations.

384-3 The Modern Middle East. This course surveys the his-

tory of the Middle East from the late 18th century until the present, concentrating primarily on the Ottoman Empire and its successor states (exclusive of the Balkans) and Iran.

385-3 Islam and the West. A history of the religious and cultural interaction between the Islamic and Western world. Surveys the changing image of Islam in western literature, the Muslim response to secularism, and the Islamic presence in Europe and America.

387A-3 History of Africa to 1800. (Same as AFR 314A) A chronological study of African peoples from earliest times to the present, including ancient Egypt, Ethiopia, the Era of the African Kingdoms, the role of Islam, the slave trade, African-European relations, colonialism, African nationalism and independence.

387B-3 History of Africa Since 1800. (Same as AFR 314B) A chronological study of African peoples from earliest times to the present, including ancient Egypt, Ethiopia, the Era of the African Kingdoms, the role of Islam, the slave trade, African-European relations, colonialism, African nationalism and independence.

392-3 Historical Research and Writing. Methods of historical investigation, criticism and composition. Restricted to undergraduate majors in history. May not be taken more than twice without completion. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Restricted to history majors and social science majors.

393-3 Military History. An introduction to the problems of armed conflict throughout history with emphasis varying by instructor. Restricted to sophomore standing and above or consent of instructor.

395-3 Honors. Great ideas and works of history, with discussion of conflicting interpretation of major historical problems. Restricted to junior standing. Special approval needed from the department.

401-3 Atlantic History. This course examines the origins and development of the Atlantic basin as an intercommunication zone for African, European and American societies from the mid-15th century through the early-19th century. Themes include transformation of environments, forced and voluntary migrations, emergence of distinct Atlantic culture communities, development of Atlantic economics and formulation and implementation of Atlantic revolutionary ideologies.

403-3 American Indians and US Empire. Use historical analysis to investigate sovereignty issues involving American Indians and the United States. The course looks critically at the relationship between Native people and dominant U.S. society in terms of colonialism. Students will read academic scholarship and write papers on related cultural, economic, political, and social topics. Prerequisite: None, HIST 366 recommended.

406A-3 Gender, Family and Sexuality in Pre-Modern Europe. (Same as WGSS 406A) A discussion of the history of the family, creation of gender roles and importance of sexuality from medieval times to the French Revolution.

406B-3 Gender, Family, and Sexuality in Modern Europe. (Same as WGSS 406B) A discussion of the history of family, creation of gender roles, and importance of sexuality from the French Revolution to the present. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement.

406BH-3 Gender, Family, and Sexuality in Modern Eu-

rope. A discussion of the history of family, the creation of gender roles, and the importance of sexuality in European history since the French Revolution. Students taking the course for honor's credit will write longer reflective essays on the readings of the course as well as take a more active role in leading class discussions.

407-3 History of Latinos in the United States. This course examines the history of Latino/a and Latin American peoples in the United States from the Colonial Era to the present. Themes to be addressed in the course include early imperialism and commercial expansion, the social construction of race, the formation of "borderland" communities, Latino immigration and assimilation, the centrality of work and labor within Latino history, and contemporary Latino culture and politics.

408-3 History of Mexico. This course surveys the history of Mexico from the earliest human inhabitation to the present. It will present different interpretations of the major themes and developments in Mexican history. A goal is to understand Mexico from the perspective of the Mexicans rather than from the point of view of the United States. Themes to be included in the course include the diversity of pre-Columbian indigenous societies; Spanish conquest; colonialism and anti-colonialism; Mexican independence; the historiography of the Mexican Revolution; and the place of Mexico within the world-economic system.

409-3 Food and History. Food is fundamentally about survival-it was for our ancestors millennia ago, and continues to be so, not only for the millions of undernourished worldwide, but for all of humanity as we confront the impact of obesity, globalization and environmental change. Because food is essential to our survival, its history is long, varied, and rich, and touches on themes including (but not limited to) politics and government; gender, race, and ethnicity; the family, religions and culture; health and the environment, and business, industry, and advertising. This class will explore these themes of global food history.

410-3 Europe in the Long Nineteenth Century, 1789-1914. This course offers a topical examination of the history of Europe from the French Revolution to World War I, mainly focusing on the French Revolution, industrialization, nationalism and nation building, and imperialism. There will also be some focus on European intellectual and cultural transformations during this period. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement.

412A-3 Empire and Social Conflict in the Roman Republic. The social, political and cultural consequences of Roman expansion during the Republican period (c. 700-44 BCE). Focus on reading and analyzing primary sources. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement.

412B-3 Religion and Society in Imperial Rome. Religious, social, and cultural conflict and change in the Roman Empire, first through third centuries. Focus on reading and analyzing primary sources. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement.

413-3 Christianization of Power and Society in Late Antiquity. An investigation into the political and social changes involved in the rise of Christian leadership in Western Europe following the fall of the Roman Empire. The course will focus on reading and analyzing primary sources from the fourth through the eighth centuries. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement.

riculum (WAC) requirement.

417-3 Ritual and Revolt in Early Modern Europe. This course examines political practices on different levels of European society from the later middle ages through the Enlightenment: court ritual, popular revolts, patronage networks, representative assemblies and family politics are among the topics covered. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement.

417H-3 Ritual and Revolt in Early Modern Europe. This course examines the social and political processes of ritual and revolt on different levels of European society from later middle ages to the French Revolution: court ritual, lifecycle rituals, religious rituals, popular protests, and revolution are among the topics covered. Honors students will select a topic to research during the course of the semester. Each student will lead the class in a discussion of his/her topic during the semester, and write a research proposal and annotated bibliography on that topic due at the end of the semester.

418-3 The Renaissance Exchange. Course employs the traditional Renaissance themes of economic, political and cultural developments in Italy and Europe from 1300-1550 as the framework for detailed examination of European interactions - economic, ideological, religious - with Asia, the Middle East and the Americas. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement.

418H-3 The Renaissance. Course employs the traditional Renaissance themes of economic, political and cultural developments in Italy and Europe from 1350-1550 as the framework for detailed examination of European interactions-economic, ideological, religious-with Asia, the Middle East and the Americas. The honors section of the course will look at the "Renaissance of the Renaissance"-the resurgence of Renaissance ideas and culture in modern film, political discourse, art, literature and other forms of entertainment. What does this nostalgia for the past and these revamped or reinvented traditions tell us about the past and present?

420-3 Reformation. Concentrates on the movement of religious reforms in the 16th Century. Emphasis on its roots in the past, particularly in earlier expressions of popular piety and to the wider social and political effects in the 16th and 17th centuries. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement.

421-3 The French Revolution. This course will consider the causes, events and outcomes of the French Revolution and Age of Napoleon (1789-1815) and situate the revolution in a global context. Themes to be considered include the influence of the American Revolution and the Enlightenment, democracy and human rights, forms of popular and female protest, revolutionary culture, French imperialism and the fight for freedom in Haiti and the legacies of the revolution.

422A-3 Intellectual History of Modern Europe 1600-1815. This course looks at European thinkers and intellectual movements from approximately 1600 to 1815. Topics include the Scientific Revolution, the Enlightenment, and early 19th Century Romanticism. The course also examines aesthetic and literary movements during the "Age of Reason".

422B-3 Intellectual History of Modern Europe Since 1815. This course looks at European thinkers and intellectual movements from the 19th Century to the present. Subjects include

Marxism, Darwinism, Existentialism, Liberalism and Conservatism. The course also examines aesthetic and literary movements over the last two centuries, and it explores intellectuals and their links to the political movements of the modern age.

425A-3 Twentieth Century Europe 1914-1945. Political, social, cultural and economic development of the major European states during the present century.

425B-3 Twentieth Century Europe Since 1945. Political, social, cultural and economic development of the major European states during the present century.

426-3 Cities and Culture in Europe 1870-1914. Cultural and social history focusing on four European cities (Paris, Berlin, Vienna, St. Petersburg) in the fin-de-siècle period (1870-1914). Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement.

426H-3 Cities and Culture in Europe 1870-1914. Cultural and social history focusing on four European cities (Paris, Berlin, Vienna, St. Petersburg) in the fin-de-siècle period (1870-1914). Course follows a seminar (reading and discussion) format. Honors students will undertake two small projects that go beyond the basic course requirements.

427-3 World War I. The first World War (1914-1918) from a variety of perspectives, with emphasis on cultural, social and political. Seminar-type format with discussions of topics such as the war's causes, nature of trench warfare, the home front, and political and cultural impact of the war. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement.

427H-3 World War I. The first World War (1914-1918) from a variety of perspectives: military, cultural, social, and political. Some of the topics covered will be: the war's causes, the nature of trench warfare, the home front, political/cultural impact of the war. Course follows a seminar (reading and discussion) format. Honors students will undertake two small projects that go beyond the basic course requirements.

429-3 Political Violence in the Modern World. This course will look at various forms of state and political violence in the 19th and 20th centuries. We will start with the "Reign of Terror" in the French Revolution, then look at the rise of terrorism in the later 19th century. The course will also cover state violence in the 20th century such as WWI, the Shoah, and the Gulag. We will examine the "logic" and justification of both state and non-state political violence. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement.

437-3 Lesbian and Gay History in the Modern United States. (Same as WGSS 437) This course explores the social, political, and cultural history of lesbians, gay men, and other sexual and gender minorities in the United States from the turn of the twentieth century to the present. Themes to be taken up in the class include: the emergence of heterosexuality and homosexuality as distinct categories of identity; the intersection between sexual identity and identities of race, class, gender, and ethnicity; the relationship between homosexuality and transgenderism; the movement for gay liberation; the creation of lesbian and gay urban and rural subcultures; representations of homosexuality in popular culture; anti-gay backlash; and AIDS.

442-3 Victorian Britain: Politics, Society, and Culture. An examination of British politics, society, and culture examining political transformations from the Glorious Revolution to the Great War, industrialization and the emergence of a class so-

ciety, Ireland and the British Empire in British culture, and Victorian culture. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement.

444-3 The Holocaust. An introduction to Nazi German's systematic mass murder of Europe's Jews and other minorities. Using works of history, literature, and film, we will examine such topics as anti-Semitism, the behavior of "ordinary Germans" during the 30s and 40s, Jewish resistance, Holocaust denial and memory after the Holocaust.

447-3 Culture and the British Empire. This course will focus on the culture of modern British imperialism. It will examine the impact that the people and commodities of the empire as well as the practices of imperial rule had on modern British culture. The emphasis of the course will be on the implications of "imperial culture" in mediating gender, race, and class relations within the broader empire as well as contemporary Britain. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement.

447H-3 Culture and the British Empire. This course will focus on the culture of modern British imperialism. It will examine the impact that the people and commodities of the empire as well as the practices of imperial rule had on modern British culture. The emphasis of the course will be on the implications of "imperial culture" in mediating gender, race, and class relations within Britain and its various colonies between the seventeenth and mid-twentieth centuries. Students taking the course for honor's credit will write all five of the review essays on the readings of the course as well as take a more active role in preparing discussion questions and leading class discussions.

448-3 Gender and Family in Modern U.S. History. (Same as WGSS 448) This course explores the history of gender and the family in the United States from the late 19th century to the present. Themes to be explored include: the family and the state, motherhood, race and family life, and the role of the "family" in national politics.

450A-3 Colonial America. The evolution of American society from European settlement through the Age of Jefferson, with special emphasis on social and political institutions and thought.

450B-3 American Revolution. The evolution of American society from European settlement through the Age of Jefferson, with special emphasis on social and political institutions and thought.

451-3 Antebellum America. The struggle to define the nation in the political, economic and social realms; the emergence of women's rights, slavery, sectional conflict from 1815 to 1860.

452-3 The Civil War and Reconstruction. The study of the background to the Civil War, the Civil War, Reconstruction, and the Gilded Age.

455-3 The Conservative View in American History. Readings in American conservative thought, from the eighteenth-century to the present day, including traditionalist, neoconservative and libertarian writers. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement.

455H-3 The Conservative View in American History. In addition to the regularly assigned readings, students on the Honors track of HIST 455 will meet with the instructor to read and write an extended essay with a focus on one particular aspect of conservative and libertarian intellectual history. The

Honors paper must be focused, thoughtful, and based on wide reading of the subject. Required length: 15-20 pages.

457-3 American Environmental History. (Same as GEOG 457) An exploration of the attitudes toward and the interaction with the natural resource environment of North America by human settlers. Coverage from the Neolithic Revolution to the present.

458-3 Bantu Diasporas in Africa & the Atlantic World. (Same as AFR 458) This course examines the origins and development of Bantu language and culture groups in Africa and the Atlantic World from the first dispersal of Bantu-speaking people thousands of years ago through the end of slavery in the Americas. Additionally, the course explores the multiple methods and disciplines used to construct histories of Bantu language and culture groups.

460-3 Slavery and The Old South. (Same as AFR 460) This course examines slavery and southern distinctiveness from the colonial period to 1861. Discussion topics include the plantation system, race relations, women and slavery, and southern nationalism.

461-3 Black Americans on the Western Frontier. (Same as AFR 461) This course examines the history of African Americans in the American West. Taking both a chronological and thematic approach, it begins with a discussion of early black explorers in the age of encounter, and ends with a focus on black western towns established in the United States by the 1880's.

464-3 History of American Capitalism. This course examines the growth of the American economy, economic thought, the evolution of the firm, and the changing place of women and minorities in American business society. It also explores the intersection between business and other institutions in American life, including labor, law, literature, government, education and religion. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement.

465-3 History of Sexuality in America. (Same as WGSS 465) Comprehensive survey of sexuality from colonial times to the present. Examines social trends, politics, and cultural debates over various forms of sexuality. Students will engage in discussion, research, and writing.

466A-3 History of the American West-Trans-Appalachian Frontier. The American frontier and its impact on American society from the colonial period to the 20th century.

466B-3 History of the American West-Trans-Mississippi Frontier. The American frontier and its impact on American society from the colonial period to the 20th century.

467A-3 History of American Thought to 1865. Major themes include Puritanism, the Enlightenment, Romanticism, Darwinism, Pragmatism, Voices of Discontent, Neo-orthodoxy, liberalism, conservatism and formulating the modern conscience. Approved as Writing-Across-the-Curriculum course.

467B-3 History of American Thought Since 1890. Major themes include Puritanism, the Enlightenment, Romanticism, Darwinism, Pragmatism, Voices of Discontent, Neo-orthodoxy, liberalism, conservatism and formulating the modern conscience. Approved as Writing-Across-the-Curriculum course.

470-3 Continuity and Change in Latin America. An in-depth examination of major topics in the history of Latin America since pre-Columbian times, especially themes that have been prominent in recent scholarship. Lectures will be supplemented

by outside readings and class discussion.

471-3 History of Modern Japan. An examination of Japanese History from the early Tokugawa period to the present. Major topics include the creation of the Japanese bureaucracy, commercialization and industrialization, and cultural experimentation.

473-3 Comparative Slavery. (Same as AFR 473) A comparative study of slavery from antiquity to its abolition in the 19th century with the differing socio-cultural, political and economic contexts; organized chronologically, regionally and thematically.

478-3 Southern Africa, 1650-1994. (Same as AFR 478) An examination of Southern African history with emphasis on South Africa from 1652 to 1994. Topics to be covered include conflicts and wars, migrations and state formations, the economics of minerals, industrialization and the Anglo-Boer War, intertwined histories of race relations, the politics of exclusions and apartheid, and the making of modern South Africa.

479-3 The Cultural Revolution. This course explores the origins, major developments, and social, economic, cultural and psychological legacies of the Great Proletarian Cultural Revolution in China from 1966 to 1976 by critically examining relevant official documents, personal memories, oral histories, literary and artistic works, and films and material objects. All required readings are in English. Open to both graduate students and advance undergraduate students. Prior knowledge of modern Chinese history helpful but not required.

480A-3 History of China-Late Imperial China, 1350 to 1890. An in-depth examination of political, economic, social and cultural history of China from 1350 to 1890. Examines the imperial state, gentry and peasants, commercialization and social change in China from 1350 to 1890.

480B-3 History of China-Twentieth Century China, 1890 to the present. An in-depth examination of political, economic, social and cultural history of China from 1890 to the present. Focuses on nation building, ideology and rural-urban culture in 20th Century China.

486-3 Arab-Israeli Conflict. This course focuses on the background to, and current dimensions of, the continuing conflict between Israel, the Palestinians and the rest of the Arab world. Beginning with origins of Zionism in the late nineteenth century, it examines, the foundation of Israel, Palestinian responses, and relations between Israel and its Arab neighbors.

487-3 The U.S. Civil Rights Movement. (Same as AFR 497) This course provides an overview of the history of the Civil Rights Movement while engaging major debates in the field of Black Freedom Studies. Central themes will include the impact of the Cold War, the roles of women, and the relationship of civil rights to black power. We will also discuss the difference between popular memory and historical scholarship as well as the meaning of such discussions for contemporary issues of racial and economic justice.

488-3 Islamic Political Movements. This course examines the use of Islamic ideals and rhetoric in social and political movements in the Middle East from the nineteenth century to the present. It focuses on political parties such as the Muslim Brotherhood in Egypt, the Welfare Party in Turkey, and Hamas in Palestine.

489-3 Women, State and Religion in the Middle East.

(Same as WGSS 489) Following an introduction to the question of women in Islamic law and Islamic history, this course will examine the changing status and experiences of women in a number of Middle Eastern countries in the 20th century, focusing on Egypt, Iran, and Turkey. Major themes will include legal, social and political rights, participation in social and economic life, cultural and literary production, and recent secular and Islamist women's movements.

490-1 to 4 Special Readings in History. Supervised readings for students with sufficient background. Registration by special permission only.

491-3 Historiography. Writings of historians from Herodotus to the present.

493-1 to 6 Topics in History. Topics vary with instructor. May be repeated for a maximum of six semester hours provided registrations cover different topics. Topics announced in advance.

495-4 History Honors. Principles of historical method, research, and writing for senior honor students only. Not for graduate credit. Special approval needed from the department.

496A-1-9 Internship in History. Supervised field work in public or private agencies or operation where history majors are frequently employed, such as archives and libraries, government offices, communications media, historic sites, and museums. Only three hours may be applied to the major and six hours toward the M.A. degree. Special approval needed from the instructor.

496B-1-9 Internship in Local History. (Same as ARC 434) Field experience in research and preservation related to regionally and nationally recognized historic sites in southern Illinois. Special approval needed from the instructor.

497-3 Historical Museums, Sites, Restorations and Archives. The development of museums from antiquity to the present, with emphasis on the United States. Additional topics include historical sites such as battlefields, historic buildings, restorations, monuments and archives. Also examines the purposes and functions of the museum and the tasks of professionals employed in museums or interpretative centers. Given in cooperation with the University Museum.

498-3 Oral History, Storytelling and Media. (Same as RTD 455) This course will develop an appreciation of the field of oral history, methodological concerns, and applications. Students will learn about the oral history process, including interview preparation and research, interview technique, the nature and character of evidence, transcribing, and legal and ethical concerns. Restricted to Junior or Senior standing.

499-3 Senior Seminar in History. Seminar for senior undergraduate students to examine in-depth a particular historical topic. Topics will vary with instructors. Students will engage in discussion, and produce a research paper. Not for graduate credit. Open to history majors only. May not be taken more than twice without completion. Fulfills the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: HIST 392.

History Faculty

Allen, Howard W., Professor, *Emeritus*, Ph.D., University of Washington, 1959.

Allen, James S., Professor, Ph.D., Tufts University, 1979.

Ammon, Harry, Professor, *Emeritus*, Ph.D., University of Virginia, 1948.

Argersinger, Jo Ann E., Professor, Ph.D., The George Washington University, 1980.

Argersinger, Peter H., Professor, *Emeritus*, Ph.D., University of Wisconsin, 1970.

Barton, H. Arnold, Professor, *Emeritus*, Ph.D., Princeton University, 1962.

Batinski, Michael C., Professor, *Emeritus*, Ph.D., Northwestern University, 1969.

Bean, Jonathan J., Professor, Ph.D., The Ohio State University, 1994.

Bengtson, Dale R., Assistant Professor, *Emeritus*, Ph.D., Hartford Seminary Foundation, 1971.

Benti, Getahun, Associate Professor, Ph.D., Michigan State University, 2000.

Brown, Ras Michael, Associate Professor, Ph.D., University of Georgia, 2004.

Carr, Kay J., Associate Professor and *Chair*, Ph.D., University of Chicago, 1987.

Carrott, M. Browning, Associate Professor, *Emeritus*, Ph.D., Northwestern University, 1966.

Conrad, David E., Professor, *Emeritus*, Ph.D., University of Oklahoma, 1962.

Detwiler, Donald S., Professor, *Emeritus*, Dr. Phil., Göttingen University, Germany, 1961.

Dotson, John E., Professor, *Emeritus*, Ph.D., Johns Hopkins University, 1969.

Fanning, Charles F., Professor, *Emeritus*, Ph.D., University of Pennsylvania, 1972.

Gold, Robert L., Professor, *Emeritus*, Ph.D., University of Iowa, 1964.

Haller, John S., Professor, *Emeritus*, Ph.D., University of Maryland, 1968.

Hurlburt, Holly S., Associate Professor, Ph.D., Syracuse University, 2000.

Lieberman, Robbie, Professor, *Emeritus*, Ph.D., University of Michigan, 1984.

Murphy, James B., Associate Professor, *Emeritus*, Ph.D., Louisiana State University, 1968.

Najar, José, Assistant Professor, Ph.D., Indiana University, 2012.

O'Day, Edward J., Associate Professor, *Emeritus*, A.M., Indiana University, 1956.

Shelby, Lon R., Professor, *Emeritus*, University of North Carolina, 1962.

Sramek, Joseph, Associate Professor, Ph.D., City University at New York, 2007.

Stocking, Rachel L., Associate Professor, Ph.D., Stanford University, 1994.

Weeks, Theodore, Professor, Ph.D., University of California-Berkeley, 1992.

Werlich, David P., Professor, *Emeritus*, Ph.D., University of Minnesota, 1968.

Whaley, Gray, Associate Professor, Ph.D., University of Oregon, 2002.

Wiesen, S. Jonathan, Professor, Ph.D., Brown University, 1997.

Wilson, David L., Professor, *Emeritus*, Ph.D., University of Tennessee, 1974.

Yilmaz, Hale, Associate Professor, University of Utah, 2006.

Zaretsky, Natasha, Associate Professor, Ph.D., Brown University, 2002.

Histotechnology (Certificate Program)

Histotechnology is a structural science that incorporates elements from anatomy, physiology, immunology and chemistry. Histology is the science dealing with the structure, function and chemical composition of cells of normal and abnormal tissue. The histotechnologist prepares tissue specimens for microscopic examination. Histologic techniques utilize the chemical properties of both tissues and dyes to impart color to particular tissue elements to aid identification and disease diagnosis. Histology is an applied laboratory science, whose practitioners are in great demand in the current job market. A certificate in Histotechnology provides intense training in histotechnology through a combination of lectures, hands-on laboratory experience and clinical internships. Some of the certification requirements can be completed with proper selection of courses as University Core Curriculum substitutes and by using elective courses to fulfill certification requirements. Students are encouraged to discuss their interests with a departmental representative to obtain additional information.

This program admits a limited number of students based on specific selection criteria. Applicants must submit additional application materials to be approved for entry into the Histology certificate program. Students will be evaluated on the number of hours of college credit, and college grade point average as calculated by SIU Carbondale. Students begin the professional sequence each fall only. This certificate program requires the successful completion of clinical internships. In accordance with Federal and State guidelines, the clinical sites will require proof of the following: vaccination for measles, mumps, rubella, tetanus, TB, and Hepatitis B; current CPR card; proof of completion of HIPPA and blood-borne pathogens training. Affiliation sites may also require students to undergo a criminal background check and drug screening.

For more information go to www.siumed.edu/anatomy or contact Maureen Doran, Histology Program Director, Department of Anatomy, 453-1584 or mdoran@siumed.edu.

Courses (HTL)

400-5 Histotechnology Practicum I. Designed to introduce students to the basic procedures used in the Histology laboratory. The student studies the principles and theories of fixation and staining processes. Practice and skill are developed in tissue processing, embedding, sectioning and routine staining. Laboratory safety and regulatory compliance will be included. Lecture is 2 hours; laboratory is 6 hours/week. Special approval needed from the instructor.

401-5 Histotechnology Practicum II. This course is designed to build on the knowledge and skills learned in HTL 400 to introduce students to more advanced aspects of histological procedures used in clinical and research settings. The course will reinforce standard histological practices and include immunohistochemistry and transmission electron microscopy. Lectures are integrated with hands-on lessons providing students both basic knowledge and practical experience. 2 hours lecture;

6 hours lab/week. Must be accepted into the HTL certificate program. Prerequisite: HTL 400 (Histotechnology Practicum I) with a minimum grade of B.

402-3 Special Topics in Histotechnology. The course focuses on microscopy-based methods used in today's research. Topics can include confocal/fluorescence microscopy, laser capture microdissection and specialized techniques for water miscible plastics. Lectures are integrated with hands-on lessons providing students practical experience. Lecture 1 hour; Lab 4 hours. Prerequisite: Histotechnology Practicum I & II (HTL 400 & 401) with a minimum grade of B.

403-2 Laboratory Management and Regulatory Compliance. This course covers the principles of laboratory management and regulatory safety requirements. OSHA's standard for the laboratory safety that incorporates the chemical hygiene plan will be covered. The class will focus on regulations regarding bloodbornes and other potential infectious materials. HIP-PA, Ergonomics, DOT and EPA guidelines will be discussed.

404-3 to 6 Occupational Histotechnology Internship I. Internships are scheduled at clinical or research affiliate sites throughout Illinois during the daytime hours in accordance with the schedule of the assigned site. The curriculum will include both daily instruction and corresponding laboratory experience. In an occupational setting, the histotechnologist is not isolated; he/she interacts with other areas besides histology. The internship provides practical hands-on experience that prepares the student for a career as a histotechnologist. Internship 18 hours/16 week semester or 36 hours/8 week summer semester. Course can be taken for 2 semesters at 3 credits. Must be accepted into the HTL certificate program. Prerequisites: HTL 400 and HTL 401 with minimum grades of B.

405-3 to 6 Occupational Histotechnology Internship II. Internships are scheduled at clinical or research affiliate sites throughout the United States in accordance with the schedule of the assigned site. The curriculum will include both daily instruction and corresponding laboratory experience. In a hospital or research/industrial setting, the histotechnologist is not isolated; he/she interacts with other areas besides histology. The internship provides additional hands-on experience in an occupational setting that prepares the student for a career as a histotechnologist. Internship 18 hours/16 week semester or 36 hours/8 week summer semester. Course can be taken 2 semesters for 3 credits. Must be accepted into the HTL certificate program. Prerequisites: HTL 400, 401, 404 with minimum grades of B.

Horse Management (See Animal Science)

Horticulture (Major, Courses, Faculty)

The horticulture major is administered through the Plant, Soil and Agricultural Systems department. The horticulture program includes three specialized areas of study.

The primary purpose of this major is: to provide specialized academic preparation in the different content areas of production horticulture, to provide the skills required for landscape design, construction and maintenance, and to provide the technical skills needed for professional turf management.

Production Horticulture Specialization. This specialization provides the student with the background and preparation for careers in production horticulture including vegetable, fruit and ornamental production, viticulture, garden center, greenhouse and nursery production, and tissue culture and propagation methodologies. Students may choose a general option within the department and select their upper division elective credits from a wide choice of courses throughout the College of Agricultural Sciences and the University. If interests are more specialized, students may elect the science option and specialize in a specific discipline.

Landscape Horticulture. Students selecting this specialization can prepare for interesting careers in landscaping parks, playgrounds, residential or industrial areas, road and street parkway improvement and maintenance to make the environment more pleasing and useful.

Turf Management. This specialization is intended for students interested in the technical management skills needed for professional turf management and the current strategies regarding environmental, social, political, and business issues within the turf industry.

Opportunities for individual program development within the various specializations/options may be realized through work experience, internships, special studies, and seminars; however, no more than 30 hours of such unstructured coursework may be counted toward the degree. Students in all specializations/options are urged to make use of them to meet the goals and needs of their respective programs.

Students in all specializations must complete the horticulture core. These courses are HORT 220, CSEM 240, one hour of HORT 381, and CSEM 409.

There may be extra expenses for field trips, manual, or supplies in some courses.

Technology Fee. The College of Agricultural Sciences assesses the College of Agricultural Sciences undergraduate majors a technology fee of \$4.58 per credit hour up to twelve credit hours. The fee is charged Fall and Spring semesters.

Bachelor of Science Degree in Horticulture, College of Agricultural Sciences

	SPECIALIZATION	
	Production Horticulture Options General	Science
<i>University Core Curriculum Requirements</i>	43 ⁴	43 ⁴
Foundation Skills		
ENGL 101 and 102	6	6
MATH 108 ¹	3	3
(MATH 125 may substitute for 108)		
CMST 101	3	3
UCOL 101I ⁵	3	3
Disciplinary Studies		
Fine Arts	3	3
Human Health	2	2
Humanities	6	6
Social Science	6	6
Multicultural	3	3
	OPTIONS	
	General	Science
Science ⁴		
Chemistry 140A substitutes for Chemistry 106	4	-
Chemistry 200 and 201 substitutes for Chemistry 106	-	5
Plant Biology 200 substitutes for Plant Biology 115	4	4
<i>Requirements for Major in Horticulture</i>	58	73
Course in one other major other than Agricultural Systems and Education, Horticulture, or Crop, Soil and Environmental Management	3	3
PHYS 203A ² and B (or approved substitute)	-	6
PLB 320 or CSEM 409	3-4	3-4
CHEM 140B	4	-
CHEM 210,211,340, 341,350	-	13
MATH 109,140	-	7
HORT 220, CSEM 240, CSEM 409, HORT 381	12	12
Other HORT courses at 300- and 400- level ³	21	21
Other AGR Electives	15	8
Business Electives and supporting courses	-	-
Electives	21-22	6-7
Total	120	120

¹Mathematics 111 may be substituted.

² Physics 205A may be substituted.

³ HORT electives must include 18 hours of structured coursework at the 300-or 400-level, with no less than 12 hours at the 400-level.

⁴ The UCC requires 41 hours of courses. Chemistry and Plant Biology are 4 hour courses, but only 3 hours count toward core requirements.

⁵ Required for first semester students.

Horticulture, Production Horticulture (General) Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101,102.....	3	3
MATH 125, CHEM 140B.....	4	4
CHEM 140A, PLB 200.....	4	4
ABE 204, GEOG 103.....	3	3
UCOL 101I, HND 101.....	3	2
<i>Total</i>	17	16

SECOND YEAR	FALL	SPRING
HORT 220, 423	4	3
CSEM 240, HORT 424.....	4	4
CMST 101, HIST 101B.....	3	3
HIST 101A, Fine Arts.....	3	3
AGR Elective	-	3
<i>Total</i>	14	16

THIRD YEAR	FALL	SPRING
HORT 437, 432	4	4
Multicultural, HORT 436.....	3	4
CSEM 401.....	-	2
HORT Elective, HORT 403B.....	3	2
AGR Electives, AGR Elective (300-400 level)	6	3
<i>Total</i>	16	15

FOURTH YEAR	FALL	SPRING
HORT Elective, CSEM 409	2	3
AGR Elective, HORT 430	6	4
Electives (300-400 level).....	4	6
HORT 381	1	-
<i>Total</i>	13	13

Horticulture, Production Horticulture (Science) Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101,102.....	3	3
MATH 125, CHEM 210.....	4	3
CHEM 200, 211.....	3	1
CHEM 201, PLB 200.....	1	4
ABE 204, MATH 109	3	3
UCOL 101I, HED 101.....	3	2
<i>Total</i>	17	16

SECOND YEAR	FALL	SPRING
HORT 220, CSEM 240.....	4	4
MATH 140, CHEM 350.....	4	3

CHEM 339, HORT 423	3	3
CHEM 341, GEOG 103.....	2	3
CMST 101, Fine Arts.....	3	3
<i>Total</i>	16	16

THIRD YEAR	FALL	SPRING
HORT 437, 424	4	4
PHYS 203A, HORT 436.....	3	4
Elective (300-400 level), HIST 101B.....	3	3
HIST 101A, PHYS 203B.....	3	3
Fine Arts	3	-
<i>Total</i>	16	14

FOURTH YEAR	FALL	SPRING
PLB 320, HORT 432	4	4
HORT 381, 430.....	1	4
AGR Electives (300-400 level), HORT 403B.....	3	2
Multicultural.....	3	2
HORT Electives (300-400 level)	2	-
<i>Total</i>	13	12

Bachelor of Science Degree in Horticulture, College of Agricultural Sciences

SPECIALIZATIONS Landscape Horticulture Turf

<i>University Core Curriculum Requirements</i>	43 ²	43 ²
<i>Foundation Skills</i>		
ENGL 101 and 102	6	6
MATH 125	3	3
(may substitute for 101)		
MATH 108 substitutes for 110 or 101	-	-
UCOL 101	3	3
CMST 101	3	3
<i>Disciplinary Studies</i>		
Fine Arts	3	3
Human Health	2	2
Humanities	6	6
Social Science	6	6
<i>Multicultural Science</i> ³	3	3
CHEM 140A substitutes for CHEM 106	4	4
PLB 200 substitutes for PLB 115	4	4
BIOL 307	3	-
PLB 320 or CSEM 409	3-4	-
CSEM 409	-	3
CHEM 140B	4	4
AGSE 371, 374	4	-
ABE 333 or CMST 280	-	3
HORT 220, CSEM 240, CSEM 409, HORT 381	12	-
HORT 220, CSEM 240,		

HORT 381, HORT 359, CSEM 409	-	15
HORT Upper Level 322, 325, 327, 328A,B, 359, 422, 423, 424, 428, 429, 430, 432, 434 ³	23-24	-
HORT 322, 403C, 421 and 422, CSEM 401, 420, 445, 447 and 468	-	25
BUS/AGR Electives	10	-
Electives	19-21	10-13
Total	120	120

¹Mathematics 111 may be substituted.
² The UCC requires 41 hours of courses. Chemistry and Plant Biology are 4 hour courses, but only 3 hours count toward core requirements.
³At least 18 hours must be chosen from structured courses. At least 12 hours must be at the 400 level.
⁴One course must be selected from ABE 333, MKTG 304, 350, MGMT 350 or ACCT 210. Remaining courses may be from above or any College of Agricultural Sciences courses.
⁵Required for first semester students.

Landscape Horticulture Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
CHEM 140A,B.....	4	4
PLB 200	3	4
AGSE 118	3	-
UCOL 101, Fine Arts	3	3
ENGL 101,102.....	3	3
HORT 359	-	1
<i>Total</i>	16	15

SECOND YEAR	FALL	SPRING
Multicultural, CMST 101	3	3
Humanities, Social Science	3	3
General Electives, Social Science.....	3	3
MATH 108/125, HORT 359	3	1
HORT 220, CSEM 240.....	4	4
Restricted Electives	-	2
<i>Total</i>	16	16

THIRD YEAR	FALL	SPRING
CSEM 409	3	-
Restricted elective (upper level).....	6	6
CSEM/HORT (upper level).....	6	5
General Elective.....	-	3
HORT 359	-	1
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
HORT 381.....	-	1
CSEM/HORT (upper level).....	9	9

ABE 333/CMST 280	3	-
Humanities, Human Health	3	2
<i>Total</i>	15	12

Minor

A minor in Horticulture is offered. A total of 15 hours of credit is required with at least 12 hours taken at the university. HORT 220 is required and at least eight hours from 300- or 400-level structured courses. The department chair or coordinating counselor must be consulted before selecting this field as a minor.

Courses (HORT)

220-4 General Horticulture. [IAI Course: AG 905] Introductory horticulture course that will provide students with a foundation for more advanced horticulture courses and an understanding of the growing and care of plants. The course is designed to acquaint students with the science, art and culture of producing the various horticultural crops. Prerequisite: PLB 200 or equivalent. Lab fee: \$50.

225-2 Genetics for the Amateur Gardener. An introduction to the essential principles of genetics and plant hybridization utilizing common garden and house plants.

228-2 Floral Arrangements. Theory and practice in the art of flower and plant arrangement for the home, show, and special occasions. History, elements, and principles of design and the use of color. Lab Fee: \$75.

238-2 Home Gardening. Gardening techniques for the home gardener including site selection, garden planning, utilization of compost and mulch, pest management, and container gardening. Both inorganic and organic gardening methods are discussed along with the latest recommended varieties for the small garden. Lab fee: \$25.

257-1 to 10 Work Experience. Credit for on-campus work experience in the areas of plant and soil science, or credit through a cooperative program developed between the department and the Office of Student Work and Financial Assistance. Credit awarded based on 4 hours of work per week during the semester for each hour of credit. Special approval needed from the department. Mandatory Pass/Fail.

322-3 Turfgrass Management. Principles and methods of establishing and maintaining turfgrass for lawns, recreational areas, public recreation areas, public grounds and higher-management turf. Identification of plant species, soil properties, and management pertinent to variable environments. Prerequisite: a plant biology course. Lab fee: \$50.

324-3 Landscape Annuals. Identification, classification, culture, and use of herbaceous annuals or plants treated as annuals in the landscape. Special approval needed from the department. Lab fee: \$50.

326-3 Landscape Perennials. Identification, classification, culture and use of herbaceous perennials, hardy bulbous plants, and perennial ornamental grasses in the landscape. Special approval needed from the department. Lab fee: \$50.

327-3 Landscape Plant Materials. Identification, usage and adaptability to the landscape of woody (deciduous and evergreen) and ornamental shrubs, trees and vines. Use of plant keys. Special approval needed from the department. Laboratory fee: \$10.

328A-2 Landscape Design. Introduction to the design process and components of landscape design (plant materials, pavement, site structures, water, landform and buildings). A brief history of landscape design is also explored.

328B-2 Landscape Design Studio. Practical application of landscape design beginning with basic graphic presentation and design skills leading to a final design of a real site. Distance learning course includes short video clips of "how to do." Lab fee: \$20.

333-3 From the Vine to its Wine. Introduction to grape growing and the making, using and appreciation of wine for pleasure, health and profit. Discover the science and art of growing, making and using wine. Participatory approach to instruction with emphasis on beginning the novice on a successful journey through the wonderful world of grapes and wine. Includes a Midwest perspective. A three-day tour of the regional industry and a Saturday tour of local establishments required. Must be 21 years of age by September 15 (prior to wine tasting exercises) of semester taken to enroll. Proof of age and signature on informed consent form required at first class meeting. Offered fall semester only. Purchase and use of required textbook mandatory. Lab fee: \$245.

359-1 to 6 Intern Program. Supervised work experience program in either an agricultural agency of the government or agribusiness. Restricted to junior standing. Special approval needed from the department. Mandatory Pass/Fail.

381-1 to 2 (1,1) Plant and Soil Science Seminar. Discussion of special topics and/or problems in the various areas of plant and soil science. Prerequisite: Communication Studies 101. Restricted to junior standing.

390-1 to 8 Special Studies in Plant and Soil Science. Assignments involving research and individual problems. Special approval needed from the department.

391-1 to 4 Honors in Plant and Soil Science. Independent undergraduate research sufficiently important to three hours per week of productive effort for each credit hour. Special approval needed from the department.

403B-2 Horticultural Crop Diseases. (Same as PSAS 403B) A survey of major diseases of important horticultural crops in the United States. Disease identification, cycles, and management strategies will be addressed. Not for graduate credit. Special approval needed from the department.

403C-1 Turfgrass Diseases. (Same as PSAS 403C) A survey of major diseases of important turfgrasses in the United States. Disease identification, cycles, and management strategies will be addressed. Not for graduate credit. Special approval needed from the department.

403D-1 Tree Diseases. (Same as PSAS 403D) A survey of major diseases of important tree species in the United States. Disease identification, cycles, and management strategies will be addressed. Not for graduate credit. Special approval needed from the department.

421-3 Turf Management Issues and Strategies. (Same as PSAS 421) Issues in environment, technology, management, society, politics, business, and sports that interact with turf management. Students will utilize periodicals and other references for preparing papers addressing these issues. Prerequisite: HORT 322 or permission of instructor. Lab fee: \$25.

422-3 Turfgrass Science and Professional Management.

(Same as PSAS 422) Basic concepts of physiology, growth, and nutrition of turfgrasses and their culture. Application of turfgrass science to management of special areas, such as golf courses, athletic fields, sod farms, and to the turfgrass industry. Prerequisite: CSEM 240 and HORT 322 or equivalent or consent of instructor. Lab fee: \$50.

423-3 Greenhouse Management. (Same as PSAS 423) Principles of greenhouse management controlling environmental factors influencing plant growth; greenhouses and related structures; greenhouse heating and cooling systems. Prerequisite: HORT 220 or consent of instructor. Lab fee: \$40.

424-4 Floriculture. (Same as PSAS 424) Production, timing, and marketing of the major floricultural crops grown in the commercial greenhouse. Each student will have an assigned project. Special approval needed from the department. Lab fee: \$40.

428-3 Advanced Landscape Design I. (Same as PSAS 428) Development of the design process, graphics and verbal communication of landscape projects. Emphasis on large scale projects and residential design. Special approval needed from the department. Lab fee: \$25.

429-3 Advanced Landscape Design II. (Same as PSAS 429) Development of the design process, graphics and verbal communication of landscape projects. Emphasis on construction details, color rendering and portfolio development. Special approval needed from the department. Lab fee: \$25.

430-4 Plant Propagation. (Same as PSAS 430) Fundamental principles of asexual and sexual propagation of horticultural plants. Actual work with seeds, cuttings, grafts, and other methods of propagation. Not for graduate credit. Prerequisite: HORT 220. Field trip cost approximately \$5. Lab fee: \$40.

431-4 Landscape Construction. (Same as PSAS 431) An introduction course in the basic elements of landscape construction dealing with wood, concrete, masonry, and stone. Emphasis will be placed on safety, interpretation of construction drawings, specifications for specific structures, materials selection, cost estimation, site preparation, and construction techniques. Not for graduate credit. Prerequisite: HORT 220. Lab fee: \$170.

432-4 Garden Center and Nursery Management. (Same as PSAS 432) Principles and practices in both fields and container production or ornamental landscape materials and the marketing of landscape plant materials at the nursery and retail garden center. Business management or both nurseries and garden centers will be included. Not for graduate credit. Special approval needed from the department. Lab fee: \$50.

434-3 Landscape Maintenance Operations. (Same as PSAS 434) Course is designed as a general introduction to landscape maintenance operations. Topics discussed include plant selection, site selection, climatic effects, planting, fertilization, pruning, diagnosis of plant problems, weed control and pest management. Emphasis given to business management practices and cost estimation skills. Not for graduate credit. Special approval needed from the department.

436-4 Successful Fruit Growing. (Same as PSAS 436) Learn how to grow and use temperate fruit trees for your pleasure and/or economic benefit. Learn to use the basic principles of plant-environment interaction to understand and solve common problems found in the culture of tree fruit crops in the landscape, garden or orchard. Master the secrets of fruit grow-

ing through emphasis on hands-on experiential laboratories. Focus on midwest culture of tree fruit and nut crops. One-day field trip. Required textbook mandatory. Not for graduate credit. Special approval needed from the department. Lab fee: \$135.

437-4 Vegetable Production. (Same as PSAS 437) Culture, harvesting, and marketing of vegetables; with morphological and physiological factors as they influence the crops. Not for graduate credit. Special approval needed from the department. Lab fee: \$25.

439-3 Introduction to Landscape Design Software. (Same as PSAS 439) Introduces students to a popular software program used to create landscape designs. Emphasis is on learning the software program rather than learning the design process. Prerequisite: HORT 328A and HORT 328B.

462-3 Sustainable Landscape Practices. (Same as PSAS 562) Landscape practices designed and maintained with respect to natural systems offer ecological benefits, functional solutions and aesthetic value to outdoor spaces. This course will introduce best practices and construction methods of sustainable landscape features as green roofs, green walls, and permeable pavers with an emphasis on construction details, material selection and case studies. Students will expand critical thinking skills as applied to landscape planning.

463-3 Plants in the Ecological Landscape. (Same as PSAS 563) Introduction to alternative plant selections for the urban landscape associated with use of native plants and creating edible landscapes. Emphasis is placed on site selection, whether in the ground, in containers or on a green roof, to determine best practices and appropriate plant choices in urban environments.

466-4 Vine and Small Fruit Culture. (Same as PSAS 466) Study of the developmental patterns and environmental responses of important vine and small fruit crops; strawberries, brambles, blueberries, grapes and exotic crops. Learn to adapt these crops to profitable culture for the amateur or professional with a Midwest focus. Practical hands-on experience in the classroom and the field. Two one-day field trips required. Required textbooks mandatory. Not for graduate credit. Special approval needed from the department. Lab fee: \$150.

469-3 Organic Gardening. (Same as PSAS 469) This class will focus on the philosophical background of organic farming, as well as the biological, environmental and social factors involved in organic food production. The student will learn the basic principles of successful organic gardening without the need to use man-made synthetic chemical sprays and fertilizers. Topics covered will include soils and organic fertilizers, composting and mulches, companion planting and crop rotation, organic cultivation of fruit, vegetable and ornamental flowers/shrubs, organic pest and disease control, permaculture, and organic garden planting design and maintenance.

470-2 Post Harvest Handling of Horticultural Commodities. (Same as PSAS 470) Fundamental principles of post harvest physiology, handling, and evaluation of horticultural commodities will be covered. Specific details will be given on vegetable, fruit, ornamental, and floricultural commodities. Not for graduate credit. Prerequisite: HORT 220 and PLB 320. Field trip costing approximately \$30.

475-4 Golf Course Green Installation and Maintenance. (Same as PSAS 475) This course will focus on the requirements, installation, care and maintenance of the rooting media of golf

course putting green and turfgrass on disturbed soils. Not for graduate credit. Prerequisite: CSEM 240.

480-3 Designing Outdoor Spaces. (Same as PSAS 480) This course will instruct and challenge the student to design outdoor spaces that cultivate a sense of place as related to the site and the user. The course will review fundamental landscape planning process including principles and elements of design with an emphasis on "green" decision making. Special approval needed from the department.

Horticulture Faculty

Boren, Amy, Senior Lecturer, M.S., Southern Illinois University, 1980.

Diesburg, Kenneth, Assistant Professor, Ph.D., Iowa State University, 1987.

Henry, Paul H., Associate Professor, Ph.D., North Carolina State University, 1991.

Jones, K. L., Professor and *Chair*, Ph.D., Texas A&M University, 1999.

Midden, Karen L., Professor, M.L.A., University of Georgia, 1983.

Preece, John E., Professor, *Emeritus*, Ph.D., University of Minnesota, 1980.

Taylor, Bradley H., Associate Professor, Ph.D., Ohio State University, 1982.

Walters, S. Alan, Professor, Ph.D., North Carolina State University, 1996.

Hospitality and Tourism

Administration (Major, Courses, Faculty)

The Hospitality and Tourism Administration program is a part of the Department of Animal Science, Food and Nutrition. The Hospitality and Tourism Administration major offers an undergraduate program as preparation for careers in hospitality and tourism management.

The mission of the Hospitality and Tourism Administration undergraduate program is to provide educational, research, and service activities with the goal of enabling students, as well as industry and community professionals, to function in an ever-changing environment. The program integrates many disciplines that address ongoing concerns and needs of the hospitality and tourism industry.

The mission is accomplished through teaching a combination of relevant hospitality theory and practical solution-based examples using appropriate current technology. The purpose is to develop industry professionals able to contribute, through employment and entrepreneurship, to the economic growth of the hospitality and tourism industry.

The Hospitality and Tourism Administration major is accredited by ACPHA (Accreditation Commission for Programs in Hospitality Administration, P.O. Box 400, Oxford, MD, 21654, phone (416) 226-5527).

Students will be required to take field trips in those courses so designated with the expenses pro-rated for each student. Appropriate uniforms will be required of all students enrolling in those courses that involve preparation of food.

Technology Fee

The College of Agricultural Sciences assesses College of Agricultural Sciences undergraduate majors a technology fee of \$4.58 per credit hour up to twelve credit hours. The fee is charged Fall and Spring semesters.

Bachelor of Science Degree in Hospitality and Tourism Administration, College of Agricultural Sciences

<i>University Core Curriculum Requirements</i>	41
Including: PSYC 102, ECON 113.	
<i>Requirements for Major in Hospitality and Tourism Administration</i>	79
<i>Professional Core Requirement</i>	12
ACCT 220; ISAT 229 or CS 200B; MKTG 304; EPSY 402 or ABE 318 or MATH 282 or PSYC 211 or SOC 308.	
<i>Hospitality and Tourism Core Requirement</i>	51
HTA 202, 206, 250, 273, 330, 351, 360, 371, 373, 380, 400, 445, 435, 440, 461, 465, and 470.	
<i>Approved Electives</i>	16-18
<i>Total</i>	120

Hospitality and Tourism Administration Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101,102.....	3	3
UCOL 101, MATH 108	3	3
UCC Fine Arts, UCC Science I.....	3	3
PSYC 102	-	3
PHIL 104, HND 101.....	3	2
HTA 202.....	3	-
<i>Total</i>	15	14

SECOND YEAR	FALL	SPRING
HTA 206, 360.....	1	4
HTA 250, Elective	3	3
HTA 273, UCC Multicultural.....	3	3
CMST 101, PHIL 105.....	3	3
ISAT 229/CS 200B, ECON 113	3	3
UCC Science II	3	-
<i>Total</i>	16	16

THIRD YEAR	FALL	SPRING
HTA 380, 440	3	3
MKTG 304, HTA 330	3	3
HTA 371, 351.....	3	3
ACCT 220, Statistics.....	3	3
HTA 373, Elective	3	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
HTA 435, 470	3	3
HTA 400, Elective	1	3

HTA 371, 461	3	3
HTA 465, Elective	3	3
HTA 445, Elective	3	3
<i>Total</i>	13	15

Professional Development Sequence (PDS) in Event Planning and Management

The PDS is meant to enhance the marketability of students who wish to pursue careers in meeting and special event planning. Enrollment in Hospitality and Tourism Administration is not required to complete the PDS. While the PDS itself does not lead to a degree, courses can be counted as approved electives toward the Hospitality and Tourism Administration degree. Students not wishing to pursue a baccalaureate must complete the unclassified undergraduate application.

Requirements for DPS in event planning and management

Hospitality and Tourism Administration (HTA) 250, 255, 350, 355, 450, 455.

Professional Development Sequence (PDS) in Food and Beverage Management

The PDS program is meant to boost job opportunities for students interested in management of food and beverage operations. The benefits of this program include opportunities to learn while working, to enhance participant knowledge, and improve opportunities in the work place. It facilitates prospective students to transfer earned program credits to pursue a B.S. degree in Hospitality and Tourism Administration at SIU. The additional advantage is an opportunity to obtain National Restaurant Association 'ManageFirst' certification. Students not wishing to pursue a baccalaureate must complete the unclassified undergraduate application.

Requirements for PDS program in Food and Beverage Management:

Hospitality and Tourism Administration (HTA) 206, 335, 360, 373, 380, 460

Courses (HTA)

156-3 Fundamentals of Foods. An introduction to the basic principles and techniques of food preparation.

202-3 Introduction to Hospitality and Tourism. Introduction to the diverse aspects of the hospitality and tourism industries and the interrelationships between them. Historical development of the industries, trends, current issues and career opportunities will be examined. Grade of C or better required.

206-1 Food Service Sanitation. (Same as HND 206) Basic sanitation principles and application in food service. Employee sanitation training, sanitation standards and safety regulations in the food service will be part of the course. Upon completion of the course, students will be eligible for the sanitation certificate national exam. Grade of C or better required.

250-3 Introduction to Professional Event Coordination. Examines the event planning and management process and will provide the skills and knowledge necessary to bring an event to life. Events of all types and sizes will be explored. Or-

ganization, implementation, and evaluation techniques will be analyzed. Grade of C or better required.

255-3 Trade Show Management. Focuses on the planning, production, and management of trade shows. Various aspects of production management will be discussed including facility management, risk management, transportation, marketing, and design principles. The role of the event planner and communication with event personnel and vendors will be examined. Grade of C or better required.

273-3 Hotel Administration. Covers contemporary lodging management issues such as conference management, hotel security, strategic planning and hotel law. Restricted to HTA major or consent of instructor. Grade of C or better required.

302-3 Dimensions of Tourism. In-depth examination of the components of the travel and tourism industry, motivators to travel, and the various market segments. Also covers analysis of the economic, social, cultural and environmental impacts to tourism. Prerequisite: HTA 202 or consent of instructor. Grade of C or better required.

330-3 Managerial Accounting for the Hospitality Industry. Presents managerial accounting concepts and explains how they apply to the hospitality industry. The contents reflect the uniform system of accounts for the lodging and foodservice industries. Grade of C or better required. Prerequisite: HTA 202, ACCT 220. Restricted to HTA majors.

335-3 Beverage Management. Introduction to beers, wines and spirits. Legal responsibilities of alcohol service. Introduction to responsible beverage service and management. Grade of C or better required. Prerequisite: HTA 202. Lab fee: \$20.

340-3 Social Media Communications in Tourism. This course will introduce students to the different social and new media platforms being used in marketing and communications within the tourism and related industries. Students will utilize the different platforms, and learn to integrate them appropriately into existing business models and communications strategies. Metrics, analytics, and optimization will be examined. Students will be required to maintain accounts with various social media platforms.

350-3 Event Entertainment and Production. Focus on entertainment production and management for large and small events. Research and design techniques, as well as coordination of event entertainment will be explored. Grade of C or better required.

351-3 Destination Management. Focuses on the public tourism business examining Chambers of Commerce, Convention and Visitors Bureaus, Tourism Marketing Offices at Regional, State, and Sub-regions levels, as well as, Public Lands and Tourism at Federal and State levels. Employment opportunities in Public Tourism will be presented. Grade of C or better required. Prerequisite: HTA 202 or consent of instructor.

355-3 Sports Event Management. Illustrates ways to create and implement successful sporting events and turn them into financially sound productions. Sporting events at all levels, from community to global, will be examined. Grade of C or better required.

360-4 Quantity Food Production. (Same as HND 360) Selection and use of institutional foodservice equipment including specifications, cost and care; use of standardized formulas, techniques of quantity preparation, and service of food to large

groups. Grade of C or better required. Prerequisites: HTA 202, HTA 206 or HND 206 or concurrent enrollment. Lab fee: \$30.

361-3 Hospitality Development. Development issues in the hospitality industry. Case studies on purchase/construction issues, inflation and recession, fiscal management and expansion of hospitality firms. Family-owned and operated businesses and entrepreneurship will be addressed. Grade of C or better required. Prerequisite: HTA 202.

363-3 Purchasing Management in the Hospitality Industry. Managerial principles of purchasing in the hospitality industry, with emphasis on functions of purchasing agents, types of markets, and methods of purchasing. Grade of C or better required. Prerequisite: HTA 202. Restricted to HTA majors only or consent of instructor.

371-3 to 6 Field Experience. Opportunity for supervised learning experiences in the student's major. 1st and 2nd 400 hour internship experience. 6 month internship experience. Major requires 371. Restricted to Hospitality and Tourism Administration majors only. Restricted to sophomore status. Special approval needed from the internship coordinator.

372-3 Front Office Management. Principles and concepts of effective front office management in the lodging industry. Grade of C or better required. Prerequisite: HTA 202 or consent of instructor.

373-3 Food and Labor Cost Control. (Same as HND 373) Examination of the managerial responsibilities of the food and beverage manager in the hospitality operation. Management methods in budgeting, forecasting, cost control, and establishing operational policies and systems. Grade of C or better required. Prerequisites: HTA 206, HTA 360 or concurrent enrollment. Restricted to HTA and HND majors only. Lab fee: \$30.

380-3 Hospitality Human Resources. Study of practices related to management and development of human resources in the hospitality industry. Contemporary management issues specifically addressing employment sanitation standards, safety regulations in food service, and challenges in hospitality and tourism will be covered. Grade of C or better required. Prerequisite: HTA 202.

390-1 to 4 Special Studies in Hospitality and Tourism Administration. Enables students to pursue personal research interests in Hospitality and Tourism related disciplines. Grade of C or better required. Prerequisite: HTA 202. Restricted to juniors and seniors only. Special approval needed from the instructor.

400-1 Senior Seminar. Discussion of issues affecting hospitality and tourism professionals. Not for graduate credit. A grade of C or better required. Prerequisite: HTA 202. Restricted to senior status.

421-3 to 6 Special Projects in Hospitality and Tourism Administration. Provides students with an independent study opportunity for an in-depth study of topics or development of projects relating to their specific interest in the hospitality and tourism fields. The topic or project area will be selected from issues, problems or developments in the hospitality and tourism fields. Course can be repeated. Grade of C or better required. Prerequisite: HTA 202. Special approval needed from the instructor.

435-3 Hospitality Marketing Management. This course concentrates on marketing for hotels, restaurants and tourism-

related entities. Industry specific problems and characteristics will be examined. Students will develop a comprehensive marketing plan for related business. The starting point for the development of hospitality marketing strategy assumes basic marketing knowledge has been derived from completing a previous marketing course. The course is taught in a blended environment, combining traditional and online components. A grade of C or better required. Prerequisite: HTA 202 and MKTG 304 or concurrent enrollment in MKTG 304. Course material fee: \$72.

440-3 Hospitality Risk Management. Introduction to risk management, security, liability and contract management applicable to the awareness and/or operations of hotels, restaurants and resorts. A grade of C or better required. Prerequisite: HTA 202.

445-3 Sustainable Tourism Planning and Development. This course focuses on sustainable tourism development as management of all resources in such a way that we can fulfill economic, social, and aesthetic needs while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems. Prerequisite: HTA 202 or consent of instructor.

450-3 Event Marketing and Sponsorships. Strategic marketing and procurement of sponsors as they relate to events will be examined. Techniques related to association, corporation, and other special events will be analyzed and applied.

455-3 Event Risk Management and Safety. Techniques used to reduce event risk and liability and increase safety for event attendees will be discussed. Crowd control, fire safety, attendee behavior, food and beverage safety, emergency medical services, among others, will be explored.

460-4 Food Service Management. The course includes practical experience in the operational administration of a food service facility. Provides students an opportunity to exercise their ability and creativity to manage a noon luncheon service for the Student Center Old Main Room. The lab involves situations in which students fill the different roles involved with food service management. Prerequisite: HTA 202, HTA 360, HTA 373 or consent. Restricted to HTA majors. Lab fee: \$30.

461-3 Service Organization and Management. (Same as HND 461) Managerial aspects of the hospitality industry as related to provision of quality service. Organizational structures, management techniques, decision-making abilities, ethics, leadership, and human resource issues are examined. A grade of C or better required. Prerequisite: HTA 202, HTA 380, or consent of instructor.

465-3 Convention Management and Services. This course serves as a primer to the understanding of the role meeting and convention planning business plays in hotel profitability. Students will explore successful procedures, practical insight, and foundational knowledge to succeed in convention management and services. Prerequisites: HTA 202 or HTA 302.

470-3 Hospitality Facilities Management. The course provides a comprehensive survey to manage the physical plants of hotels and food service establishments by working with the engineering and maintenance divisions in an effective and efficient manner. Areas of emphasis will include maintenance, energy conservation, environmental impact, and facilities management, with specific issues such as maintenance needs as

they affect operations, property expenditures and resources, and a balance between guest satisfaction and environmental sustainability being addressed. A grade of C or better required. Prerequisite: HTA 202 or consent of instructor.

Hospitality and Tourism Administration Faculty

Agbeh, Anthony, Instructor, M.S., Florida International University, 1983

Banz, William, Professor and Chair, Ph.D., University of Tennessee, 1995.

Davis, Nicole L., Instructor, Ph.D., Southern Illinois University, 2009.

Girard, T. C., Associate Professor, *Emeritus*, M.S., University of Wisconsin, 1992.

Karan, Ravi, Instructor, M.S., Northumbria UK, 2006.

Smith, Sylvia F., Assistant Professor, Ph.D., University of Tennessee, 2007.

Hotel Management

(SEE HOSPITALITY AND TOURISM ADMINISTRATION)

Human Nutrition and Dietetics

(Major, Courses, Faculty)

Nutrition is an exciting and expanding field. The study of Human Nutrition exemplifies the indicate relationships between diet, health, and disease. The Human Nutrition & Dietetics (HND) major is part of the Department of Animal Science, Food, and Nutrition (ASFN) and offers three specializations: Dietetics/Pre-Nursing (DPN); Nutrition for Wellness Specialization (NW); and Dietetics (DPD). Admission to the HND major follows general undergraduate admission requirements outlined in this Undergraduate Catalog.

DIDACTIC PROGRAM IN DIETETICS SPECIALIZATION (DPD)

This specialization is designed specifically for those wanting to become registered dietitians (RD). The first step to become a registered dietitian (RD) and/or licensed dietitian/nutritionist (LDN) in the State of Illinois requires successful completion of an ACEND-accredited DPD program. To become a RD or LDN the following qualifications apply:

1. Baccalaureate degree or post-baccalaureate degree in human nutrition, food and nutrition, dietetics, food systems management, nutrition education, or equivalent from an accredited University.
2. 1200 hours of supervised practice in an ACEND-accredited Dietetic Internship to obtain RD status, and 900 hours of supervised practice to obtain LDN status.
3. Successful completion of a professional examination.
4. Continuing education.

The SIU DPD program is fully accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) of the Academy of Nutrition and Dietetics (The Academy), 120 South Riverside Plaza, Suite 2000, Chicago, Illinois 60606-6995, phone (312) 899-5400. As a DPD student it is of **upmost importance** that significant dietetic work experience (paid or volunteer), exceptional academic performance (overall GPA>2.85), and involvement in extracurricular activities are acquired.

All DPD students are required to maintain at least a 2.85 (on a 4.0 scale) cumulative GPA and a 3.0 in HND courses to remain in the DPD program. If a student drops below minimum requirements, they will be placed on *departmental* probation and have one semester to reestablish the minimum requirements (2.85 cumulative GPA and a 3.0 in HND courses).

The DPD specialization is served by an advisory committee made up of practicing registered dietitians, food service managers, dietetic internship preceptors, and educators who provide expertise to assure a curriculum that will prepare graduates to meet ACEND Standards of Education and needs of the public. Employment opportunities available in traditional areas of dietetics (clinical, management, and community), and non-traditional areas such as private practice, business, industry, education, government/politics, book authoring, health promotion, spas, and fitness centers. More information regarding this specialization can be found at <http://coas.siu.edu/academics/bachelors/human-nutrition/didactic-program/index.html>.

DIETETICS/PRE-NURSING SPECIALIZATION (DPN)

The DPD curriculum can be concurrently completed with the pre-nursing curriculum (see DPD description) and/or meet the open pre-professional programs requirements (http://www.science.siu.edu/advisement/health_advisement/information/index.html). This will allow HND students who plan to enter medical, dental, pharmacy, nursing, dietetics, or other health professions meet the pre-professional requirements to apply for admission see corresponding sections in the *Undergraduate Catalog* for specific requirements. This specialization can also be combined with specific minors (e.g., Animal Science, Biological Sciences, Chemistry, Health Care Management, Kinesiology, Microbiology, Philosophy, Psychology, Zoology to mention a few). These options will allow HND students various career possibilities. *Individuals wishing to provide nutrition counseling or medical nutrition therapy must be a Registered Dietitian and/or licensed in their state of residence.*

NUTRITION FOR WELLNESS (NW)

Interest in sports nutrition and wellness is rapidly growing. Employment may comprise working with a healthy, active, and highly competitive population, or are pursuing to acquire or reestablish a dynamic, healthy lifestyle. Individuals aspiring to become Registered Dietitians must also complete the DPD specialization to qualify them to apply for a post-baccalaureate internship (supervised practice program). Combining these two (2) specializations may require additional semesters and more than 120 credit hours. Individuals wishing to provide nutrition counseling or medical nutrition therapy must be a Registered Dietitian and/or licensed in their state of residence.

Bachelor of Science Degree in Human Nutrition and Dietetics, College of Agricultural Sciences

<i>University Core Curriculum Requirements</i>	41 ²
<i>Requirements for Major in Human Nutrition and Dietetics</i>	32
UCOL 101I	(3)
PLB 115/ZOOL 115	(3)
CHEM 140A,B	(3) + 5
PHIL 104	(3)
MICR 201	4

EPSY 402, MATH 282, ABE 318, or PSYC 211	3/4
PHSL 201 and 208	4
HND 100, 101, 320, 356, 425, 475, 485	(2) + 16
<i>Additional Requirements for Didactic Program in Dietetics.</i> 47	
AH 105	2
HED 415, SOCW 383, or EPSY 493	3
AH 105	2
HND 321, 400, 410, 470, 480	14
AH 105	2
HTA 206, 360, 373, 435, 461	14
MKTG 304	3
PSYC 323	3
Electives	8
<i>Additional Requirements for Dietetics/Pre-Nursing (DPN)...</i> 8	
ZOOL118	(3) + 1 ³
PHSL 301	4
CMST 262	3
<i>Additional Requirements for Nutrition for Wellness (NW)...</i> 47	
AH 105	2
KIN 201	3
HED 311, 312, 351	9
HND 321, 410, 445, 495	12
Approved Electives	21
Total	120

¹The numbers in parentheses are counted as part of the 41-hour University Core Curriculum.

²Replaces ZOOL/PLB 115.

Human Nutrition and Dietetics Suggested Curricular Guide: Didactic Program in Dietetics Specialization

FIRST YEAR	FALL	SPRING
UCOL 101I, HND 101	3	2
HND 100, ENGL 102	1	3
ENGL 101, Fine Arts Elective	3	3
MATH 108, PSYC 102	3	3
PHIL 104, CHEM 140A	3	4
ZOOL 115,	3	-
<i>Total</i>	16	15
SECOND YEAR	FALL	SPRING
HTA 206, HND 320	1	3
CHEM 140B, HTA 360	4	4
PHSL 201, Multicultural	3	3
PHSL 208, Social Science	1	3
CMST 101, MICR 201	3	4
Humanities elective	3	-
<i>Total</i>	15	17
THIRD YEAR	FALL	SPRING
HND 321, 356	3	3
HND 475, 410	3	3
HTA 373, HND 425	3	3
PSYC 323, MKTG 304	3	3
Elective	2	-
<i>Total</i>	14	12

THIRD YEAR*	*SUMMER
HED 415/EPSY 493/SOCW 383	3
Elective	3
<i>Total</i>	6

* EPSY 493 may be taken Fall or Spring; SOW 383 may be taken Fall. Therefore, students are not required to take those courses, or the elective, over the Summer term. HED 415 is only available during Summer

FOURTH YEAR	FALL	SPRING
HND 400, 470.....	1	4
HND 485, 480	3	3
AH 105, HTA 461	2	3
Elective, EPSY 402/ABE 318/ PSYC 211/MATH 282	3	3-4
HTA 435	3	-
<i>Total</i>	12	13-14

Human Nutrition and Dietetics Suggested Curricular Guide: Dietetics/Pre-Nursing Specialization

FIRST YEAR	FALL	SPRING
UCOL 101I, ENGL 102.....	3	3
ENGL 101, CHEM 140B.....	3	4
MATH 108, Social Science	3	3
ZOOL 118, MICR 201	4	4
CHEM 140A, PHSL 301	4	4
PSYC 102.....	3	-
<i>Total</i>	20	18

SECOND YEAR	FALL	SPRING
HND 100, 320.....	1	3
HND 101, Multicultural	2	3
HTA 206, Social Science	1	3
Humanities elective, PHIL 104.....	3	3
PHSL 201, Fine Arts elective	3	3
PHSL 208	1	-
CMST 262.....	3	-
<i>Total</i>	14	15

THIRD YEAR	FALL	SPRING
HND 321, 356	3	3
HND 475, 410.....	3	3
HTA 373, HND 425.....	3	3
HTA 360, MKTG 304	4	3
<i>Total</i>	13	12

THIRD YEAR	SUMMER
HED 415/EPSY 493/SOCW 383	3
<i>Total</i>	3

* EPSY 493 may be taken Fall or Spring; SOW 383 may be

taken Fall. Therefore, students are not required to take those courses, or the elective, over the Summer term. HED 415 is only available during Summer

FOURTH YEAR	FALL	SPRING
HND 400, 470.....	1	4
HND 485, 480	3	3
AH 105, HTA 461.....	2	3
HTA 435, EPSY 402/ABE 318/ PSYC 211/MATH 282	3	3-4
PSYC 323	3	-
<i>Total</i>	12	13-14

Human Nutrition and Dietetics Suggested Curricular Guide: Nutrition for Wellness Specialization

FIRST YEAR	FALL	SPRING
UCOL 101I, HND 101.....	3	2
ENGL 101, ENGL 102.....	3	3
MATH 108, Fine Arts Elective.....	3	3
ZOOL 118, PSYC 102	4	3
Social Science, CHEM 140A.....	3	4
<i>Total</i>	16	15

SECOND YEAR	FALL	SPRING
CMST 101, HND 320.....	3	3
CHEM 140B, MICR 201	4	4
PHSL 201, Multicultural	3	3
PHSL 208, Humanities elective.....	1	3
KIN 201, HED 312	3	3
<i>Total</i>	14	16

THIRD YEAR	FALL	SPRING
HND 321, 356	3	3
HND 475, 425.....	3	3
PHIL 104, HND 410.....	3	3
HED 311 HND 445	3	3
Elective, Humanities elective.....	3	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
AH 105, EPSY 402/ABE 318/ PSYC 211/MATH 282	2	3-4
HND 485, HED 351	3	3
HND 495, Elective	3	3
Electives	3	3
Electives	3	3
<i>Total</i>	14	15-16

Courses (HND)

100-1 Careers in Dietetics. Overview of the diverse career options in dietetics from the perspective of guest speakers, readings, and assignments. Required courses and skills that characterize the dietetic professional will be reviewed. Restricted to HND major or consent of instructor.

101-2 Personal Nutrition. (University Core Curriculum) This course integrates nutrition and promotion of health through prevention of disease and will answer questions found daily in the media regarding nutrition. Topics emphasized are functions of basic nutrients, impact of culture, gender, ethnicity, social environments and lifestyle on nutrition and health.

206-1 Food Service Sanitation. (Same as HTA 206) Basic sanitation principles and application in food service. Employee sanitation training, sanitation standards and safety regulations in the food service will be part of the course. Upon completion of the course, students will be eligible for the sanitation certificate national exam. Grade of C or better required.

215-2 Introduction to Nutrition. (Same as ANS 215) An up-to-date study of basic principles of nutrition including classification of nutrients (physical and chemical properties) and their uses in order to provide the student a working knowledge of nutrition in today's environment.

247A-1 The School Lunch Program-Food Purchasing.

247B-1 The School Lunch Program-Quantity Food Production.

247C-1 The School Lunch Program-Nutrition Practices in the School Lunchroom.

256-5 Science of Food. Application of scientific principles including preparation, chemistry, functions, and interrelationships in ingredients and their effects on physical, chemical, and sensory characteristics of foods. Three lectures and two three-hour laboratories per week. Prerequisite: CHEM 140A or 200 and 201.

320-3 Foundations of Human Nutrition. Principles of human nutrition in relation to intermediary metabolism and the role of vitamins and minerals. Prerequisite: HND 101, CHEM 140A or CHEM 200 and 201.

321-3 Food and Nutrition Assessments. Demonstration and use of tools and practices in assessing food and nutrition behaviors of individuals and groups in clinical and community nutrition care settings. Prerequisites: HND 320 or equivalent.

356-3 Experimental Foods. Experimental approach to the study of food science including factors influencing the interrelationships of ingredients and their effects on physical, chemical, and sensory characteristics of food. Prerequisites: HND/HTA 206 or sanitation certification, HND/HTA 360. Lab fee: \$10.

360-4 Quantity Food Production. (Same as HTA 360) Selection and use of institutional foodservice equipment including specifications, cost and care; use of standardized formulas, techniques of quantity preparation, and service of food to large groups. Grade of C or better required. Prerequisite: HTA 202, HTA 206 or HND 206 or concurrent enrollment. Lab fee: \$30.

371-2 Field Experience. Opportunity for supervised learning experiences in the student's major. Restricted to food and nutrition majors only, sophomore status. Special approval needed from internship coordinator.

373-3 Food and Labor Cost Control. (Same as HTA 373) Examination of the managerial responsibilities of the food and beverage manager in the hospitality operation. Management methods in budgeting, forecasting, cost control, and establishing operational policies and systems. Grade of C or better required. Prerequisites: HTA 206, HTA 360 or concurrent enrollment. Restricted to HTA and HND majors only. Lab fee: \$30.

390-1 to 4 Special Studies in Human Nutrition and Di-

etetics. Enables students to pursue personal research interests in the human nutrition and dietetics area. Restricted to juniors and seniors only. Special approval needed from the department.

400-1 Career Development. Review of the post-baccalaureate accredited Internship Program application process. Not for graduate credit. Prerequisite: HND 100. Restricted to senior status.

410-3 Nutrition Education. Principles, techniques and evaluation methods necessary to incorporate nutrition into the educational curriculum of schools, hospitals, out-patient clinics, and health agencies. Prerequisite: HND 321.

420-3 Recent Developments in Nutrition. Critical study of current scientific literature in nutrition. Prerequisite: HND 320.

425-3 Biochemical Aspects in Nutrition. (Same as ANS 425) The interrelationship of cell physiology, metabolism and nutrition as related to energy and nutrient utilization, including host needs and biochemical disorders and diseases requiring specific nutritional considerations. Prerequisite: ANS 215 or HND 320, CHEM 140B, PHSL 201 and 208.

445-3 Nutrition for Sport and Exercise. This course presents the metabolic and physiologic basis for macronutrient and micronutrient requirements during training, competition/performance, and recovery. The course begins with a brief overview of nutrition and exercise metabolism, followed by examination of nutritional requirements for sport and exercise, and concluding with a discussion of the practical aspects of nutrition related to athletes and exercise enthusiasts. Restricted to Junior, Senior, or Graduate Standing or Permission of Instructor.

461-3 Service Organization and Management. (Same as HTA 461) Managerial aspects of the hospitality industry as related to provision of quality service. Organizational structures, management techniques, decision-making abilities, ethics, leadership, and human resource issues are examined. A grade of C or better required. Restricted to HTA or HND major. Special approval needed from the instructor.

470-4 Medical Nutrition Therapy. Study of pathophysiology and principles of medical nutrition therapy for various disease states. Application of Nutrition Care Process, nutrition screening and assessment, and medical record documentation. Prerequisite: HND 320, HND 321, AH 105, CHEM 140B, PHSL 201 and 208.

475-3 Nutrition Through the Life Cycle. The study of human nutrition during each phase of the life cycle, prenatal through geriatric. Students elect at least two phases for in-depth study. A general review of basic nutrition is included. Prerequisite: HND 320.

480-3 Community Nutrition. Study of the objectives, implementation strategies, and evaluation methods of nutrition programs in community health programs. Integration of nutrition into the health care system at local, state, and federal levels included. Prerequisite: HND 475.

485-3 Advanced Nutrition. This course applies advanced principles of biochemistry and physiology to expand on basic nutrition information and explains the role of nutrients from cellular and mechanistic aspects. Prerequisite: HND 320, 425.

490-3 Practicum in Sport Nutrition and Wellness. This is an opportunity to gain field experience in wellness and sports nutrition and collaborate with peers to share experiences and

work through a variety of problems. It is a “capstone” course: one that brings together the theory, knowledge, and skills that you’ve gained through completion of the Nutrition curriculum that you may apply in a live setting. The goal of this course is to expose students to a variety of situations they may encounter in a wellness and/or sports nutrition profession. Restricted to senior standing or instructor approval.

495-3 Nutrition and Obesity. This course will examine the multifactorial etiology of obesity, its corresponding health consequences, and the role of diet in prevention and treatment of obesity and its related comorbidities. At the end of this course, students will be able to (i) understand basic physiological and metabolic concepts underlying the development of obesity; (ii) discuss the health consequences of obesity across the lifespan; and (iii) describe the nutrition-related approaches for prevention and treatment of obesity. Prerequisite: HND 425 or concurrent enrollment.

Human Nutrition and Dietetics Faculty

Ashraf, Hea-Ran L., Professor, *Emerita*, Ph.D., Iowa State University, 1979.

Banz, William J., Professor, Ph.D., University of Tennessee, 1995.

Davis, Jeremy, Assistant Professor, Iowa State University, 2008.

Davis, Nicole L., Instructor, Ph.D., Southern Illinois University, 2009.

Endres, Jeannette M., Professor, *Emerita*, Ph.D., St. Louis University, 1972.

Gill, Lynn, Instructor, M.S., Southern Illinois University Carbondale, 1996.

Girard, T. C., Associate Professor, *Emeritus*, M.S., University of Wisconsin, 1992.

Green, Brenda Harsha, Instructor, M.S., Southern Illinois University, 2000.

Harper, Jenny M., Professor, *Emerita*, Ph.D., Cornell University, 1941.

Hasin, Afroza, Instructor, M.S., Washington State University, 2004.

Konishi, Frank, Professor, *Emeritus*, Ph.D., Cornell University, 1958.

Roth, Sara Long, Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1991.

Smith, Sylvia F., Assistant Professor, Ph.D., University of Tennessee, 2007.

Welch, Patricia, Professor, *Emerita*, Ph.D., Southern Illinois University, 1982.

Industrial Technology (Major, Courses, Faculty)

The Industrial Technology major has as its objective the training of qualified personnel who can develop and direct the production and distribution of products and services. The major is designed to prepare management-oriented technical professionals in the economic-enterprise system.

The industrial technology curriculum is flexible enough to provide the means whereby graduates of two-year occupational programs may obtain a Bachelor of Science degree. A graduate of a two-year industrially-oriented occupational program, such as aviation, construction, drafting, data processing, electronics,

machine tool, mechanical, and mining may have an appropriate preparation to pursue a Bachelor of Science degree with a major in industrial technology.

Students with work related experience might receive credit toward the degree via Industrial Technology 258. Additional flexibility in earning credit toward the degree is possible through cooperative work experience provided meaningful employment is available.

A Capstone Option may be available in the industrial technology major and is explained in Chapter 3 of this bulletin. Students holding associate degrees of at least 60 semester hours in non-baccalaureate-oriented programs or equivalent certification with a minimum grade point average of 2.0 are qualified. For the industrial technology major, the associate degree or equivalent certification should be in an industry-related field. This option permits qualified students to fulfill their degree requirements by completing 60 semester hours of work approved by the Capstone advisor. Each individual’s program of study may differ according to the previous academic work.

The Association of Technology, Management, and Applied Engineering accredits the industrial technology program. For each curriculum, a minimum of 30 hours in industrial technology courses must be taken in residence at Southern Illinois University Carbondale.

Bachelor of Science Degree in Industrial Technology, College of Engineering

INDUSTRIAL TECHNOLOGY MAJOR — MANUFACTURING TECHNOLOGY SPECIALIZATION

The manufacturing technology specialization is designed to prepare graduates for supervisory and technical management positions in manufacturing. Curriculum requirements are broad based to enable the graduate to obtain employment in manufacturing areas such as quality control, processes, safety, methods analysis, and computer-aided manufacturing/robotics. The Capstone Option feature is available for students and is described in Chapter 3 of this bulletin.

<i>University Core Curriculum Requirements</i>	41
Foundation Skills	15
English 101, 102	6
UCOL 101	3
Mathematics (substitute Mathematics in major)	3
Communication Studies 101	3
Disciplinary Studies	23
Fine Arts	3
Human Health	2
Humanities	6
Science (substitute Physics in major for 3 hours)	6
Social Science	6
Integrative Studies	3
Multicultural	3

<i>Requirements for Major in Industrial Technology with a Specialization in Manufacturing Technology</i>	(6) + 79
Industrial Technology Core Requirements	12-13
Physics 203A,B, 253A,B	(3) + 5
Mathematics 111	(3) + 1
Mathematics 140 or Industrial Technology 307	3-4
Psychology 323 or Industrial Technology 340	3
Specialization in Manufacturing Technology	66-67

Industrial Technology 110, 208, 305, 376, 390, 392, 445, 450, 455, 465, 470A, 470B, 476.....	39
Technical Electives	21-22
Electives	6
<i>Total</i>	120

Industrial Technology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, IT 110.....	3	3
MATH 111, ENGL 102	4	3
IT 208, MATH 140/IT 307	3	4
Core Human Health, Core Biological Science	2	3
UCOL 101, Core Fine Arts	3	3
<i>Total</i>	15	16

SECOND YEAR	FALL	SPRING
IT 390, 392.....	3	3
IT 376, PHYS 203B.....	3	3
PHYS 203A, 253B.....	3	1
PHYS 253A, CMST 101	1	3
Core Humanities, Technical Elective.....	3	3
Technical Elective	3	3
<i>Total</i>	16	16

THIRD YEAR	FALL	SPRING
Free Elective, IT 305	3	3
IT 470A, PSYC 323	3	3
Core Humanities, Core Multicultural ...	3	3
Core Social Science, IT 470B.....	3	3
Technical Elective, IT 445	3	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
IT 455, 450	3	3
IT 476, 465.....	3	3
Technical Elective, Core Social Science	3	3
Technical Elective, Technical Elective...	3	3
Free Electives	3	3
<i>Total</i>	15	15

PROFESSIONAL DEVELOPMENT SEQUENCE (PDS) IN LEAN SIX SIGMA

The PDS in Lean Six Sigma is intended to enhance the marketability and training of students who wish to pursue careers in quality management and process improvement. Enrollment in the Industrial Technology major is not required to complete the program. The PDS in Lean Six Sigma facilitates prospective students to transfer earned program credits to pursue a B.S. degree in Industrial Technology at SIU. Students not wishing to pursue a baccalaureate must complete the unclassified undergraduate application.

Requirements for PDS in Lean Six Sigma 12
 Courses: Industrial Technology (IT) 450, 465, 470A, 470B. All courses are offered Face-to-Face and Online.

Courses (IT)

Safety glasses, a suitable scientific calculator, and textbooks are required for most of the following courses.

105-3 Computer-Aided Drafting. (Same as ET 103) Links the components of technical sketching with current CAD software. Sketching to include: orthographic projection, sectional views and dimensioning. Employ these elements with current CAD software in creating drawing entities, managing layers, displaying and modifying drawings, annotating and dimensioning, and file management. Restricted to College of Engineering students or departmental approval required.

110-3 Geometric Dimensioning and Tolerancing. Geometric dimensioning and tolerancing (GD&T) principles based on industry standards such as ANSI and ASME. Includes terminology, symbol identification feature control frames, modifiers, datums, etc. Selection of datum features, calculation of bonus tolerances, assignment of form, run-out and positional tolerances, and tolerance stack-up. Restricted to College of Engineering students or departmental approval required. Special approval needed from the department.

208-3 Fundamentals of Manufacturing Processes. [IAI Course: IND 913] Introduction to the basic processes, equipment, and material used in manufacturing. Includes plastics, metal removal, materials joining, casting, and some of the newer processes. Restricted to College of Engineering students or departmental approval required. Special approval needed from the department.

209-3 Manufacturing Process Laboratory. (Same as ET 209) Laboratory experiments to familiarize the student with the theory and operation of manufacturing processes. Laboratory. Prerequisite: IT 208 or consent of instructor. Restricted to College of Engineering students or departmental approval required.

258-2 to 30 Work Experience Credit. Credit granted for past work experience while employed in fields related to the student's educational objective. Credit is established by departmental evaluation. Restricted to College of Engineering students or departmental approval required.

259-2 to 60 Occupational Credit. For occupational credit earned at junior colleges and technical institutes. Credit is established by departmental evaluation. Restricted to College of Engineering students or departmental approval required.

270-3 Computational Methods for Industrial Technologists. Introduces the student to a problem-oriented computer language that is used to solve relevant problems that occur in industry. Restricted to College of Engineering students or departmental approval required.

305-3 Industrial Safety. Principles of industrial accident prevention; accident statistics and costs; appraising safety performance; recognizing industrial hazards and recommending safeguards. Includes a study of the Occupational Safety and Health Act and the Coal Mine Health and Safety Act. Restricted to College of Engineering students or departmental approval required. Special approval needed from the department.

307-3 Applied Calculus for Technology. Applying mathematical techniques to technology problems, including the analysis, formulation, and problem solutions. Techniques of

differentiation, max-min problems, and elementary techniques of integration. Prerequisite: MATH 111 or equivalent with a minimum grade of C. Restricted to College of Engineering students or departmental approval required.

319-2 to 16 Industrial Internship. Industrial experience includes job skills, manufacturing processes, technical information, and labor-management relationships with supervised instruction, conferences, and examinations. Special approval needed from the instructor. Mandatory Pass/Fail. Restricted to College of Engineering students or departmental approval required.

321-3 Underground Mining. Study of terminology, mining methods, equipment selection, ventilation, haulage, coal handling, and safety parameters associated with underground coal extraction technology. Restricted to College of Engineering students or departmental approval required.

340-3 Introduction to Supervision. Analysis of problems of supervisors. Topics include leadership, motivation, communication, grievances, training, discipline, group and individual effectiveness, and labor relations. This course is designed to introduce the roles and responsibilities of supervisors and managers in the workplace. In addition, this course is designed to prepare persons who are or intend to become supervisors in business, industry, government, or in the service industry. Prerequisites: none. Restricted to College of Engineering students or departmental approval required. Special approval needed from the department.

341-3 Maintenance. Principles and practices of maintenance department organization, preventative procedures, and typical equipment problems. Also, includes related topics such as plant protection, custodial services, and maintenance of powerplants. Restricted to College of Engineering students or departmental approval required.

342-1 to 12 Industrial Technology Cooperative Education. Supervised work experience in industry with an emphasis on manufacturing. Students will gain first-hand knowledge of the various aspects of Industrial Technology. Work experience is supervised by a faculty. Reports will be required from the student and employer. Hours may count toward technical electives. Mandatory Pass/Fail. Restricted to junior standing. Restricted to College of Engineering students or departmental approval required.

351-3 Industrial Metrology. Methods and equipment of industrial measurement and inspection. Includes 3-D measuring machines, lasers, and non-destructive testing. Restricted to College of Engineering students or departmental approval required.

358-1 to 30 Work Experience Credit. Credit granted for past work experience that is principally management and/or supervisory in nature. Students seeking credit must demonstrate an employment history in fields/areas related to the student's educational objective. Credit is established by departmental evaluation. Restricted to College of Engineering students or departmental approval required.

375-3 Production and Inventory Control. Production and inventory control systems. Includes topics in forecasting, master production scheduling, material requirements planning, capacity requirements planning, inventory management, production activity control, and applicable operations research

techniques. Prerequisite: Mathematics 111 or equivalent with a minimum grade of C. Restricted to College of Engineering students or departmental approval required. Special approval needed from the department.

376-3 Supply Chain Operations and Logistics. The objective of this course is to introduce the basic principles and techniques of supply chain operations and logistics. Major topics covered include overview of supply chain management, roles of logistics in supply chains, global dimensions of supply chains, demand management, order management and customer service, managing inventory in the supply chain, transportation, distribution, and other modern supply chain management techniques and issues. Prerequisite: Math 111 or equivalent. Restricted to College of Engineering students or departmental approval required.

386-3 Total Quality. Application of quantitative methods and human resources to improve product quality, enhance productivity, customer satisfaction, manufacturing organizational effectiveness and ability to compete in a global market. Restricted to College of Engineering students or departmental approval required.

390-3 Cost Estimating. (Same as ET 390) Study of the techniques of cost estimation for products, processes, equipment, projects, and systems. Prerequisite: MATH 111 or equivalent. Restricted to College of Engineering students or departmental approval required.

392-3 Facilities Planning and Workplace Design. Discusses and applies the tools necessary to design a work area (e.g. facility, department, workstation) from various aspects including time standards development and uses, throughout requirements, ergonomics, lean manufacturing, methods engineering, work environment, safety, material handling, process flow, and cost. Various methods and techniques will be introduced and utilized to analyze the effectiveness and efficiency of a given layout. Prerequisite: IT 208 or consent of instructor, MATH 111 with minimum grades of C. Restricted to College of Engineering students or departmental approval required. Special approval needed from the department.

395-3 Technology Design. An elective project on a technical subject selected by the student with advice from the instructor. Stimulates original thought and creativity. Special approval needed from the instructor. Restricted to College of Engineering students or departmental approval required.

405-4 Applied Robotics and Control Lab. Laboratory experiments to familiarize the student with writing robotic programs for performing specific tasks, developing and debugging PLC code, integrating robotic programming and PLC programming in the control of a robotics cell, developing basic programming skills using computer simulation packages; milling and lathing applications of CNC machining. Prerequisite: IT 445 or ET 445 and IT 455 or concurrent enrollment in both. Restricted to College of Engineering students or departmental approval required. Restricted to Junior/Senior standing.

430-3 Health and Injury Control in A Work Setting. (Same as HED 430) Assesses the health and injury control programs present in a work setting. Emphasis given to employee programs in health, wellness, and injury control that are effective. Field trips to work sites are included. Restricted to College of Engineering students or departmental approval required.

440-3 Manufacturing Policy. Review of all areas covered by the industrial technology program. Includes problems which simulate existing conditions in industry. Students present their solutions to the class and to the instructor in a formal manner. Restricted to College of Engineering students or departmental approval required.

442-3 Fundamentals of Leadership. This course is designed to provide an introduction to leadership by focusing on what it means to be a good leader. Emphasis in the course is on the practice of leadership. The course will examine topics such as: the nature of leadership, recognizing leadership traits, developing leadership skills, creating a vision, setting the tone, listening to out-group members, handling conflict, overcoming obstacles, and addressing ethics in leadership. Attention will be given to helping students to understand and improve their own leadership performance. Not for graduate credit. Restricted to sophomore standing or higher. Restricted to College of Engineering students or departmental approval required.

445-3 Computer-Aided Manufacturing. (Same as ET 445) Introduction to the use of computers in the manufacturing of products. Includes the study of direct and computer numerical control of machine tools as well as interaction with process planning, inventory control and quality control. Laboratory. Prerequisite: Industrial Technology 208, Mathematics 111 or equivalent. Restricted to College of Engineering students or departmental approval required. Special approval needed from the department. Restricted to Junior/Senior standing.

450-3 Project Management. This course is designed to provide students with an overview of the project management process followed by an in-depth examination of the activities needed to successfully initiate, plan, schedule, and control the time and cost factors of the project. Prerequisite: none. Restricted to College of Engineering students or departmental approval required. Special approval needed from the department. Restricted to Junior/Senior standing.

455-3 Industrial Robotics. (Same as ET 455) Study of robotics within a wide variety of application areas. Topics covered include classification of robots, sensor technology, machine vision; control systems, including programmable logic controllers (PLCs); robot safety and maintenance; and economic justification of robotic systems. Prerequisite: Mathematics 111 or equivalent. Restricted to College of Engineering students or departmental approval required. Special approval needed from the department. Restricted to Junior/Senior standing.

465-3 Lean Manufacturing. This course will cover the principles and techniques of lean manufacturing. Major topics covered include lean principles, 5S, value stream mapping, total productive maintenance, manufacturing/office cells, setup reduction/quick changeover, pull system/Kanbans, continuous improvement/Kaizen, lean six sigma, lean simulation, and other modern lean manufacturing techniques and issues. Restricted to College of Engineering students or departmental approval required. Special approval needed from the department. Restricted to Junior/Senior standing.

470A-3 Six Sigma Green Belt. Study the knowledge areas of Six Sigma Green Belt. Topics include six sigma goals, lean principles, theory of constraints, design for six sigma, quality function deployment, failure mode and effects analysis, process management, team dynamics, project management basics, data

and process analysis, probability and statistics, measurement system analysis, and process capability. Restricted to College of Engineering students or departmental approval required. Special approval needed from the department. Restricted to Junior/Senior standing.

470B-3 Six Sigma Green Belt II. The objective of this course is to provide the student with a complete coverage of the statistical and analytical tools used and applied in the "Six Sigma" methodology at the green-belt level. Topics include: discrete probability distributions, continuous probability distributions, statistical process control tools, quality control charts, process capability analysis, gauge and measurement capability studies, cumulative sum control charts and exponentially-weighted moving average control charts. Prerequisite: Industrial Technology 307 or equivalent, Industrial Technology 470A or consent of instructor. Restricted to College of Engineering students or departmental approval required. Special approval needed from the department. Restricted to Junior/Senior standing.

475-3 Quality Control. Study the principles and techniques of modern quality control practices. Topics include total quality management, fundamentals of statistics, control charts for variables and other quality related issues and techniques. Restricted to senior standing. Restricted to College of Engineering students or departmental approval required.

476-3 Supply Chain Design and Strategy. The objective of this course is to introduce the basic principles and techniques of supply chain design and strategy. Major topics covered include supply chain network analysis and design, sourcing materials and services, producing goods and services, supply chain sustainability, strategic challenges and change for supply chains, supply chain relationships, supply chain performance measurement and financial analysis, managing information flow and other modern supply chain management techniques and issues. Prerequisite: IT 376 with a minimum grade of C. Restricted to College of Engineering students or departmental approval required and junior/senior standing.

480-3 Six Sigma Black Belt. The purpose of this course is to provide the student with a comprehensive coverage of the knowledge areas and tools of Six Sigma beyond green-belt training, focusing on descriptive and analytical methods to deal with variability including point and interval estimation, hypothesis testing, and design of experiments. Topics include: confidence intervals, hypothesis testing, regression analysis, analysis of variance, single factor experiments, block design of experiments. Prerequisite: Industrial Technology 307 or equivalent, Industrial Technology 470B. Restricted to College of Engineering students or departmental approval required. Special approval needed from the department. Restricted to Junior/Senior standing.

485-3 Quality Control II. Study the principles and techniques of modern quality control practices. Topics include fundamentals of probability, control charts for attributes, acceptance sampling systems, reliability and other quality related issues and techniques. Restricted to senior standing. Restricted to College of Engineering students or departmental approval required.

490-3 Six Sigma. Six Sigma is a data-driven management system with near-perfect-performance objectives that has been employed by leading corporations. Its name is derived from the statistical target of operating with no more than 3.4 defects per one

million chances, but its principles can be applied in business of all types to routinely reduce costs and improve productivity. This overview describes what Six Sigma is, and what its techniques and tools are. Prerequisite: IT 475. Restricted to College of Engineering students or departmental approval required.

492-1 to 6 Special Problems in Industry. Special opportunity for students to obtain assistance and guidance in the investigation and solution of selected industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering students or departmental approval required. Special approval needed from the department.

494A-1 Applied Project-Motion and Time Study. Selected applied project. Requires the students to apply knowledge learned in various courses to the solution of industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering students or departmental approval required.

494B-1 Applied Project-Cost Estimating. Selected applied project. Requires the students to apply knowledge learned in various courses to the solution of industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering students or departmental approval required.

494C-1 Applied Project-Materials Handling and Plant Layout. Selected applied project. Requires the students to apply knowledge learned in various courses to the solution of industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering students or departmental approval required.

494D-1 Applied Project-Production and Inventory Control. Selected applied project. Requires the students to apply knowledge learned in various courses to the solution of industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering students or departmental approval required.

494E-1 Applied Project-Quality Control. Selected applied project. Requires the students to apply knowledge learned in various courses to the solution of industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering students or departmental approval required.

494F-1 Applied Project-Manufacturing Policy. Selected applied project. Requires the students to apply knowledge learned in various courses to the solution of industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering students or departmental approval required.

494H-1 Applied Project-Fundamentals of Industrial Processes. Selected applied project. Requires the students to apply knowledge learned in various courses to the solution of industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering students or departmental approval required.

494I-1 Applied Project-Industrial Safety. Selected applied project. Requires the students to apply knowledge learned in various courses to the solution of industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering students or departmental approval required.

494K-1 Applied Project-Computer-Aided Manufacturing. Selected applied project. Requires the students to apply knowledge learned in various courses to the solution of industrial problems. Not for graduate credit. Special approval needed from the instructor. Restricted to College of Engineering students or departmental approval required.

Technology Faculty

Chang, Feng-Chang (Roger), Associate Professor, Ph.D., Ohio State University, 1985.

Chen, Han Lin, Associate Professor, *Emeritus*, M.S., Southern Illinois University, 1958.

Contor, Keith L., Associate Professor, *Emeritus*, M.S., State College of Washington at Pullman, 1960.

Crosby, Garth V., Associate Professor, Ph.D., Florida International University, 2007.

Cross, Bud D., Visiting Assistant Professor, *Emeritus*, M.S., Southern Illinois University, 1965.

DeRuntz, Bruce D., Professor, Ph.D., Southern Illinois University Carbondale, 2005.

Dunning, E. Leon, Professor, *Emeritus*, Ph.D., University of Houston, 1967.

Dunston, Julie K., Associate Professor, Ph.D., Florida State University, 1995.

King, Frank H., Visiting Assistant Professor, *Emeritus*, Ph.D., Southern Illinois University, 1981.

Marusarz, Ronald K., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1999.

Meyers, Fred E., Associate Professor, *Emeritus*, M.B.A., Capitol University, 1975.

Savage, Mandara D., Associate Professor and *Chair*, Ph.D., Iowa State University, 1999.

Spezia, Carl J., Associate Professor, Ph.D., Southern Illinois University Carbondale, 2002; 2005.

Velasco, Tomas, Associate Professor, Ph.D., University of Arkansas, 1991

Information Systems & Applied Technologies (School, Courses, Faculty)

The School of Information Systems and Applied Technologies in the College of Applied Sciences and Arts offers the following technically related courses. These courses serve as common requirements for various majors. Selected courses are available to students enrolled in other academic units.

Game Design and Development Minor

The minor in Game Design and Development (GDD) is a multidisciplinary minor offered by the School of Information Systems and Applied Technologies (ISAT), and the College of Mass Communication and Media Arts (MCMA). The purpose of this minor is to prepare students who wish to enter the field of game design and development. The Game Design and Development minor requires 18 credits. The courses required to complete this minor include: ISAT 340 or CP 260, IST 209G, RTD 487, RTD 361, IST 392 or MCMA 499, and one elective course. The approved electives for this minor are: IST 306, IST 312, IST 426, IST 446, RTD 331, RTD 496, CP 361, CP 454, CP 470C, CP 470W, and CP 472. All prerequisites for these courses must be fulfilled pri-

or to enrollment in each course. All courses for this minor must be completed with a grade of C or better. All students who wish to enroll in this minor must do so through the ISAT advisor or the Cinema and Photography or Radio-Television, and Digital Media advisors. MCMA students may not count a course taken to fulfill the requirements of this Minor as one of the courses required to fulfill either an RTD or CP major.

Required:

CP 260 - Understanding Visual Media
or ISAT - 340 Introduction to Video Gaming Industry
IST 209G - Introduction to Game Programming
RTD 361 - Sound Mix in Popular Culture
RTD 487 - 3D Animation I: Modeling
IST 392 - Special Projects
or MCMA 499 - Independent Study

Elective Courses:

IST 306 - Android Application Development
IST 312 - Programming II
IST 426 - Application Development Environments -
IST 446 - Software Engineering and Management
RTD 331 - Digital graphics Foundations
RTD 496 - Sound and Moving Image
CP 361 - History of New Media
CP 454 - Animated Film Production
CP 470C - Advanced Topics Photography
CP 470W - Advanced Topics Screenwriting
CP 472 - Problems Creative Production Cinema

Courses (ISAT)

101-3 Introduction to Information Processing. The successful student should be able to demonstrate an understanding of basic terminology, procedures, applications and equipment used in information processing. Topics covered will range from simple computer processing techniques to advanced contemporary applications. Credit cannot be given for both 101 and Information Systems Technologies 109. Lecture three hours.

113-3 Information Assurance for Everyone. This course is designed to give all students, especially those without a technical or computing background, an introduction to the concerns and issues associated with computers, social networks, and the Internet. Students will learn about the motivation of cyber criminals, common tricks and tactics used by them, and methods of defending against them. At the end of the course, students will have the knowledge necessary to more safely and securely use modern communication technologies and systems. Students will learn about basic ethical and legal issues of computing, consequences of insecurity for individuals and organizations, and leave the course with a broad understanding of the basics concepts and topics of information security and assurance. Lab and lecture.

120-3 Fiscal Aspects of Applied Sciences and Arts I. An individualized program of instruction designed to acquaint students enrolled in the various technical programs of the College of Applied Sciences and Arts with applications and procedures common to their area of specialization. Students will be able to demonstrate a basic working knowledge of the standard documents and procedures related to their specific area through the use of business working papers and practice sets. Open to students in the College of Applied Sciences and Arts. Lecture three hours.

121-3 Installing and Upgrading Computer Systems. This

course introduces students to the process of installing and upgrading personal computer systems. Topics include identification, selection, and installation of hardware, operating system, peripherals, and basic networking. Introduction to basic electrical measurements and numbering systems are also included. Lecture and Laboratory. Restricted to Information Systems Technologies or Electronic Systems Technologies major.

125-3 Optimizing and Troubleshooting Operating Systems. This course will introduce both Linux and Windows operating systems, from a user and an administrator standpoint. Basic monitoring, optimizing, and troubleshooting tools will be utilized to understand and manipulate a PC. The student will also create a Linux server. Prerequisite: ISAT 121 or concurrent enrollment. Restricted to majors within ISAT.

213-3 Application Programming Projects. This course will enable the student to use advanced techniques in the design and implementation of application programs. The student draws upon knowledge gained in previous courses and develops an understanding of the interrelationship of subject matter. Topics will include structures, classes, overloading, inheritance and exception handling. Prerequisite: Information Systems Technologies 209.

224-3 Network Fundamentals. This course takes a lab/lecture approach which leads the student through a series of activities involved in the installation of a local area network (LAN) capable of sharing information and a variety of electronic input/output devices. The student will be introduced to various LAN designs, communication protocols, network certification requirements, as well as procedures for selecting, installing, and managing a LAN. Lecture and Laboratory. Prerequisite: ISAT 121 or concurrent enrollment or consent of school.

229-3 Computing for Business Administration. The successful student will acquire an understanding of information systems concepts and of the use of computers to process business data through solving a variety of business related problems. Emphasis on the computer as a management tool. Lecture one hour, lab two hours.

259-1 to 60 Occupational Education Credit. A designation for credit granted for past occupational educational experiences related to the student's educational objectives. Credit will be established by departmental evaluation. This credit may be applied only at the 100 and 200 level unless otherwise determined by the school's director. Restricted to majors in the Information Systems and Applied Technologies.

292-1 Introduction to Microcomputers. A short course introduction to concepts and procedures related to using microcomputer hardware and software. Lecture one hour. Mandatory Pass/Fail.

299-1 to 16 Individual Study. Provides students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Special approval needed from the instructor.

316-3 Information Assurance I. The purpose of this course is to provide the student with an overview of the field of Information Security and Assurance. Students will be exposed to the spectrum of security activities, methods, methodologies, and procedures. Coverage will include inspection and protection of

information assets, detection of and reaction to threats to information assets, and an overview of the Information Security Planning and Staffing functions. Prerequisite: ISAT 224. Restricted to IST or EST major.

325-3 Small Office Networking. This lecture/lab course provides an introduction to the planning installation, and administration of a small office network. Topics covered: an overview of current networking technologies, small to moderate scale network planning and design, an introduction to peer-to-peer and client-server topologies, file storage and back-up, and other topics specific to the small business environment. Restricted to major within ISAT.

327-3 Linux Essentials. Students will learn to use Linux operating systems in this course. Intermediate computing skills are required, but previous experiences to Linux is not necessary. From the foundations of the open source philosophy to advanced command line activities, this course teaches the skills and knowledge needed for the Linux Essentials certification exam. Topics include selecting a Linux distribution, installing applications, operating system security, and basic shell scripting to automate tasks. Lecture and lab.

335-3 Network Protocols and Applications. Students will build upon their fundamental knowledge of networking by examining, in depth, the operation of TCP/IP and a limited set of application layer protocols. The operation and implementation of DHCP, DNS, and HTTP will be discussed with hands-on lab and implementation exercises. Analysis of the most common data link layer protocols will be performed and installation of physical layer components will be performed. Lecture and Laboratory. Prerequisite: ISAT 224 or consent of school.

340-3 Introduction to Video Game Design and Industry. Introduction to electronic video game development, processes, and game development careers. This course includes an examination of the history of video games, genres and platforms, the game development process with an emphasis on design elements, audio for games, game industry teams and careers, and managerial roles in the game development and publishing industry. Special approval needed from the instructor.

350-1 to 32 Technical Career Subjects. In-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, professions, and health service occupations offered through various workshops, special short courses, and seminars. Hours and credits to be individually arranged. This course may be classified as independent study. Special approval needed from the advisor.

358-1 to 30 Work Experience Credit. Credit will be granted via departmental evaluation of prior job skills, management-worker relations, and supervisory experience while employed in industry, business, the professions or service occupations. Credit will be established by school director evaluation. This credit may be applied only to the Major Requirements for degrees in the School of Information Systems and Applied Technologies. Restriction: Majors in the School of Information Systems and Applied Technologies.

360-3 Information Assurance II. Students in this course will approach the topics of information assurance and security from the perspective of a large enterprise. Technologies and procedures used to improve an organization's security posture will be discussed and tested in hands-on lab exercises. An examination

of modern security products and standard security protocols will accompany lab exercises. Lecture and laboratory. Prerequisite: ISAT 316.

365-3 Data Applications and Interpretation. (Same as TRM 383) This course will give students an understanding of the basic principles and techniques involved in the statistical treatment of data, including the selection of data sources, the design of statistical studies, and the analysis, synthesis, and utilization of data. Students will gain experience in using data for decision-making in their respective professions. Information Systems Technologies majors must earn a grade of C or better. Prerequisite: University Core Curriculum Mathematics. Restriction: College of Applied Sciences and Arts.

366-3 Applications of Technical Communication. (Same as TRM 316) This course will increase students' abilities in communicating various workplace documents common to technical disciplines. Oral presentations use computerized presentation software. The course is designed to meet the writing portion of the College's Communication-Across-the-Curriculum initiative. A grade of C or better is required. Prerequisite: ENGL 101 w/C or better. Restriction: College of Applied Sciences and Arts.

381-1 to 9 Special Topics. Intensive study of selected topics relevant to the contemporary information management systems environment. Offered as need exists and as time and interests permit. May be repeated for up to nine hours total. Special approval needed from the advisor.

392-1 to 6 Special Projects. Advanced undergraduate information management systems students will work with current technology to solve problems and develop projects in a team environment. Special approval needed from the instructor.

411-3 Information Storage and Management: Data, Drives and Disaster Recovery. This course will provide students with fundamental understanding of a wide range of data storage devices, techniques, and systems ranging from individual standalone drives to large storage system clusters. Focus will be placed on enterprise storage systems in conjunction with lab exercises. Methods to create secure and recoverable storage systems and forensic discovery. Prerequisite: ISAT 224. Restricted to IST & EST majors.

415-3 Enterprise Network Management. This course teaches students about advanced services and application layer protocols used to support business communications in a complex enterprise network. Students will analyze technical business requirements in order to design and propose technology to meet those requirements. Implementation of the design using common technologies, software, and hardware will be performed as part of student lead lab exercises. Students will focus their network designs by implementing solutions relying on Microsoft Windows technologies. The integration of security principles within network designs is required. Lecture and laboratory. Prerequisite: ISAT 335 with a grade of C or better.

416-3 Advanced Enterprise Networking Management. This course immerses students in additional advanced network services and application layer protocols used to support business communications in a complex and distributed enterprise network. Students will analyze technical business requirements in order to design and propose technology to meet those requirements. Implementation of the design using common technologies, software, and hardware will be performed as part

of student lead lab exercises. Students will focus their network designs by implementing solutions relying on Linux and open source software and technologies. Demonstration of successful integration of security technologies and techniques is required. Lecture and laboratory. Prerequisite: ISAT 415 with a grade of C or better.

419-1 to 12 Occupational Internship. Each student is required to secure an internship at a business/industry work site which relates to the student's academic program and career objectives. The student will perform duties and services as assigned by the work supervisor and internship coordinator, and will also complete reports and assignments. Minimum of 4 credit hours required for Information Systems Technologies majors. Grade of C or better required. Not for graduate credit. Prerequisites: ISAT 365 and 366.

491-3 Seminar. Students will examine a variety of information management systems topics and/or problems. Not for graduate credit. Special approval needed from the instructor.

Information Systems and Applied Technologies Faculty

Caldwell, Paul N., Associate Professor, *Emeritus*, M.S. ED., Southern Illinois University, 1965.

Chung, Sam, Professor and *Director of ISAT*, Ph.D., University of South Florida, 1996.

Cook, F. Roger, Assistant Professor, *Emeritus*, M.S., Southern Illinois University, 1987.

Davis, Diane, Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1990.

Devenport, William R., Associate Professor, *Emeritus*, M.S., Southern Illinois University, 1985.

Dotson, Michael, Assistant Professor, *Emeritus*, M.S., Southern Illinois University Carbondale, 1986.

Einig, Raymond G., Jr., Assistant Professor, *Emeritus*, M.S., St. Louis University, 1962.

Evans, Candy Duncan, Associate Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1992.

Fisher, Valerie, Assistant Professor, *Emerita*, M.S., Southern Illinois University Carbondale, 1975.

Gonzenbach, Nancy, Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1990.

Harre, Paul A., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1995.

Hebel, Martin A., Associate Professor, M.S., Southern Illinois University Carbondale, 1998.

Henry, Janice Schoen, Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1987.

Hertz, Vivienne, Associate Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1980.

Imboden, Thomas, Associate Professor, M.S., DePaul University, 2007.

Kearney, Brian, Assistant Professor, *Emeritus*, M.S., Southern Illinois University Carbondale, 1990.

Legier, John, Associate Professor, Ph.D., Southern Illinois University Carbondale, 2007.

Magney, John, Assistant Professor, *Emeritus*, Ph.D., University of Michigan at Ann Arbor, 1977.

Martin, Nancy, Assistant Professor, Ph.D., Southern Illinois University Carbondale, 2006.

Morgan, Barbara, Assistant Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1992.

Novak, Mary Ann, Associate Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1987.

Preece, Linda, Assistant Professor, *Emerita*, M.S., Southern Illinois University Carbondale, 1984.

Rehwaldt, Susan S., Assistant Professor, *Emerita*, Ph.D., Southern Illinois University, 1982.

Richard, Harold, Associate Professor, *Emeritus*, Ed.D., Pennsylvania State University, 1976.

Robb, James A., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1974.

Sheets, Leslie P., Associate Professor, *Emeritus*, M.S., Southern Illinois University Carbondale, 1976.

Shih, Stephen C., Professor, Ph.D., Pennsylvania State University, 1992.

Shin, Wangshik, Associate Professor, *Emeritus*, M.A., Southern Illinois University, 1963.

Sissom, James D., Associate Professor, M.P. Ad., Southern Illinois University Carbondale, 1996.

Soares, Andrey, Assistant Professor, Ph.D., Pennsylvania State University, 2009.

Stitt, Beverly A., Associate Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1980.

Vaughn, F. Eugene, Associate Professor, *Emeritus*, M.S. ED., Southern Illinois University Carbondale, 1961.

Wang, Andy Ju An, Professor and *Dean*, Ph.D., Beijing University of Aeronautics and Astronautics, 1992.

Woodward, Belle S., Associate Professor, M.A., Webster University, 1997.

Information Systems Technologies (Major, Courses)

Information Systems Technologies is a baccalaureate degree major designed to prepare students for careers in a wide variety of work settings that rely on computerized information technologies to accomplish organizational goals. The curriculum recognizes that graduates must have good computer application skills as well as an understanding of the principles of organizations and systems, including an awareness of technological, economic, political, social and cultural factors. Many courses require significant hands-on computer activities related to applications software, networking communications and computer troubleshooting and maintenance. Students may also choose ten courses from an approved list to reflect their personal interests in Information Systems Technologies.

Significant computer resources are available to students in this program for instructional purposes and for completion of assignments. The courses are based on a nationally recognized model curriculum, *Organizational and End-User Information Systems* by Organizational Systems Research Association (OSRA). Graduates of this program will meet the continuing needs of business and industry for personnel to use computer systems technologies within organizations utilizing end-user information systems. They will be able to supervise the planning and implementation of information systems in work/office environments, and deal with people, and procedures and equip-

ment resources of companies in this country or abroad.

Students entering the Information Systems Technologies degree must be able to keyboard at a competency level adequate enough to complete a variety of computer related tasks and assignments (generally considered at 30 wpm or above). The Capstone Option is available to qualified students entering these programs. More information about the Capstone Option can be found in Chapter 3 of the *Undergraduate Catalog*.

Information Systems Technologies offers an option for place-bound transfer students to complete the degree by taking advanced career and elective courses online. Refer to the department's website below for detail.

The Information Systems Technologies program has signed a number of Program Articulation Agreements with computer/word/information processing-related community college degree programs in order to facilitate the transfer of community college students to SIU. These agreements take full advantage of the Capstone Option for admission to the Bachelor of Science in Information Systems Technologies. If you have questions about how these agreements apply to your personal situation, contact the school's program representative or contact the academic advisor in Information Systems Technologies at (618) 453-7200 or <http://isat.siu.edu/>.

Bachelor of Science Degree in Information Systems Technologies, College of Applied Sciences and Arts

INFORMATION SYSTEMS TECHNOLOGIES MAJOR

<i>University Core Curriculum Requirements</i> ¹	41
Recommend PHIL 104 or 105, and ECON 113, PSYC102 or SOC 108	
<i>Career Course Requirements</i> ²	21
IST 209, 207	6
ISAT 120, 121, 125, 224, 229	15
<i>Requirements for Major in Information Systems Technologies</i>	58
Required Major Courses	
IST 314, 334, 336, 370, 404, 412	18
ISAT 365, 366, 419	10
Approved Major Electives (Note: Fifteen hours must be at the 300 or 400 level) ³	30
Total	120

¹Students may meet these requirements through an approved AA/AS degree from an accredited community college.

²Students may meet these requirements through an articulated approved AAS degree from an accredited community college.

³The current approved list is on file in the school office.

Information Systems Technologies Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ISAT 121, 125	3	3
ISAT 229	3	-
UCOL 101, CMST 101	3	3
ENGL 101, 102	3	3
UCC Math, Health	3	2
ECON 113, PSYC 102 or SOC 108	-	3
Total	15	14

SECOND YEAR	FALL	SPRING
ISAT 224	3	-
UCC Science, ISAT 120	3	3
IST 207, 209	3	3
ECON 113, PSYC 102 or SOC 108	-	3
UCC Fine Arts, Humanities	3	3
PHIL 104 or 105, UCC Science	3	3
Total	15	15

THIRD YEAR	FALL	SPRING
IST 334, 370	3	3
IST 336, ISAT 365	3	3
ISAT 366, IST 314	3	3
Elective	6	6
Total	15	15

FOURTH YEAR	FALL	SPRING
IST 412	3	-
IST 404	-	3
ISAT 419	-	4
UCC Multicultural	3	-
Elective	9	9
Total	15	16

Courses (IST)

207-3 Programming Logic and Design. This course provides students with the foundation for computer programming covering topics such as problem analysis, flowcharting, pseudocode, and algorithm development. Concepts such as documentations, structured design and modularity are emphasized. The course also introduces topics in discrete mathematics such as number systems, sets and logic, relations and functions, and Boolean algebra.

209-3 Introduction to Programming. This course is designed to introduce students to the design and development of logical solutions to business information processing problems. Upon completion, students will be able to develop algorithms, draw flowcharts and process files and tables using an appropriate computer programming language. Lecture two hours and lab one hour. Prerequisite: IST 207 or EST 201.

209G-3 Introduction to Game Programming. This course is designed to introduce students to the design and development of logical solutions to game design. The course will cover basic concepts and techniques to developing computer games with the support of a game engine. Upon completion, students will be able to develop algorithms, draw flowcharts, and process files and arrays using an appropriate computer programming language. The course activities include several programming assignments and the creation of a game as final project. Required for the minor in Game Design and Development.

232-3 Systems Analysis and Design Tools. This course is designed to introduce participants to the principles and fundamentals of information systems design. Emphasis will be placed on the various techniques and practices used for problem

definition and analysis, information gathering, project management and project presentation. Computer assisted tools will be introduced and utilized. Prerequisite: ISAT 229.

240-3 Desktop Publishing Applications. This course is designed to introduce students to basic and advanced desktop publishing concepts and applications. The student will develop an understanding of terms related to page assembly, topography and other desktop publishing elements. The student will be able to describe basic desktop publishing design principles and apply them to the creation and production of documents including newsletters, flyers and brochures. Lecture and lab. Prerequisite: ISAT 229.

259-1 to 60 Occupational Education Credit. A designation for credit granted for past occupational educational experiences related to the student's educational objectives. Credit will be established by school director evaluation. This credit may be applied only at the 100 and 200 level unless otherwise determined by the department chair. Restricted to IST major.

299-1 to 16 Individual Study. Provides student with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resource and facilities of the entire institution. Each student will work under the supervision of a sponsoring faculty member and school director. Special approval needed from the sponsor and school director.

306-3 Android Application Development. Students will be introduced to concepts, models, and methodologies for developing applications that run on the Android platform. Students will gain hands-on experience creating and deploying mobile applications for Android devices. The course will explore features such as networking, web services, cloud computing, location services, phone sensors, media, data persistence, speech recognition, and animation. Prerequisite: IST 209 (with a grade of C or better) or IST 209G (with a grade of C or better).

311-3 Android Application Development. Students will be introduced to concepts, models, and methodologies for developing applications that run on the Android platform. Students will gain hands-on experience creating and deploying mobile applications for Android services. The course will explore features such as networking, web services, cloud computing, location services, phone sensors, media, data persistence, speech recognition, and animation. Prerequisite: IST 209 (with a grade of C or better).

312-3 Programming II. This course is designed to enable the student to use advanced programming techniques in the design and implementation of business application programs. Topics will include object-oriented programming, classes, inheritance, graphic user interfaces, and database access. Prerequisite: IST 209 (with a grade of C or better).

314-3 Ethical and Legal Issues in IT. This course deals with the impact of computers on us as individuals and on our society. Rapid changes in computing technology and in our use of that technology have changed the way we work, play, and interact with other people. These changes have created a flood of new ethical and legal issues that demand critical examination. Restricted to Information Systems Technologies major.

334-3 Database Design and Processing. This course is designed to provide students with essential knowledge and pragmatic skills of databases design and processing. Essential topics

include database development life cycle, conceptual data modeling, logical database design and normalization, and query languages. For hands-on learning, this course focuses on the use of relational database management systems to construct database system objects, such as tables, queries, and SQL code. A grade of C or better is required. Prerequisite: IST 209 and ISAT 229 with a grade of C. Restricted to IST major.

336-3 Web-based Applications in Information Systems. This course is designed to provide students with skills on the fundamentals of client-side web development languages used to build professional websites, such as HyperText Markup Language (HTML), Cascading Style Sheets (CSS) and JavaScript. The course introduces Web standards, Web Design principles, and Web Design and Development tools. Hands-on assignments will provide students with practical experience developing interactive Web pages and websites using client-side technologies. Prerequisite: IST 209 with a grade of C or better. Restricted to IST major.

345-3 Health Information Technology. This course introduces students to the field of health information technology. Students will explore the fundamentals of healthcare delivery and payment systems, the content, use, and structure of health data records, and common applications and standards used in healthcare information systems. Privacy, security, legal and ethical issues associated with health information will be examined.

350-1 to 32 Technical Career Subjects. In-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, professions and health service occupations offered through various workshops, special short courses and seminars. Hours and credit to be individually arranged. Course may be classified as independent study. Restricted to IST major.

351-1 to 6 Readings. Selected readings in specific information systems topics not ordinarily covered in depth in other courses. Special approval needed from the instructor.

358-1 to 30 Work Experience Credit. Credit will be granted via departmental evaluation of prior job skills, management-worker relations, and supervisory experience while employed in industry, business, the professions or service occupations. Credit will be established by school director evaluation. This credit may be applied only to the Major Requirements of the Information Systems Technologies degree. Restriction: IST major.

370-3 Database Programming with SQL. This course is designed to provide students with pragmatic skills of database programming with Structured Query Language (SQL). Students will learn to create and maintain database objects (e.g., tables and views) as well as insert and manipulate data. Other important topics include basic queries, advanced queries (e.g., subqueries), joining data from multiple tables, and single-row and group functions. Prerequisite: IST 334 (with a grade of C or better).

392-1 to 6 Special Projects. (Same as MCMA 499) Students will work with current technology to solve problems and develop projects in a team environment. Restricted to IST major. Special approval needed from the instructor.

403-3 Client-Side Web Development. This course is designed to provide students with experience using client-side technologies to add functionality to Web pages. Current languages and

techniques will be used, such as XHTML, JavaScript, and XML. Hands-on assignments will be used to provide experience developing interactive Web pages through the usage of dynamic XHTML documents. Not for graduate credit. Prerequisites: IST 209 and IST 336 (each with a grade of C or better).

404-3 Information Technology Project Management. Combines theory and techniques of project management emphasizing information technology applications. The course adheres to the Project Management Body of Knowledge (PMBOK) using case studies to cover the PMBOK process areas. Students will apply project management skills. Course concepts are strengthened by the use of automated project management software. A grade of C or better is required. Not for graduate credit. Prerequisite: IST 232.

405-3 Server-Side Web Development. This course provides a comprehensive introduction to programming tools and skills used to construct web server platforms. Students will gain hands-on experience with server-side technologies, such as PHP, JSP, and Ajax. In addition, web database access will be introduced. Prerequisite: IST 312, IST 336, IST 370 (each with a grade of C or better).

406-3 Assistive Technologies and Accessible Web Design. This course examines how people with disabilities use computer technology and access electronic information. Topics include the history, characteristics, and service delivery of assistive technologies, web site evaluation and repair, design of universally accessible web resources, and major legislative initiatives applied to ameliorate problems faced by persons with disabilities. Not for graduate credit. Prerequisite: IST 336.

412-3 Information Systems: Analysis, Design, and Implementation. This course is designed to provide students with essential knowledge and pragmatic skills of information system analysis, design, and implementation. Special topics include systems development life cycle methodologies, system analysis and modeling methods, technical design specifications development, business forms and reports design, query languages, and information systems integration. In addition, students are expected to conduct projects to build field-based information system applications. A grade of C or better is required. Not for graduate credit. Prerequisites: IST 334, ISAT 365, 366 with grades of C. Restricted to IST major.

414-3 Trends and Issues in Information Systems. Explores special topics related to the nature, types, role, and impact of information systems in organizations and methodological concepts for understanding information systems in the future. Students will envision, identify, evaluate, select, and recommend computer-based technologies/solutions for organizational problems. Not for graduate credit. A grade of C or better is required. Prerequisite: ISAT 366. Restricted to IST major.

415-3 Cases in Information Systems Technology. Using case studies, this course involves the analysis, synthesis, application and evaluation of advanced concepts related to information systems. Grade of C or better required. This course is writing intensive and reflects the college's Communication-Across-the-Curriculum initiative. Prerequisites: ISAT 365, 366.

426-3 Application Development Environments. This course is designed to allow students to develop computer applications using an object-oriented programming language. Topics will include the usage of an application development environ-

ment, subprocedures, menus, database files and graphics. Not for graduate credit. Prerequisite: IST 209 or consent of instructor. Restricted to IST major.

436-3 Advanced Web-based Application Development. Students will gain hands-on experience with web development using client-side and server-side scripting languages to create dynamic web pages and applications that access databases. This is an advanced programming course that requires good knowledge of HTML, computer programming, database, and SQL. A grade of C or better is required. Not for graduate credit. Prerequisite: IST 405.

441-3 The Information Systems Technologies Profession. This course engages students in research and advanced study related to the Information Systems Technologies (IST) profession. Topics include, but are not limited to: the historical development of the profession; trends and future directions of information systems technologies in the global economy; professional standards and ethics; related professional organizations; and employment opportunities for information systems professionals. Each student is required to complete a separate research report that is related to the student's career goals. Concurrent enrollment in one semester hour of 350 is required. Restricted to IST major.

446-3 Software Engineering and Management. Students will be introduced to software engineering concepts, models, and methodologies that will help them develop skills to construct high quality, reliable, and easy to maintain large scale software systems. Topics include: software process models, design methods, quality assurance, configuration management, testing, maintenance, etc. Prerequisite: IST 209 (with a grade of C or better).

452-1 to 6 Research. The selection, investigation, research and writing on a specific topic approved by a faculty member. Not for graduate credit. Special approval needed from the school.

470-3 Oracle Database Administration. This course is designed to give students a thorough conceptual understanding of the Oracle database architecture. Students will gain the necessary knowledge and skills needed to set up, maintain, and troubleshoot an Oracle database. Basic database administrative tasks will be performed. Not for graduate credit. Prerequisite: IST 370. Restricted to IST major or consent of school.

491-3 Seminar. Students will examine a variety of information systems technologies topics and/or problems. Not for graduate credit. Special approval needed from the school.

Interior Design (Major, Courses, Faculty)

The Interior Design program is continually responsive to the demands and standards of qualification of the profession and its related fields. The program is accredited by the Council For Interior Design Accreditation (CIDA), 206 Granville Ave., STE. 350, Grand Rapids, MI. 49503, (618) 458-0400. A four-year curriculum is offered resulting in a Bachelor of Science degree in Interior Design that is a CIDA Accredited Professional Level Program.

Students receive a comprehensive, interdisciplinary education in preparation for design and administrative positions in the fields of commercial, contract and residential design. After

passing the National Council for Interior Design Qualification (NCIDQ) Exam, graduates of the program will be qualified to practice professionally in a wide range of positions with interior and architecture firms, corporations, government agencies, or independently.

The approach toward interior design education at Southern Illinois University Carbondale provides a comprehensive technical emphasis as the basis for problem solving. At the core of the required course work are classes and studios which provide knowledge of design and the design process including programming, schematic design, design development, and construction documents. Support courses to complement and enhance the core consist of drawing, presentation, furniture, materials, history, lighting, acoustics, mechanical systems, professional practice and topics current to the profession.

The amount of material to be covered, the fast pace of assignments, and the pressure of critical reviews combine to produce a highly charged and energetic atmosphere. Successful students must be able to handle multiple projects simultaneously and demonstrate an ability to manage their time wisely.

To support students in their educational endeavors, sophomores, juniors and seniors are provided dedicated studio space. Program facilities include a resource library, model/furniture shop and a dedicated computer graphics laboratory. The computer graphics laboratory provides access to input/output devices. However, each student is required to purchase or lease a laptop computer and software that meet program specifications prior to the start of the second year for those on the four-year plan or prior to the start of the first year for those on the three-year plan. Laptop and software specifications will be supplied during the registration process.

While facilities are provided for use, costs for supplies, individual equipment, and required field trips and workshops necessary to the successful completion of the program are borne by the student. Due to the variation in individual materials use, it is impossible to predict the exact costs for each student. A reasonable estimate of additional expenses is in the range of \$1000 to \$2000 per academic year.

The interior design program maintains the right to retain student work for exhibition or for records and accreditation purposes. Students are advised to assemble digital files of their work for their portfolios.

Students are encouraged to participate in profession related student organizations which include the American Society of Interior Designers, International Interior Design Association, Illuminating Engineering Society, and Construction Specifications Institute. Other activities designed to enhance the overall quality of education include the University Honors Programs, travel study programs, workshops, guest lectures, and residence hall living learning communities.

Prospective students attending another college or university prior to transferring to Southern Illinois University Carbondale should concentrate on completing courses articulated or approved as substitutes for Southern Illinois University Carbondale's University Core Curriculum requirements. Prior to taking courses that appear to equate to the professional sequence, the applicant should consult with the program director or designated representative.

Students must pass all Interior Design and Architectural

Studies prefix courses with a grade of *D* or better in order to satisfy prerequisites and to graduate. If a student receives a grade of *F* three times in the same course, the course cannot be taken again. Students cannot repeat Interior Design or Architectural Studies prefix courses in which they received a grade of *C* or better.

Bachelor of Science Degree in Interior Design, College of Applied Sciences and Arts

University Core Curriculum Requirements 41¹
 As per University requirements for baccalaureate degrees, but must include History 101A,B.
Requirements for Major in Interior Design (9) + 79
 MATH 111² (3) + 1
 PHYS 101 (3)
 FDM 241 3
 AD 207A,B, or C 3
Required Major Courses
 Interior Design 121, 122, 242, 251, 252, 271, 331, 333, 334, 351, 361, 372, 374, 382, 391, 392, 432, 451, 471, 481, 491, 492 (3)+71
Total 120

¹ ID 333, 334, PHYS 101 and MATH 111 will apply toward nine hours of University Core Curriculum requirements making a total of 41 in that area.

² MATH 108 and 109 substitute for MATH 111.

Interior Design Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ID 121, 122	4	4
ENGL 101, 102	3	3
HIST 101A,B	3	3
MATH 111, CMST 101	4	3
UCOL 101, Select Core	3	2
<i>Total</i>	17	15
SECOND YEAR	FALL	SPRING
ID 333, 334	3	3
ID 251, 252	4	4
ID 271, 242	3	3
PHYS 101	3	-
Select Core, Select Core	3	3
<i>Total</i>	16	13
THIRD YEAR	FALL	SPRING
ID 331, 372	3	3
ID 351, 374	3	3
ID 361, 382	3	3
ID 391, 392	4	4
FDM 241	3	-
<i>Total</i>	16	13
FOURTH YEAR	FALL	SPRING
ID 471, ID 432	3	3
ID 481, AD 207A,B or C	3	3
ID 451	3	-

ID 491, 492	4	5
Select Core	-	6
Total	13	17

Courses (ID)

121-4 Design Communication I. (Same as ARC 121) Introduction to basic drawing and graphic modeling for interior design, architecture, and graphic communication. Instruction in two- and three-dimensional visualization of form and space. Topics: freehand drawing and drafting skills, orthographic projection, shade and shadow, paraline drawing, sketching, drawing and projection composition, and perspective geometry and projection. Restricted to major in Interior Design. Studio Fee: \$48.

122-4 Design Communication II. (Same as ARC 122) Continuation of Design Communication I. This course is a continuation of sketching and black and white drawing techniques. The introduction of color and color presentation techniques with emphasis on advanced interior design and architectural graphics and presentation composition. Introduction of basic computer graphics tools such as Photoshop. Prerequisite: ID 121. Restricted to major in Interior Design. Studio Fee: \$48.

199-1 to 10 Individual Study. Provides first-year students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring faculty member. Restricted to major in Interior Design. Special approval needed from the Instructor and Director.

242-3 Building Technology I: Wood. (Same as ARC 242) Introduction to basic materials, components, processes, theories, and means of assembly of light wood frame construction. Building of full-scale projects on and off campus requiring the fabrication of wood structures with appropriate tools and equipment. Preparation of working drawings in light wood frame construction using BIM software. Prerequisite: ID 122 and 271. Restricted to major in Interior Design. Studio Fee: \$36.

251-4 Design I: Concept. (Same as ARC 251) Introduction to the basic principles and elements of design by means of practical and abstract applications. Development of two- and three-dimensional solutions and presentations for conceptual design problems. Emphasis is on three-dimensional thinking and communication. Prerequisite: ID 122. Restricted to major in Interior Design. Studio Fee: \$48.

252-4 Design II: Order. (Same as ARC 252) A series of studio exercises to develop an understanding of the use of a model for structuring design information, fundamentals of programming, research, communication skills and the design process. This course is designed to satisfy the writing portion of the Communication-Across-the-Curriculum requirements. Prerequisite: ID 251, ID 271, and ENGL 101. Restricted to major in Interior Design. Studio Fee: \$48.

258-1 to 30 Work Experience Credit. Credit granted for job skills, management-worker relations, and supervisor experience for past work experience while employed in industry, business, the profession, or service occupations. Credit will be established by school director evaluation. Credit may be applied only at the 100- and 200-level for the interior design degree un-

less otherwise determined by the director. Restricted to major in Interior Design. Special approval needed from the Director.

259-1 to 60 Occupational Education Credit. A designation for credit granted for past occupational educational experiences related to the student's educational objectives. Credit will be established by school director evaluation. Credit may only be applied at the 100- and 200-level for the interior design degree unless otherwise determined by the director. Restricted to major in Interior Design. Special approval needed from the Director.

271-3 Computers in Architecture. (Same as ARC 271) This course serves as an introduction to various electronic media employed within the practice of interior design and architecture. Creative and effective skills in the use of computers in interior design and architecture applications are consistently stressed. Restricted to major in Interior Design.

299-1 to 16 Individual Study. Provides students with opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring faculty member. Restricted to major in Interior Design. Special approval needed from the Instructor and Director.

300-1 to 3 Resources in Practice. Participation in the operation of the program resource library provides students the opportunity to become familiar with resources used in the profession. Emphasis is placed on gaining knowledge of practices necessary to competently organize and maintain a professional working resource facility. Restricted to major in Interior Design. Special approval needed from the Instructor and Director.

319-1 to 15 Occupational Internship. Student will be assigned to a University approved entity engaged in activities related to the student's academic program and career objectives. Student will perform duties and services as assigned by the sponsor and instructor. Reports and assignments are required to be completed by the student. Hours and credits to be individually arranged. Mandatory Pass/Fail. Restricted to major in Interior Design. Special approval needed from the Instructor and Director.

331-3 Interior Design History. Study of interiors, furnishings, buildings, and the language of interior design from antiquity to the present with the context of aesthetic, philosophical, psychological, socio-economic, and environmental rationales. Prerequisite: ID 334, HIST 101A and B. Restricted to major in Interior Design or Architectural Studies.

333-3 Architectural History I. (Same as ARC 231) (Advanced University Core Curriculum Course) The study of the influences and the development of architecture from prehistoric to the 19th century, in particular, the study of structure, aesthetics, and the language of architecture. With 334-Architectural History II, satisfies Core Curriculum Fine Arts requirement. Restricted to major in Interior Design.

334-3 Architectural History II. (Same as ARC 232) (Advanced University Core Curriculum Course) Course covers development of modern architecture and urban planning from the nineteenth century to the present, and includes American, British and Continental architecture and urban planning and influences of Eastern Architecture and design. With 333-Architectural History satisfies Core Curriculum Fine Arts requirement. Prerequisite: ID 333. Restricted to major in Interior Design.

350-1 to 32 Career Subjects. In-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, and design professions offered through various workshops, special short courses, and seminars. Hours and credit to be individually arranged. Restricted to major in Interior Design. Special approval needed from the Instructor and Director.

351-3 Furniture Design. Study of furniture through evaluation of historic furnishings as well as contemporary furnishings. Issues include ergonomics, anthropometrics, quality of materials and methods of construction. Prerequisite: ARC 242 or ID 242, ARC 232 or ID 334. Restricted to major in Interior Design and Architectural Studies. Special approval needed from the instructor for nonmajors.

361-3 Design Programming I. Introduction to the design process used in interior design with emphasis on the study of methods for gathering data and analysis of project information for design synthesis. Co-requisite with ID 391. Prerequisite: ID 252 or ARC 252. Restricted to major in Interior Design.

370-1 to 3 Special Topics in Lighting Design. A seminar course which explores current issues in the area of lighting design. Emphasis is placed on supervised readings, discussion and creative projects directed toward individual research. Prerequisite: ID 382/ARC 482. Restricted to major in Interior Design or Architectural Studies. Special approval needed from the Instructor and Director.

372-3 Interior Construction. The development of interior construction knowledge to solve interior architectural problems in new construction with an emphasis on high-rise structures. Special concern in the adherence to life safety, building, fire and accessibility codes is to be observed in the preparation of working drawings. Co-requisite with ID 374. Prerequisite: ID 242. Restricted to major in Interior Design.

374-3 Materials and Specifications. A study of materials and finishes applicable to the interior environment including production methods, limitations, quality control, application and uses. Emphasis is on specification for commercial interiors and liability issues for designers. Co-requisite with ID 372. Restricted to major in Interior Design.

382-3 Environmental Design III: Lighting and Acoustics. (Same as ARC 482 and ARC 584) This course provides a comprehensive overview of the luminous and sonic environment with emphasis on energy-conscious design. Prerequisite: ID 391 and PHYS 101. Restricted to major in Interior Design.

390-1 to 4 Special Project in Interior Design. Investigation of a project-type specialization. Includes application of design process principles with emphasis on programming and preliminary design. Prerequisite: ID 391. Restricted to major in Interior Design. Special approval needed from the Instructor and Director.

391-4 Design III: Context. Interior design of the personal environment at the individual level. Emphasis is on residential design. Co-requisite with ID 361. Prerequisite: ARC 252, ID 252, ARC 232, ID 334. Restricted to major in Interior Design. Studio Fee: \$48.

392-4 Design IV: Complexity. Interior design of the environment at the multi-user level when client/owner and client/user are different. Emphasis is on public access spaces, e.g., restaurants, stores, museums, professional offices and future

facilities. Prerequisite: ID 391. Restricted to major in Interior Design. Studio Fee: \$48.

399-1 to 16 Individual Study. Provides students with opportunity to develop a special program of study to fit a particular need not met by other offerings. Enrollment provides access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring faculty member. Restricted to Interior Design majors. Special approval needed from the Instructor and Director.

432-3 Interior Design Seminar. Study of the current trends and topics in interior design. Not for graduate credit. Prerequisite: ID 491. Restricted to major in Interior Design.

451-3 Design Programming II. Preliminary stage of senior design project includes project research, data gathering, and analysis. Not for graduate credit. Co-requisite with ID 491. Prerequisite: ID 392. Restricted to major in Interior Design.

471-3 Professional Practice I. (Same as ARC 491 and ARC 591) Introduction to the organization, management, and practice of interior design and architecture as a business and profession. Emphasis is placed on the range of services provided, professional ethics, business management, marketing, contracts and negotiations, design cost analysis/control, and other aspects of professional practice. Prerequisite: ID 392. Restricted to major in Interior Design.

481-3 Environmental Design II: Energy and Systems. (Same as ARC 481 and ARC 583) The study of the influences of energy, human comfort, climate, context, heating, cooling and water on the design of buildings and sites. The design of passive and active environmental systems and strategies for sustainability. Not for graduate credit. Prerequisite: ID 372, ID 392, and PHYS 101.

491-4 Design V: Corporate. Interior design of the environment at the corporate or institutional level where client/owner and client/user are significantly different. Emphasis is on design. Furniture systems, particularly in the area of office planning are to be included. Facility types include financial institutions and institutional facilities. Not for graduate credit. Prerequisite: ID 372, ID 374, ID 382, ID 392. Restricted to major in Interior Design. Studio Fee: \$48.

492-5 Design VI: Capstone Design Thesis. Completion of an interior design project of large square footage as initiated in ID 451. Emphasis is on design process from schematic design to completion of annotated comprehensive solution and presentation. Facility types vary and may include a component of community involvement. Not for graduate credit. Prerequisite: ID 451, 481, 491. Restricted to major in Interior Design. Studio Fee: \$48.

499-1 to 16 Individual Study. Provides students with opportunity to develop a special program of study to fit a particular need not met by other offerings. Enrollment provides access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring faculty member. Not for graduate credit. Restricted to Interior Design majors. Special approval needed from the instructor and director.

Interior Design and Architectural Studies Faculty

Anz, Craig K., Associate Professor, Ph.D., Texas A&M, 2009, M.Arch., University of Texas at Arlington, 1991.

- Bramlet, James E.**, Assistant Professor, *Emeritus*, M.A., Western Illinois University, 1970.
- Brazley, Michael D.**, Associate Professor, Ph.D., University of Louisville, 2002, B.Arch., Howard University, 1978.
- Davey, Jon**, Professor, Ph.D., Southern Illinois University Carbondale, 2011.
- Dobbins, John K.**, Associate Professor, Head of Master of Architecture Program, M.Arch., M.B.A., University of Illinois, 1986.
- Gimenez, Atilio M.**, Assistant Professor, *Emeritus*, M.Arch., University of Buenos Aires, 1961.
- Gonzalez-Torres, Rolando E.**, Associate Professor, Ph.D., Universitat Politecnica de Catalunya, Spain, 2008.
- Hays, Denny M.**, Associate Professor, *Emeritus*, M. Arch., University of Utah, 1971.
- Kremers, Jack**, Professor, *Emeritus*, M.Arch., University of Michigan, 1966.
- Lach, Norman**, Assistant Professor, M.Arch., University of Illinois Champaign, 1974.
- Ladner, Joel Brooks**, Associate Professor, *Emeritus*, M.Arch., University of Houston, 1984.
- LaGarce, Melinda**, Associate Professor and *Program Director*, M.F.A., Texas Technology University, 1972.
- Morthland, Laura**, Assistant Professor, M.I.Arc., University of Oregon, 2003.
- McDonald, Shannon**, Assistant Professor, M.Arch., Yale University, 1992.
- Owens, Terry A.**, Associate Professor, *Emeritus*, M.S., Southern Illinois University Carbondale, 1984.
- Poggas, Christy**, Assistant Professor, *Emerita*, M.S. Ed., Southern Illinois University Carbondale, 1990. B.Arch., University of Arizona, 1975.
- Schwartz, Chad J.**, Assistant Professor, M.Arch., Arizona State University, 2003.
- Smith, Peter B.**, Associate Professor, M. Arch., University of Illinois, 1980.
- Swenson, Robert**, Associate Professor, *Emeritus*, M. Arch., Yale University, 1969.
- Wendler, Walter V.**, Professor and *Director*, Ph.D., University of Texas, 1991, M.Arch., University of California, Berkeley, 1975.
- Wessel, Stewart P.**, Professor, M.F.A., University of North Texas, 1992.
- White, David J.**, Associate Professor, M.S. Ed., Southern Illinois University Carbondale, 1991.
- Wright, James K.**, Assistant Professor, *Emeritus*, M.Arch., University of Pennsylvania, 1966.

International Studies

(See Languages, Cultures, and International Studies)

International Trade

(SEE AGRIBUSINESS ECONOMICS)

(SEE FOREIGN LANGUAGE AND INTERNATIONAL TRADE)

Japanese

(See Languages, Cultures, and International Studies)

Journalism (School, Major, Minor, Courses, Faculty)

The School of Journalism at Southern Illinois University Carbondale occupies a national leadership role in mass communication education at a time of revolutionary change. The technology of communication is changing faster than any time since the invention of movable type. The School of Journalism is keeping pace with these historic changes by expanding coursework in areas including web, video, audio and multi-media skills, while continuing to reinforce knowledge vital to journalists of all eras - clear writing, clear thinking, law, ethics and history.

The program combines a detailed understanding of the practice of journalism in modern society with a broad knowledge of the liberal arts. Students acquire the specific skills necessary to become professionals in advertising, new media production, news, photojournalism, or other communication fields. Students are encouraged to develop in-depth knowledge by completing the requirements of a structured minor in a subject area outside the College of Mass Communication and Media Arts and related fields. The curriculum prepares students for positions of responsibility in a broad array of fields in which the ability to communicate is essential. New specializations include New Media News Production and Sports Media, while the School is now offering an Online Certificate in Journalism and Mass Communications for non-resident students as well (see below for details). The School of Journalism also prepares students for graduate studies in mass communication, the social sciences, and the law.

The School of Journalism is accredited by the Accrediting Council on Education in Journalism and Mass Communication, University of Kansas, School of Journalism Stauffer-Flint Hall, Lawrence, Kansas 66045, the agency formally recognized by the Council on Postsecondary Accreditation and the U.S. Office of Education. Prospective students should be aware that excellent written and oral language skills are essential for successful careers in the journalism field. With this in mind, the School of Journalism has adopted admission and retention standards that emphasize language facility and academic proficiency.

While most students are best served by one of the following specializations, other programs of study in the major may be designed to meet special needs.

ADVERTISING

Students in the advertising specialization learn to analyze problems in, and identify solutions for, the promotion of goods and services. They develop skills in verbal and visual communication and presentation of materials. Instruction emphasizes branding, online presentation, media sales, consumer research, account planning and creative strategies. Graduates are prepared to enter a wide variety of positions with marketing communications firms (including advertising, sales promotion, public relations and direct marketing agencies), in the communications media and with retail or manufacturing firms.

NEW MEDIA PRODUCER

The New Media Producer specialization is designed to give students a high level of competence in skills needed to produce institutional websites. This includes placing audio, video, still photography and the printed word on sites for news organizations, government agencies, nonprofits and corporations. Students

learn a strong sense of aesthetics and design and a deep understanding of how to communicate with 21st century technology.

NEWS EDITORIAL

As the communication revolution expands the ways in which news and information can be presented, the need increases for individuals with the ability to prepare and present news and information precisely and accurately for a variety of media. Students in the news specialization receive practical training in the theory and practice of identifying, gathering, processing, interpreting, writing and presenting news for traditional print, broadcast, and for new media. News students are encouraged to take photo, video and audio classes.

PHOTOJOURNALISM

Students in the photojournalism specialization develop the photographic and news reporting skills necessary to communicate visually with a mass audience through contemporary media outlets - both printed and electronic. Photojournalism students receive practical training in gathering, writing, photographing, editing and presenting news and feature stories in which the essential information is photographic. The program remains on the cutting edge by integrating traditional instruction in a digital environment with new media skills in website development, audio and video production. Graduating students are fully aware of the power of photography, are well grounded in the legal and ethical traditions of the profession and are practically prepared to make a significant contribution to contemporary journalism.

SPORTS MEDIA

The proliferation of sports programming in both traditional and new media is triggering an increasing demand for graduates with sports production, sports promotion and sports journalism backgrounds. The School of Journalism and the Radio, Television, & Digital Media Department have joined forces to establish specializations in both academic units. The School of Journalism's specialization has two tracks. One prepares students for sports reporting, the other for sports promotion. The reporting track includes new sports courses and the essentials form the news/editorial specialization. The promotions track adds new sports courses to the essentials of the advertising specialization.

ONLINE CERTIFICATE IN JOURNALISM AND MASS COMMUNICATION

There is an increasing demand for trained personnel with skills in writing for the mass media. Organizations such as website content providers, publishers, colleges and universities, non-profit organizations, and traditional media outlets are all looking for students who can provide content for their publications. Careers for students with journalism and advertising skills include, but are not limited to: News Reporter/Editor, Online Journalist, Web Content Producer, Advertising Copywriter, Grant Writer, News Service Writer, Newsletter Writer/Editor, Public Relations Specialist, Publications Specialist, Sports Information Director and Technical Writer, Book Editor, etc. The School of Journalism, in partnership with the SIU Extended Campus office, offers a unique Online Certificate allowing non-resident students the opportunity to build and enhance media related knowledge and skills needed in the media industry and in education.

Admission Standards

To be admitted to the School of Journalism, applicants must meet the following requirements: Beginning freshmen must meet the University's regular admission requirements, as described in Chapter 2. Transfer students who have completed fewer than 26 semester hours must meet the requirements for beginning freshmen and have earned an overall collegiate grade point average of at least 2.00 (4.0 scale). Transfer students who have completed more than 26 semester hours must have earned an overall collegiate grade point average of at least 2.00.

Students currently enrolled or who were previously enrolled at SIU in another major must meet the same requirements as transfer students. If they have completed more than 26 semester hours they must have an overall grade point average of at least 2.00. Students with fewer than 26 semester hours must meet beginning freshman requirements as well as have a grade point of at least 2.00. Grade point average is calculated for purposes of admission to the School of Journalism by using all grades earned at SIU and other collegiate institutions. This includes repeated courses.

Retention Policies

Students majoring in journalism must meet these retention requirements to continue their enrollment in the major: Students who have completed 26 semester hours or more must have an accumulative SIU grade point average of 2.00 or higher.

A grade of C or better is required in all journalism courses in order to be counted toward the major or minor and to satisfy prerequisite requirements. Students may enroll for a maximum of two times in any journalism course. Students who repeat a course in an attempt to earn the required letter grade of C or higher are limited to this two-time enrollment maximum.

Strong skills in the use of the English language are required to enter the first writing course in the School of Journalism: JRNL 302 or 310. Students may demonstrate proficiency in the use of the English language with an English ACTE subscore of 22 or higher, or by earning a grade of C or higher in English 300. This prerequisite must be successfully completed prior to registration for any course for which the prerequisite is required. Students must pass a grammar test prior to admission to either JRNL 310 or JRNL 302 as well. Information concerning the grammar test is available by contacting the School of Journalism main office.

Students who are unable to meet retention requirements will be placed in probationary status within the School of Journalism. These students will be given one semester to correct their deficiency prior to dismissal. Those who are dismissed from the School of Journalism but are eligible to continue in the University will be placed in Pre-Major advisement or may request permission to enter another collegiate unit.

Other Requirements

Enrollment in Journalism courses may be canceled for students who do not attend the initial class session of the semester. Fees will be assessed for supplies and materials in some courses. Students should inquire about amounts before registering. Subject to the approval of the School's director, undergraduate students may receive as many as 9 hours of transfer credit toward journalism course requirements.

Academic Advisement

A student planning to major in Journalism should consult the school's academic advisor as early as possible in order to discuss the degree requirements for the specialization chosen. After admission to the major in journalism, the student will be expected to visit the academic advisor each semester until all major requirements have been completed.

Bachelor of Science Degree, College of Mass Communication and Media Arts

The academic requirements for the Bachelor of Science degree in journalism include (1) 6 hours of journalism: JRNL 201 and JRNL 202, (2) 33 hours in journalism coursework at the 300 level or higher and (2) a minimum of 24 hours in junior-senior level course work in the College of Liberal Arts (excluding speech communication courses), the College of Science or other areas approved by the faculty. Students will also complete a 15-hour minor in an area approved by the School of Journalism. Students who select a minor within the College of Liberal Arts or another approved area may include those hours in their minimum of 24 junior-senior level hours.

The School of Journalism is accredited by the Accrediting Council on Education in Journalism and Mass Communication (ACEJMC). As a result, there are ACEJMC requirements that must be met. A major must complete a minimum of 72 semester hours outside of journalism and mass communication related courses. The student, with the assistance of the journalism academic advisor, should exercise care in course selection to assure that these requirements are met.

Bachelor of Science Degree in Journalism, College of Mass Communication and Media Arts

<i>University Core Curriculum Requirements</i>	41
<i>Requirements for a Major in Journalism</i>	39
<i>Journalism Core Courses</i>	6
JRNL 201 and JRNL 202	
<i>Specialization Requirements</i>	33
<i>Advertising Specialization:</i>	
JRNL 301, 302, 304, 335, 405, 406, 407, CMST 281,	
plus three approved JRNL electives.	
<i>New Media News Production Specialization:</i>	
JRNL 310, 311, 312, 332, 335, 337, 426, 434, 436,	
MCMA 396, plus one approved JRNL elective.	
<i>News Editorial Specialization:</i>	
JRNL 310, 311, 312, 332, 335, 434, two of either	
313, 337, or MCMA 396 and three JRNL electives (two	
must be at 400 level).	
<i>Photojournalism Specialization:</i>	
JRNL 310, 311, 313, 332, 337, 412, 413, 434, 495, and two	
JRNL electives.	
<i>Sports Media Specialization:</i>	
Sports Media Reporting: RTD 321, JRNL 310, 311, 312, 332,	
335 or MCMA 396, JRNL 434, 481, 488 plus two JRNL elec	
tives.	
Sports Media Promotion: RTD 321, JRNL 301, 302, 304, 310,	
335 or MCMA 396, JRNL 407, 481, 488 plus two JRNL elec	
tives.	
<i>Minor</i>	15
Minor must be completed in non-mass communication	

field. Communication studies and practicing theater do not satisfy minor requirement.

<i>Approved Non-Journalism Electives</i>	24
Communication Studies courses may not be used for this	
requirement.	
<i>Internship hours and/or electives by advisement</i>	1
<i>Total</i>	120

Journalism Suggested Four-Year Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
UCOL 101, MATH 101	3	3
UCC Humanities.....	3	3
UCC Social Science.....	-	3
UCC Human Health	2	-
CMST 101, JRNL 201.....	3	3
<i>Total</i>	14	15
SECOND YEAR	FALL	SPRING
UCC Science.....	3	3
UCC Multicultural, Social Science.....	3	3
UCC Fine Arts, Liberal Arts Elect.....	3	3
JRNL 202.....	3	-
Major Course	3	6
<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING
Major Courses	6	6
Liberal Arts Courses.....	6	6
Minor	4	3
<i>Total</i>	16	15
FOURTH YEAR	FALL	SPRING
Major Courses	6	6
Liberal Arts Courses.....	3	6
Minor	6	3
<i>Total</i>	15	15

Journalism Optional Three-Year Curriculum Plan

The School of Journalism offers a three-year graduation plan for students entering the program as freshmen. Students who attempt to pursue this plan will successfully complete 40 credit hours per academic year. For more information, please contact the School of Journalism academic advisor.

Journalism Optional Three-Year Suggested Curricular Guide

FIRST YEAR	SUMMER	FALL	SPRING
ENGL 101,102.....	3	3	-
UCOL 101.....	-	3	-
UCC MATH	-	3	-
UCC Humanities	-	3	-
UCC Science	-	-	3
UCC Social Science.....	3	-	3
JRNL 202, Major Course	-	-	6

CMST 101, JRNL 201	0	3	3
<i>Total</i>	6	15	15
SECOND YEAR	SUMMER	FALL	SPRING
UCC Science	3	-	-
UCC Multicultural	-	-	3
UCC Humanities	3	-	-
UCC Fine Arts.....	3	-	-
Liberal Arts/Minor/Elective	-	10	6
UCC Health	0	2	0
Major Course	0	6	9
<i>Total</i>	9	18	18
THIRD YEAR	SUMMER	FALL	SPRING
Major Courses	3	6	6
Liberal Arts/Minor/Elective	6	9	9
<i>Total</i>	9	15	15

Journalism Minor

A total of 15 hours of journalism courses at the 300 level or higher, at least one of which must be a writing course (302 or 310), constitutes a minor for nonjournalism majors. All courses for minors in Journalism must be completed with a grade of C or higher.

Journalism minors can emphasize any of our specializations, i.e. **Advertising, News Editorial, Photojournalism, Sports Media, or New Media News Production**. The School’s academic adviser is available to assist students in designing a minor emphasis.

Online Certificate in Journalism and Mass Communication..... 30 Total

Students will need to complete 30 credits of Journalism online courses (ten courses total/3 credits each) with a grade of C or better to complete the Online Certificate. JRNL 201 and one of JRNL 332, 407, or 434 must be completed as part of the 30 credit hours required for completion. All prerequisites or approvals must be satisfied prior to taking a course. The courses are offered through the SIU Extended Campus office.

Courses (JRNL)

160-3 Mass Communication in Society. Acquaints non-journalism students with an introductory history and development of the American mass media. Examines media roles in society, potential for development, weak points, and the roles consumers can and should play regarding the media.

201-3 Writing Across Platforms. Explores the concept of convergence in media writing while developing a basic understanding of journalism principles and writing skills for newspapers, online news, magazines, public relations, television and radio; develops skills in word usage, grammar, spelling and AP style for print and broadcast. Course Fee: \$42.

202-3 Creativity Across Platforms. Provides the basic understanding of the fundamentals of new media. Introduces students to the different software and tools that are increasingly being used in the news industry in order to tell stories and deliver content via multiple platforms. Students will learn how to create content by utilizing and integrating different content

modalities such as text, audio, photographs and video. Course Fee: \$42.

290-3 Writing Concepts for Media Professions. Develops language skills required by the mass media, with an emphasis on grammar and AP and APA style as applied to journalistic problems and media research. Includes study of representative works by masters of journalistic writing. Taught with mastery learning techniques.

301-3 Principles of Advertising/IMC. [IAI Course: MC 912] An introduction to integrated marketing communications elements, including advertising, direct response, sales promotion and marketing public relations, and their functions in today’s communication environment. Explores research, media and message elements involved in the creation of a campaign; governmental regulations; and social and economic considerations.

302-3 Copywriting and Creative Strategy for Advertising. Study of the principles and practice in the writing of copy and visual design of persuasive messages such as advertising, sales promotion, direct response, marketing, public relations and others. Includes writing for print and broadcast media, across products and services and oral presentation of materials. Prerequisite: ACTE English subscore of 22 or higher or grade of C or higher in ENGL 300 or JRNL 201, and JRNL 301. Lab fee: \$42.

303-3 Creating Advertising/IMC Messages. Examination of and practice in the development of persuasive message strategies and the writing and design of messages for all media advertising, direct response, sales promotion and marketing public relations, and oral presentations of IMC materials. Prerequisite: JRNL 301, 302 and ACTE English subscore of 22 or higher, or grade of C or higher in ENGL 290 or LING 290.

304-3 Placing Advertising Messages in the Media. Examination of the various media systems/types available to carry advertising creative messages. Emphasis is given to both the development of advertising media objectives and strategies in the context of a media plan, as well as the steps involved in the actual negotiation of specific media vehicles. Prerequisite: JRNL 301.

305-3 Direct Response Advertising/IMC. Overview of direct response advertising and its measurability; the media involved; and the strategic, tactical and creative approaches. Introduces topics such as database management, mailing lists, telemarketing, lead generation program, catalog marketing, sales promotion and business-to-business marketing communications. Prerequisite: JRNL 301, 302 and MKTG 304.

306I-3 International Media Systems. (University Core Curriculum) An overview of the mass media systems of the world; comparison of theoretical models and actual practice. Explores differing conceptual models of the mass media and their underlying philosophies; actual operations of different press systems with specific economic, political and cultural structures including historical development and current status.

307-3 Interactive Advertising/IMC. Explores the development of interactive media and their impact on integrated marketing communication and consumer behavior. Analyses the use of new media in brand building, business-to-business communication, direct response, database marketing, and sales promotions. Includes examination of strategic, planning, and communication aspects of Web sites, online advertising, e-mail

marketing, CD-ROMs, interactive presentations, interactive kiosks, and more. Provides principles such as user experience, content organization, navigation development, and interface design necessary to develop persuasive interactive marketing materials. Prerequisite: JRNL 301. Course fee: \$42.

310-3 Writing for the Mass Media. [IAI Course: MC 919] Emphasis on mass media writing styles; basic principles of editing; the techniques of information gathering and reporting; story organization; the use of library and on-line sources; and other basic news gathering skills. Prerequisite: ACTE English subscore of 22 or higher or grade of C or higher in ENGL 300 or JRNL 201. Lab fee: \$42.

311-3 Reporting and News Writing. Continues development of news reporting skills for all media. Emphasizes personal interviews, development and use of news sources, analysis of public records, news beats and specialized reporting structures, and the professional working relationship between the writer and other news personnel. Prerequisite: JRNL 310. Lab fee: \$42.

312-3 Editing. [IAI Course: MC 920] Introduces principles and techniques of editing and information management. Course emphasizes the editing of body copy and display type for maximum clarity and impact in a wide variety of news media including print, broadcast, and new media publications. Prerequisite: JRNL 310. Lab fee: \$42.

313-3 Basic Photojournalism. Includes basic camera technique, digital photo imaging methods and evaluation of pictorial communication effects. Discusses the history and ethics of the profession. Student supplies own materials. Lab fee: \$52.

314I-3 American Politics and the Mass Media. (University Core Curriculum) (Same as POLS 314I) The role of the mass media in American politics. Emphasis will be on the way in which the news media covers political actors and institutions, the effects of media on political behavior, and the expanding role of the internet in politics.

332-3 Journalism Law. Examination of the constitutional law of press censorship, of libel and privacy, of commercial speech and its regulation, of copyright and trademark, of access to government proceedings, and of confidentiality in newsgathering.

334-3 Ethics in Media, Culture and Society. The purpose of this course is to discuss what it means to act ethically. Does it mean anything more than doing what is right? Are ethics for a lawyer different from a journalist or priest or doctor? How does society decide what is ethical behavior and what is not?

335-3 Graphic Communication. Explores the history of visual communication with an emphasis on the integration of text and graphic images through design. Introduces fundamental design principles and the basics of typography, color usage, picture editing, and project management, all within the context of changing communication technology and production methods. Lab fee: \$42.

337-3 Video for Online Journalism. Introduces professional shooting and editing techniques to students interested in producing video stories within integrated new media storytelling for online journalism. Conduct pre- and post-production work to develop, investigate and report online news stories in a converged media environment. Prerequisite: JRNL 311 and 313 or consent. Lab Fee: \$42.

340-3 Media and Visual Culture. This course introduces

ways of reading, analyzing, and interpreting visual media, so that we may become careful and critical observers. The goal of the course will be to understand how people both communicate meanings visually and produce visual images for media. Themes and topics to be covered include how images function as signs; politics, propaganda, and power; fashion; scientific and medical imagery; advertising and the commodification of visual images; gender and sexuality; and the global circulation of visual information. The course will draw on numerous historical and contemporary examples from journalism and advertising, film, art and architecture, television, new media and other forms of visual communication and culture. The course will be a combination of lectures and discussions, with assignments designed to help students sharpen their critical viewing, reading, and writing skills.

360-3 Magazine Management and Production. The day-to-day operations of a magazine and the techniques involved in producing a magazine. A combination of lectures and workshops in which the professor will deal individually with student projects. Each student will produce an original magazine idea and bring it to, at least, the semi-comprehensive stage of development. Lab fee: \$42.

396-3 Publishing to the World Wide Web. The class provides instruction in designing for the WWW. Students learn the basics of HTML, and are provided an opportunity to develop literacy in networked, interactive communication. Students learn the basics of good interface design and apply these skills in interactive multimedia such as interactive news and information display, training development, business marketing applications, asynchronous learning materials, and entertainment products.

400-3 History of Journalism. Development of American newspapers, magazines, and radio-television with emphasis on cultural, technological, and economic backgrounds of press development. Current press structures and policies will be placed in historical perspective.

402-3 Advanced Creative Strategies. Examination of and practice in the development of persuasive, strategic campaigns and message strategies for multiple clients. Creation of a professional quality portfolio demonstrating proficiency in both traditional and new media required. Prerequisite: JRNL 302.

403-3 Media Sales. Historical perspective of media and sales philosophies and tactics grounded in sales ethics. Learn and apply relationship selling techniques enabling students to become media advertising consultants. Learn how to effectively work with local clients, agencies and national firm and balance the goals of management with the needs of clients while enhancing communication effectiveness. Prerequisite: JRNL 302 and 304.

404-3 Advanced Media Strategies and Planning. Provides an understanding of the factors that influence media strategy. Emphasis will be placed on advanced concepts such as building reach patterns, calculating effective frequency levels, in order to develop an effective media plan. Introduces media planning for the web and other new media options. Prerequisite: JRNL 304.

405-3 Introduction to Mass Communication Research. Overview of communication research methods including practical training in interpretation and presentation of social science data. Introduction to survey research methods, experimental design, and use of computers for analysis of data. Presentation

of data in journalistic forms and social science reports. Not for graduate credit. Prerequisite: JRNL 201 or instructor/departmental approval.

406-3 Advertising/IMC Campaigns. Conceptual synthesis and practical application of business, research, media and creative principles used in the formulation of persuasive messages. Includes the development of a complete integrated marketing communications (IMC) campaign for a specific advertiser. Includes all relevant target audience contact points (e.g., advertising, sales promotion, marketing public relations, event marketing, packaging) and both written and oral presentation of the campaign. Prerequisite: JRNL 303, 304, 405.

407-3 Social Issues and Advertising. Analysis of social issues involving advertising; economic relationships, government and self-regulation, cultural effects, influence on media content and structure, role in democratic processes, international comparisons and the stereotyping of women, minorities and other audience segments.

409-3 Specialized Topics in Advertising/IMC. New developments in advertising and integrated marketing communications. Topics change each term. Students should check specific topic and any special requirements and prerequisites before enrolling. Special approval needed from the instructor.

410-3 Multi-Media Publication Project. All journalistic skills and tools will combine to produce a report on a public issue important to southern Illinois. The report will be published both in hard copy and on the web. Students will have an opportunity to hone skills they already have learned or to learn new skills that broaden their repertoire. Prerequisite: JRNL 310 or 413 or consent. Lab fee: \$42.

411-3 Public Policy Reporting. Continued development of reporting skills with emphasis on the reporting of public policy issues and on use of statistics, the analysis of computerized data bases, and advanced techniques for the investigation of complex stories. Prerequisite: JRNL 311 or consent of instructor.

412-3 Images and Sound. Photojournalism course advancing news gathering techniques, visual and interactive journalistic communication, and photographic content and sound. Audio recording, editing, and flash photography skills will be developed and professional and ethical aspects of photojournalism will be emphasized. Prerequisite: JRNL 313 or consent of instructor. Lab fee: \$42.

413-3 Advanced Photojournalism. Emphasis on in-depth photojournalistic reporting. Students research, write and photograph picture stories. Examines ethics, history and social role of photojournalism domestically and internationally. Digital imaging and an introduced to full-motion video. Students must have fully adjustable camera. Prerequisite: JRNL 412. Student supplies own materials. Lab fee: \$64.

414-3 Picture Story and Photographic Essay. Production of photographic stories and essays for newspapers, magazines and news media presentations. Students discuss, research, photograph, design and write several stories and essays, while studying the work of influential photojournalists. Student must supply own camera equipment. Prerequisite: JRNL 313 or consent of instructor. Lab fee: \$42.

416-3 Critical and Persuasive Writing. The roles and responsibilities of the editor, editorial writer, and opinion columnist with emphasis upon editorial writing and critical thinking.

Editorial problems, methods, policies, style and the fundamentals of persuasion and attitude change form the basis for study. Prerequisite: JRNL 311.

417-3 Freelance Feature Writing. Identification, research and application of creative writing techniques in producing feature articles for various media. Students analyze reader appeal as well as feature story structure and methods of marketing features to various audiences and publications. Prerequisite: JRNL 310. Lab fee: \$42.

419-3 Specialized Topics in News Reporting. Develops detailed reporting expertise in such topics as business, environment, education, arts and entertainment, health and medicine, sports, new media, etc. Repeatable up to three times as long as the topic changes. Prerequisite: JRNL 311 or consent of instructor. Lab fee: \$42.

426-3 Online Journalism. Examination of emerging forms of news delivery by computer and related convergence of print and broadcast media. Apply concepts and theories and skills in projects, and web-news content management as a real world setting for the production of professional-level cyber-clips for an online portfolio. Includes the production of news stories via email, cellular and other evolving media environments. Prerequisite: Grade of C or better in JRNL 302 or JRNL 310 and JRNL 396.

434-3 Media Ethics. (Same as PHIL 434) Explores the moral environment of the mass media and the ethical problems that confront media practitioners. Models of ethical decision-making and moral philosophy are introduced to encourage students to think critically about the mass media and their roles in modern society.

435-3 Advanced Graphic Communication. Continues development of message design skills. Emphasizes creative solutions to the display of complex content in a wide variety of media. Prerequisite: JRNL 335 or consent of instructor. Lab fee: \$46.

436-3 Multimedia Publication Design. Building upon the basic skills learned in publishing on the WWW, the course continues the exploration of using computer-based technologies for presentation of information to wide audience using the interactive capabilities of the internet and other new media. Focus is on organization of information, design of presentation, use of transaction generated information, and the production of multimedia files in a networked environment. Includes discussion of topics including privacy intellectual property, libel, and other matters of concerns to an interactive publisher. Prerequisite: MCMA 396. Course fee: \$42.

450-3 Account Planning and Consumer Research. Introduces the field of account planning. Provides an understanding of how consumer research influences and informs the creative process. Learn to use qualitative research methods that are used in consumer research. Writing creative briefs that are effective and provide insights for the creative team. Prerequisite: JRNL 405.

481-3 Sports Reporting. Sports reporting requires two essential ingredients: the ability to write compelling prose and a good grip on news gathering and reporting techniques. This course emphasizes both and utilizes students' interest in sports to advance their reporting skills and while preparing them for sports reporting positions in the media industry. Prerequisite: JRNL 310 or RTD 310.

488-3 Sports Communication and Promotion. This course will expose students to the rapidly expanding and complex world of sports business, with an emphasis on sports communication and promotion. Topics include, but are not limited to, packaging proposals for event sponsorship, event promotion and management, effective strategies to maximize product and corporate exposure through media partnerships, and client representation.

490-1 to 6 (1 to 3, 1 to 3, 1 to 3) Readings. Supervised readings on subject matter not covered in regularly scheduled courses. Limited to maximum of 3 credits per semester. Not for graduate credit. Special approval: written consent of instructor and director.

494-1 to 6 Practicum. Study, observation, and participation in publication or broadcast activities and related areas. Special approval needed from the instructor and area head. Mandatory Pass/Fail for undergraduates.

495-1 to 12 (1 to 6, 1 to 6) Proseminar. Selected seminars investigating media problems or other subjects of topical importance to advanced journalism majors. Seminars will be offered as the need and the interest of students demand. Restricted to senior standing.

Journalism Faculty

Atwood, L. Erwin, Professor, *Emeritus*, Ph.D., University of Iowa, 1965.

Babcock, William, Professor, Ph.D., Southern Illinois University Carbondale, 1979.

Barrett, Anita J., Visiting Assistant Professor, M.F.A., Syracuse University, 1995.

Bush, Jerry, Daily Egyptian Newspaper Business and Advertising Director, M.S., Southern Illinois University Carbondale, 2003.

Correll, Linda C., Assistant Professor, M.A., Hunter College/City University of New York, 1968.

Dolan, Mark, Associate Professor, M.S., Syracuse University, 1995.

Fidler, Eric, Daily Egyptian Faculty Managing Editor, M.S.J., Northwestern University, 1986.

Freivogel, William H., Associate Professor, J.D., Washington University, 2001.

Frith, Katherine T., Professor, Ph.D., University of Massachusetts, 1985.

Greer, Phillip, Photojournalist-in-Residence.

Grundy, C. Richard, Assistant Professor, *Emeritus*, J.D., University of Illinois, 1959.

Iyer, Narayanan, Assistant Professor, Ph.D., Indiana University Bloomington, 2009.

Jaehnig, Walter, Associate Professor, *Emeritus*, Ph.D., University of Essex, 1974.

Karan, Kavita, Professor, Ph.D., University of London, 1994.

Kingcade, Carolyn, Senior Lecturer, M.S., Southern Illinois University Edwardsville, 2006.

Kreher, Vicki, Senior Lecturer, B.S., Southern Illinois University Carbondale, 1986.

Lowry, Dennis, Professor, *Emeritus*, Ph.D., University of Iowa, 1972.

Onyebadi, Uche, Associate Professor and *Director*, Ph.D., University of Missouri Columbia, 2008.

Recktenwald, William, Senior Lecturer.

Shidler, Jon A., Associate Professor, *Emeritus*, M.S., Roosevelt University, 1980.

Spellman, Robert L., Jr., Associate Professor, *Emeritus*, J.D., Cleveland State University, 1977.

Stone, Gerald C., Professor, *Emeritus*, Ph.D., Syracuse University, 1975.

Veenstra, Aaron, Assistant Professor, Ph.D., University of Wisconsin-Madison, 2009.

Xie, Wenjing, Assistant Professor, Ph.D., University of Maryland, 2009.

Yepsen David, Director of the Paul Simon Public Policy Institute, M.P.A., Drake University, 1985.

Kinesiology (Department with Majors, Courses, Faculty) (Formerly Physical Education)

The Department of Kinesiology offers programs, which qualify graduates for positions as teachers in elementary, middle/junior high, and secondary schools or for alternative careers in private, industrial, and public settings. Whatever the student's career aims may be, the programs provide a full range of intriguing and challenging professional opportunities in diversified curricula. The student can choose a discipline best suited to individual interests, talents, temperament, and future plans.

While studying new concepts, the student will observe the work of outstanding teachers, athletic coaches, and clinicians. Whichever direction is selected, the student will study and practice in modern facilities, with the latest equipment and will learn the most recent techniques.

Physical Education Teacher Education Major

The physical education teacher education major consists of courses, which are designed to meet the requirements of the Illinois State Board of Education and are, in most cases, transferable to meet requirements of other states. The laboratory and classroom experiences consist of basic and applied sciences, methods of teaching, and acquisition of physical skills, which include a variety of team and individual sports, exercise, and dance.

Students selecting the Physical Education Teacher Education Major are encouraged to complete a minor in coaching. This addition to the preparation for teaching will enhance a graduate's employment opportunities.

PHYSICAL EDUCATION TEACHER EDUCATION MAJOR

<i>University Core Curriculum Requirements</i>	43
To include EDUC 311, 314, PSYC 102, KIN 201, PHSL 201, 208.	
<i>Requirements for Major in Physical Education Teacher Education</i>	47
KIN 113, 116, 118, 120, 205, 216, 220, 300, 301, 305, 313, 314, 320, 321, 323, 345, 370.	
<i>Professional Education Requirements</i>	27
EDUC 301, 302, 303, 308, 313, 319, 401A, CI 360.	
*EDUC 311 and 314 are required courses that are included in the University Core Curriculum.	
<i>Elective</i>	3
<i>Total</i>	120

Physical Education Teacher Education Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101.....	3	-
ENGL 101, 102.....	3	3
CMST 101, MATH 101	3	3
KIN 113, PSYC 102.....	2	3
KIN 116, 120	3	3
KIN 118, UCC Humanities	2	3
<i>Total</i>	16	15

SECOND YEAR	FALL	SPRING
KIN 201, 220	3	3
KIN 205	3	-
KIN 216, 320	3	3
PHSL 201/208, KIN 300	4	3
UCC Fine Arts, UCC Humanities	3	3
EDUC 314	-	3
<i>Total</i>	16	15

THIRD YEAR	FALL	SPRING
KIN 313, 301	3	3
KIN 321, 323	3	3
KIN 314, 370	3	2
EDUC 311.....	-	3
EDUC 313, 319.....	3	3
EDUC 301, 302.....	1	1
Elective	3	-
<i>Total</i>	16	15

FOURTH YEAR	FALL	SPRING
KIN 305, EDUC 401A	2	12
KIN 345	3	-
CI 360	3	-
EDUC 308.....	3	-
EDUC 303.....	1	-
Science Group I.....	3	-
<i>Total</i>	15	12

Physical Education Minor

A student with a minor in Physical Education in secondary education must complete the following courses:

<i>Required Activity Courses</i>	7
Kinesiology 113, 116 or 120, 118	7
<i>Required Methods Courses</i>	5
Kinesiology 305, 323	5
<i>Required Theory Courses</i>	22
Kinesiology 201, 300, 301, 313, 320 or 321, 324, 370	19
Physiology 201	3
<i>Total</i>	34

Exercise Science Major. This program is designed for students who are interested in the study of Exercise Science. Preparation in this program enables the graduate to assess the components of human performance in healthy and clinical populations. Graduates are prepared for careers in public and private

health and wellness programs as well as clinical programs for the rehabilitation of cardiac, cancer and pulmonary patients. Graduates have a foundation for continued study in professional programs such as physical therapy, occupational therapy, physician assistant, medicine, chiropractic and podiatry as well as graduate studies in exercise science.

Sport Administration. This major is designed for students who are interested in working in various administrative areas in the realm of sport. Students are exposed to the economic, financial, legal, ethical, managerial, sociological, and psychological aspects of sport. Job opportunities exist at the professional, intercollegiate, interscholastic, community, and youth levels within the growing sport industry.

EXERCISE SCIENCE MAJOR

<i>University Core Curriculum Requirements</i>	42
To include PSYC 102 and ZOOL 118 or 115, HND 101, MATH 108, CHEM 140A.	
<i>Requirements for Major in Exercise Science</i>	67
KIN 201, 300, 313, 318, 320, 321, 324, 342, 355F, 381, 382, 408, 420, 421, 428	44
<i>Additional Requirements</i>	23
ACCT 210; MGMT 304; CHEM 140B; CS 200B; PHSL 201, 208; PHYS 101; EPSY 402.	
<i>Electives</i>	11
<i>Total</i>	120

Exercise Science Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, KIN 201	3	3
PSYC 102, HND 101.....	3	2
ZOOL 115, ENGL 102.....	3	3
MATH 108, CMST 101	3	3
UCOL 101; PHSL 201, 208	3	4
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
KIN 300, 320	3	3
KIN 313, CS 200B	3	3
CHEM 140A, B	4	4
KIN 324, Humanities	3	3
ACCT 210, Social Science	3	3
<i>Total</i>	16	16

THIRD YEAR	FALL	SPRING
KIN 321, 382	3	3
KIN 381, 342	3	3
Multicultural, KIN 355F	3	2
MGMT 304, Elective	3	3
UCC Fine Arts, KIN 318	3	3
<i>Total</i>	15	14

FOURTH YEAR	FALL	SPRING
PHYS 101, KIN 428	3	3
KIN 420, EPSY 402	3	3
KIN 421, Electives	3	9

KIN 408	3	-
Elective	2	-
Total	14	15

SPORT ADMINISTRATION MAJOR

<i>University Core Curriculum Requirements</i>	42
To include KIN 201, 210; PSYC 102; PHIL 104; ECON 240.	
<i>Requirements for Major in Sport Administration</i>	62
KIN 200, 301, 313, 329, 345, 360, 364, 365, 366, 367, 416 and 455	38
<i>Additional Requirements</i>	24
ACCT 210; CS 200B; EPSY 402 or MGMT 208; MGMT 304; JRNL 396; MKTG 304; PSYC 323; CMST 280.	
<i>Electives</i>	16
Total	120

Sport Administration Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102	3	3
PSYC 102, CMST 101	3	3
UCC Science (Gr I), UCC Fine Arts.....	3	3
MATH101/108, UCC Humanities	3	3
UCOL 101, KIN 201	3	3
Total	15	15

SECOND YEAR	FALL	SPRING
PHIL 104, ECON 240	3	3
UCC Science (Gr II), CMST 280	3	3
KIN 210, CS 200B	3	3
ACCT 210, KIN 360	3	3
KIN 200, Electives	3	3
Total	15	15

THIRD YEAR	FALL	SPRING
KIN 345, 301	3	3
KIN 313, 329	3	3
MKTG 304, KIN 366	3	3
PSYC 323, MGMT 304	3	3
Electives	3	3
Total	15	15

FOURTH YEAR	FALL	SPRING
KIN 367	3	-
KIN 364, 365	3	3
KIN 416, JRNL 396	2	3
EPSY 402/MGMT 208, KIN 455	3	6
Electives	4	3
Total	15	15

Admission Requirements:

- a. Incoming freshmen must rank in the top half of their high school graduating class and have a high school GPA equal to or greater than the minimum University admission requirement.
- b. Students transferring from another program at SIU or students seeking admission from another institution should have a minimum overall GPA of 2.50 at the time of application. In addition, they should have completed at least 30 credit hours.

Program Requirements:

- a. Students must maintain a minimum overall GPA of 2.50.
- b. Students must earn a C or better in each of the sport administration courses that are aligned with the Sports Management Program Standards (9 courses): KIN 210, 301, 329, 345, 360, 364, 365, 366, and 367.

Internship Requirements (KIN 455):

- a. Students must have a minimum overall GPA of 2.50.
- b. Students must have completed a minimum of 90 credit hours and must have senior status, or they should obtain approval from the program coordinator.
- c. Students should have completed all sport administration courses that are aligned with the Sports Management Program Standards (9 courses): KIN 210, 301, 329, 345, 360, 364, 365, 366, and 367.

Students wishing to gain experience in kinesiology and areas related to kinesiology may pursue work in aquatics and coaching.

Minor in Aquatics

A student must have advanced swimming skill, a current American Red Cross Lifeguarding certificate and a current adult CPR certification to enter the program. If not, the student must obtain them by coursework or workshops.

<i>Required Courses:</i>	10
KIN 307 or 311, 310, 312, 355A, 418	
<i>Electives:</i>	6
Three courses from KIN 307 or 311; 308A,B,C,D, or E; 330C; 494A,B (First Aid Instructor and CPR Instructor certification ¹ .)	
Total	16

Minor in Coaching

The minor in Coaching is designed to prepare non-teacher education students to become certified via the Illinois High School Association (IHSA) to coach at an educational institution in the state of Illinois. A minor requires 17 hours of KIN coursework to include KIN 201, 313, 324, 329, 345, and 355C. Students may enroll in the coaching practicum (KIN 355C) once they have met the required prerequisites, are in their last year of coursework and have met with the instructor. The 355C practicum requires a minimum of 90 hours of hands-on training under a certified coach. Students are required to meet with the 355C instructor of record once they declare the coaching minor.

<i>Required courses</i>	17
KIN 201, 313, 324, 329, 345, 355C	
KIN 201, 313 & 324 required before 355C. KIN 329 & 345 may be taken concurrently with 355C	
The Department of Kinesiology recommends these additional courses: KIN 320 and 321	

Minor in Dance

The minor in Dance from SIUC consists of at least 12 hours of the following courses and requires that a student maintain a minimum 2.5 GPA in the dance minor curriculum.

<i>Required courses</i>	8
Eight hours from the following: KIN 103A,B,C,D,E,F, 118	
<i>Electives</i>	4
Two courses from: KIN 160, 493A, THEA 203A, CMST 201, 230, MUS 106, 203, 303I, 364	
Total	12

Courses (KIN)

100-2 Introduction to Dance. This course will cover the foundations of basic body mechanics and alignment. The class will introduce the student to basic dance skills shared in performance art dance and provide the student with a foundation for further study in dance.

101-2 Current Concepts of Physical Fitness. (University Core Curriculum) To foster a thorough understanding of scientific principles of physical fitness and to enhance the ability to utilize physical exercise toward achievement of healthful living. Lab fee: \$3.

102A-2 Aquatics-Swimming I: Orientation to Swimming. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Swimming suits and towels are provided; however, students may provide their own one piece swimming suit (no pockets), towels and cap (optional). Long hair must be tied back. Goggles are recommended for some classes. Prerequisite: course is open only to non-swimmers. Mandatory Pass/Fail grading. A \$4 fee is required for all classes listed.

102B-2 Aquatics-Swimming II. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Swimming suits and towels are provided; however, students may provide their own one piece swimming suit (no pockets), towels and cap (optional). Long hair must be tied back. Goggles are recommended for some classes. Prerequisite: KIN 102A or equivalent skills and safe in deep water. A \$4 fee is required for all classes listed.

102C-2 Aquatics-Skin Diving. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Swimming suits and towels are provided; however, students may provide their own one piece swimming suit (no pockets), towels and cap (optional). Long hair must be tied back. Goggles are recommended for some classes. Special approval needed from the instructor and pass swimming test prior to enrollment. A \$4 fee is required for all classes listed.

102D-2 Aquatics-Scuba Diving. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Swimming suits and towels are provided; however, students may provide their own one piece swimming suit (no pockets), towels and cap (optional). Long hair must be tied back. Goggles are recommended for some classes. Fee and successful completion of National Test required for certification, special sections have extra charge for field trips. Special approval needed from the instructor and pass swimming test prior to enrollment. A \$4 fee is required for all classes listed.

102F-2 Aquatics-Lifeguarding. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Swimming suits and towels are provided; however, students may provide their own one piece swimming suit (no pockets), towels and cap (optional). Long hair must be tied back. Goggles are recommended for some classes. Fee and successful completion of National Test required for certification. Prerequisite: KIN 102B or equivalent skill and pass swimming test first day of class (500 yard continuous swim using front crawl, sidestroke and breaststroke, tread water two

minutes-legs only, retrieve a ten pound brick from seven foot depth). A \$4 fee is required for all classes listed.

103A-2 Dance-Ballet. These courses are designed to provide skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. Prerequisite: KIN 100 or dance experience. A fee of \$4 is required for all classes listed.

103B-2 Dance-Ballroom. These courses are designed to provide skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. Prerequisite: KIN 100 or dance experience. A fee of \$4 is required for all classes listed.

103C-2 Dance-Jazz. These courses are designed to provide skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. Prerequisite: KIN 100 or dance experience. A fee of \$4 is required for all classes listed.

103D-2 Dance-Modern. These courses are designed to provide skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. Prerequisite: KIN 100 or dance experience. A fee of \$4 is required for all classes listed.

103E-2 Dance-Square. These courses are designed to provide skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. Prerequisite: KIN 100 or dance experience. A fee of \$4 is required for all classes listed.

103F-2 Dance-Tap. These courses are designed to provide skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. Prerequisite: KIN 100 or dance experience. A fee of \$4 is required for all classes listed.

104A-2 Fitness-Aerobic Dance. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of \$4 is required for all classes listed.

104B-2 Fitness-Cycling. Bicycle required and helmet. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of \$4 is required for all classes listed.

104D-2 Fitness-Strength Training. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of \$4 is required for all classes listed.

104E-2 Fitness-Walking and Jogging. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of \$4 is required for all classes listed.

104F-2 Fitness-Weight Control. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of \$4 is required for all classes listed.

105A-2 Individual and Dual Activities-Badminton. Three shuttles required. These courses are designed to provide

an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of \$4 is required for all classes listed.

105B-2 Individual and Dual Activities-Bowling. Additional lane fee of \$18 per credit hour and bowling shoes required. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity.

105C-2 Individual and Dual Activities-Golf. Six plastic golf balls required. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of \$4 is required for sections A, D and E. A \$10 fee is required for section C.

105D-2 Individual and Dual Activities-Racquetball. Three racquetballs required. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of \$4 is required for all classes listed.

105E-2 Individual and Dual Activities-Tennis. Three tennis balls and racquet. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of \$4 is required for all classes listed.

105F-2 Basic Pocket Billiards. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of \$10 is required for this section.

106A-2 Team Activities-Basketball. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of \$4 is required for all classes listed.

106B-2 Team Activities-Flag Football. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of \$4 is required for all classes listed.

106C-2 Team Activities-Soccer. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of \$4 is required for all classes listed.

106D-2 Team Activities-Softball. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of \$4 is required for all classes listed.

106E-2 Team Activities-Volleyball. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of \$4 is required for all classes listed.

107-1 to 4 Restricted Physical Education. For physically challenged students as recommended by Student Health Center and consent of instructor. Course not designed for students who can take other physical activity courses. Mandatory Pass/Fail.

113-2 Aquatics. This course provides the opportunity for the student to improve one's ability in swimming skills and strokes. It is designed to prepare the student to be safe in, on and around the water. It prepares the student to react in emergency situations by knowing and having the ability to perform the proper rescue techniques to use while maintaining one's own safety. Prerequisite: KIN 102A or equivalent skill. Restricted to Kinesiology Majors only.

116-3 Team Sports and Activities. This course is designed to introduce students to skills, lead up and modified games, strategies and basic rules of team sports. Emphasis will be on developing the basic skills through observation and analysis of movement patterns appropriate for various skill level. Restricted to Kinesiology Majors Only. Equipment Fee: \$4.

118-2 Rhythms and Dance. This course is designed to introduce the fundamentals of rhythm, basic dance steps and the elements of dance. Basic skills in square, folk, and social dance as well as basic rhythms and movement analysis will be covered. Lab fee: \$4.

120-3 Individual Sports and Activities. This course is designed to introduce students to skills, lead up games, strategies and basic rules of individual sports and activities. Emphasis will be on developing the basic skills through observation and analysis of movement patterns appropriate for various skill level. Restricted to Kinesiology Majors Only. Equipment Fee: \$4.

127A-1 Pre-Clinical Experience I. Observational and clinical experiences designed to provide students with structured exposure to the field of athletic training. This course requires the completion of a minimum of 100 observational and clinical hours under the direct supervision of an Approved Clinical Instructor. Restricted to ATEP Major.

127B-1 Pre-Clinical Experience II. Observational and clinical experiences designed to provide students with structured exposure to the field of athletic training. This course requires the completion of a minimum of 100 observational and clinical hours under the direct supervision of an Approved Clinical Instructor. Restricted to ATEP Major.

160-2 to 8 (2,2,2,2) Dance Concert Production Ensemble. A select group which choreographs, rehearses, produces, and performs one dance concert per semester and performs in other venues as feasible. Restriction: audition prior to first registration and consent of instructor each semester. 2.000 to 8.000 Credit Hours. 2.000 to 8.000 Lecture Hours.

170-2 Varsity Sports. The course is designed to teach skills and strategies as well as the rules and practices involved in a selected varsity sport. Prerequisite: Names must appear on an official NCAA squad list. Special approval needed from the instructor. Mandatory Pass/Fail grade.

200-3 History of Sport in the United States. This course examines the development and significance of sport from 18th century Colonial America to the early 21st century United States. Factors such as religion, social and economic systems, urbanization, development of higher education, sport governance structures, gender, race, and ideas concerning the body are examined, and their impact upon sport is considered.

201-3 Introduction to Human Movement Science. (Advanced University Core Curriculum course) KIN 201 is a course designed to introduce students to scientific evidence related to the impact of exercise/physical activity on various physiologic

systems and provide them with the knowledge necessary to promote health-related physical fitness. Students will be introduced to a variety of exercise science assessment techniques and training programs and will use the scientific method during laboratory experiments. Satisfies University Core Curriculum Human Health requirement in lieu of 101 for kinesiology majors.

202-3 Physical Activities for Children and Youth. Developing activities for motor perceptual development and skill acquisition appropriate for different age levels of children and youth. Tennis shoes required. Dress must permit ease of movement. Restricted to at least sophomore standing.

205-3 Instructional Strategies in Physical Education. An introduction to planning and teaching physical education activities. Content includes lesson planning, practice of teaching skills through micro teaching, peer teaching, and analysis of teaching. Restricted to declared Physical Education Teacher Education majors.

210-3 Diversity in American Sport. (University Core Curriculum) Explores how historical and contemporary forces have shaped opportunities and experiences of various cultural groupings in American sport. The course focuses on diversity issues related to race, ethnicity, gender, social class, sexuality and physical ability/disability. Class utilizes a variety of interactive classroom activities to explore multicultural dynamics in sport and society.

216-3 Teaching Team Sports and Activities. This course is designed to introduce students to the instructional considerations and teaching techniques related to the teaching of team sports and activities. Emphasis will be on skill progression techniques, practical instructional methods, lesson planning and peer teaching. Prerequisite: KIN 116 and KIN 120.

220-3 Teaching Individual Sports and Activities. This course is designed to introduce students to the instructional considerations and teaching techniques related to the teaching of individual sports and activities. Emphasis will be on skill progression techniques, practical instructional methods, lesson planning and peer teaching. Prerequisite: KIN 116 and KIN 120.

225-3 Introduction to Athletic Training. This course is designed for students pursuing a career in athletic training. The course provides knowledge about the NATA, job opportunities, incidence of injury, basic injury prevention, recognition and treatment. It also provides the student with information concerning the recognition and treatment of illnesses and conditions common to athletes.

226-2 Clinical Applications in Athletic Training. This course is designed to familiarize the beginning athletic training student with all aspects of prophylactic taping, wrapping and use of braces for athletic training injuries. In addition, within the course students will be presented with basic skills, such as: splinting, taping, record keeping, wound care, measurement of vital signs, and illness assessment. Prerequisite: KIN 225 or concurrent enrollment in 225. Fee: \$50.

227A-2 Clinical Experience-Upper Extremity. Clinical experience designed to provide students with formal instruction and evaluation of the athletic training clinical proficiencies. This course requires the completion of a minimum of 250 clinical hours under the direct supervision of an Approved Clinical

Instructor. Prerequisite: admission to the Athletic Training Education Program. Special approval needed from the Director or Clinical Education Coordinator of the Athletic Training Education Program. Lab fee: \$185.

227B-2 Clinical Experience-Lower Extremity. Clinical experience designed to provide students with formal instruction and evaluation of the athletic training clinical proficiencies. This course requires the completion of a minimum of 250 clinical hours under the direct supervision of an Approved Clinical Instructor. Prerequisite: admission to the Athletic Training Education Program. Special approval needed from the Director or Clinical Education Coordinator of the Athletic Training Education Program. Lab fee: \$185.

227C-2 Clinical Experience-Equipment Intensive. Clinical experience designed to provide students with formal instruction and evaluation of the athletic training clinical proficiencies. This course requires the completion of a minimum of 250 clinical hours under the direct supervision of an Approved Clinical Instructor. Prerequisite: admission to the Athletic Training Education Program. Special approval needed from the Director or Clinical Education Coordinator of the Athletic Training Education Program. Lab fee: \$185.

227D-2 Clinical Experience-General Medical. Clinical experience designed to provide students with formal instruction and evaluation of the athletic training clinical proficiencies. This course requires the completion of a minimum of 250 clinical hours under the direct supervision of an Approved Clinical Instructor. Prerequisite: admission to the Athletic Training Education Program. Special approval needed from the Director or Clinical Education Coordinator of the Athletic Training Education Program. Lab fee: \$185.

227E-2 Clinical Experience-Practicum. Clinical experience designed to provide students with formal instruction and evaluation of the athletic training clinical proficiencies. This course requires the completion of a minimum of 250 clinical hours under the direct supervision of an Approved Clinical Instructor. Prerequisite: admission to the Athletic Training Education Program. Special approval needed from the Director or Clinical Education Coordinator of the Athletic Training Education Program. Lab fee: \$185.

227F-2 Clinical Experience-Culminating Experience/Exam Prep. Clinical experience designed to provide students with formal instruction and evaluation of the athletic training clinical proficiencies. This course requires the completion of a minimum of 250 clinical hours under the direct supervision of an Approved Clinical Instructor. Prerequisite: admission to the Athletic Training Education Program. Special approval needed from the Director or Clinical Education Coordinator of the Athletic Training Education Program. Lab fee: \$185.

230-3 Youth Fitness and Sport Training. An exploration and examination of the scientific foundations underpinning the field of youth fitness and sport training. The student will learn to practically apply these principles into sound and developmentally appropriate practice in a manner that will enhance client movement ability, efficiency, and aptitude while preventing injury and maximizing performance.

245-3 Sport and Modern Society. (Same as SOC 233) An examination of the social, cultural, political and economic aspects of contemporary sport. Special attention given to gender, race,

and social class issues related to sport.

257-1 to 5 Current Work Experience. The student receives credit for current work experiences. Credit is awarded for many practical experiences and must be related to kinesiology and in process. Prerequisite: at least C average in Kinesiology after 12 hours. Mandatory Pass/Fail.

258-1 to 5 Work Experience. The student receives credit for past work experiences. Credit is awarded for many practical experiences and must be related to kinesiology and already completed. Mandatory Pass/Fail. Prerequisite: at least C average in Kinesiology courses after 12 hours.

300-3 Musculoskeletal Anatomy. A fundamental study of the human body and its parts with special emphasis on bone, muscle and tissues. Lab fee: \$10.

301-3 Foundation, Organization and Administration of Physical Education. This course is designed to examine the historical and philosophical development of physical education. Students will gain a historical perspective of the physical education profession ranging from its earliest origins to its future development. The course will also examine the administrative and legal concerns relevant to the profession of physical education. Students will develop an understanding of the theories and principles involved in the administration and management of a physical education program. Specific concerns to be addressed are: (1) organizational and administrative processes, (2) program facilities and equipment, (3) personnel, (4) budget, (5) legal liabilities, and (6) public relations. The emphasis throughout the course will be a practical application of administrative concepts for the physical education teacher. Restricted to KIN Majors Only.

302-2 Kinesiology of Normal and Pathological Conditions. Force system, its relation to the mechanics of muscle action. Analysis of muscular-skeletal forces involved in physical activities.

303-2 Kinesiology. Force system, its relation to the mechanics of muscle action. Analysis of muscular-skeletal forces involved in physical education activities.

304-2 Mechanical Basis of Human Movement. Applies body mechanics with application of mechanical laws and principles to performance in physical activities.

305-2 Methods of Teaching Physical Education for Special Populations. An introductory course designed to provide the physical education generalist with the minimal competencies needed to teach the mildly physically challenged students in the mainstreamed or special education setting. The course will also aid the special education classroom teacher in providing appropriate physical education. Prerequisite: KIN 313. Restricted to junior standing.

306-1 Advanced Swimming, Skill and Analysis. Prerequisite: KIN 102B.

307-2 Water Safety Instructor. Methods of teaching swimming and basic emergency water safety. American Red Cross Water Safety Instructor certificate may be earned. Fee and National Test are required for certification. Prerequisite: KIN 102A and concurrent enrollment in KIN 306.

308A-2 to 10 (2 per section) Instructor of Aquatics-Handicapped. Special approval needed from the instructor.

308B-2 to 10 (2 per section) Instructor of Aquatics-Skin Diving. Special approval needed from the instructor.

308C-2 to 10 (2 per section) Instructor of Aquatics-Scuba Diving. Special approval needed from the instructor.

308D-2 to 10 (2 per section) Instructor of Aquatics-Canoeing. Special approval needed from the instructor.

308E-2 to 10 (2 per section) Instructor of Aquatics-Swimming. Special approval needed from the instructor.

310-2 Aquatics Facilities Management. Learning experiences designed to aid in the development of aquatic specialists who can efficiently work toward satisfactory solutions to the problems inherent in functional design, operation, and maintenance of aquatic facilities that are associated with schools, municipalities, and other organizations.

311-2 Lifeguarding Instructor. The skills, techniques and methods of preparing qualified individuals to prepare persons to become lifeguards at pools and open-water, non-surf beaches, American Red Cross Lifeguard Instructor Certification may be earned. Fee and National Test required for certification. Prerequisite: KIN 102F or equivalent certification. Lifeguarding experience.

312-2 Science and Pedagogy of Swimming. Designed to provide students: (1) a scientific basis for teaching swimming and (2) a necessary background as a future professional in the aquatic field. Prerequisite: KIN 307 or equivalent. Previous teaching or coaching swimming required.

313-3 Motor Behavior. This course will introduce the student who will teach motor skills to people of any age to basic principles and concepts involved in the performance, control, and learning of motor skills. Emphasis will be on acquainting the student with age-related characteristics affecting motor performance, processes involved in the control of movement, and structuring the learning environment to maximize long-term retention of skills. Restricted to KIN Majors Only.

314-3 Methods of Teaching Elementary Physical Education. The purpose of this course is for physical education students to develop knowledge and skills for planning, implementing, and evaluating appropriate and effective physical education progressions. The course will consist of lectures, class participation in demonstrations of teaching movement, and peer teaching/field experience. Prerequisite: KIN 113, KIN 116, KIN 118 and KIN 120. Concurrent enrollment in KIN 323 is not permitted. Equipment Fee: \$4.

316-3 Advanced Level Sports Skills: Scuba. Special approval needed from the instructor.

318-3 Behavioral Aspects of Exercise. This course will explore the theory and research related to the psychological and social aspects of exercise and how exercise may impact the individual's psychosocial health and behavior. The focus is on theory and application. It will cover theories and models of exercise behavior, psychosocial outcomes of exercise, social factors in exercise behavior, communication skills needed to help increase physical activity, policy, population, community, and individual physical activity interventions.

320-3 Exercise Physiology. Immediate and long range effects of muscular activity on the systems. Integrative nature of body functions and environmental influence on human performance efficiency. Lab to be arranged. Prerequisite: KIN 201 or consent of instructor and PHSL 201. Lab fee: \$10.

321-3 Biomechanics of Human Movement. The science of human motion is the basis of this course. The anatomical and

mechanical principles of human motion will be studied as well as how these principles relate to skillful and efficient movement in humans. Prerequisite: KIN 300 or PTH 207.

322-1 Teaching Practicum. Laboratory experience assisting with a physical education courses or in a school setting. Mandatory Pass/Fail.

323-3 Methods of Teaching Secondary Physical Education. The purpose of this course is for physical education students to develop knowledge and skills for planning, implementing, and evaluating appropriate and effective physical education programs at the secondary school level. The course will focus on knowledge and skills related to effective instructional strategies, efficient management and organizational principles, and effective class control and motivational techniques specific to teaching physical education for secondary school students. Prerequisite: KIN 113, KIN 116, KIN 118 and KIN 120. Concurrent enrollment in KIN 314 is not permitted. Equipment Fee: \$4.

324-3 Essentials of Athletic Injury Management. This course is designed to provide basic information regarding risk management, prevention, recognition, first aid, taping, and wrapping of athletic injuries. The student will be required to successfully demonstrate basic strapping techniques, bandaging, splinting, CPR/AED & First Aid. The course will lead to certification in Adult/Child First Aid, CPR and AED. Certification fees payable to the local organization will be collected in class. Restricted to Junior/Senior standing only. Lab fee: \$15.

325-3 Therapeutic Modalities. This course provides the athletic training student with the theoretical background of the physiological effects, indications, contraindications, and clinical applications of therapeutic modalities. This course also includes laboratory experiences in the clinical application of therapeutic modalities. Restricted to admission into Athletic Training Education Program or permission of instructor. Course fee: \$50.

326-3 Emergency Care and Prevention of Athletic Injuries. The theoretical and practical methods of preventing and treating athletic injuries; techniques of taping and bandaging; emergency first aid; massage; use of physical therapy modalities. Lecture and laboratory sessions. Prerequisite: KIN 300 or PHSL 301.

327-3 Medical Aspects of Athletic Injury. The student will acquire an advanced understanding of the proper prevention and rehabilitation of athletic injuries. The student will also understand medical and surgical procedures and their consequent factors to be considered in treatment programs. Prerequisite: KIN 326.

328A-3 Field Experience I. Designed on an individual basis for athletic training students as a field experience in a sports medicine setting under the direct supervision of a NATABOC-certified athletic trainer. Field Experience I with fall football (required). Restricted to admission into Athletic Training Education Training Program or permission of instructor. Lab fee: \$185.

328B-3 Field Experience II. Designed on an individual basis for athletic training students as a field experience in a sports medicine setting under the direct supervision of a NATABOC-certified athletic trainer. Field Experience II in various athletic training settings (optional). Restricted to admission into Athletic Training Education Training Program or permission of instructor.

328C-3 Field Experience III. Field experience in an athletic training setting under the direct supervision of a BOC Certified Athletic Trainer. Restricted to admission into the Athletic Training Education Program or permission of instructor.

328D-3 Field Experience IV. Field experience in an athletic training setting under the direct supervision of a BOC Certified Athletic Trainer. Restricted to admission into the Athletic Training Education Program or permission of instructor.

329-3 Principles and Procedures for the Conduct of Interscholastic Athletics. An examination of the history, values, and trends in extracurricular sports programs. A review of regulations and standards as determined by the governing bodies for men's and women's sports and an in-depth study of coaching and administrative procedures.

330A-2-26 (2 per section) Techniques and Theory of Coaching-Basketball.

330B-2-26 (2 per section) Techniques and Theory of Coaching-Football.

330C-2-26 (2 per section) Techniques and Theory of Coaching-Swimming.

330D-2-26 (2 per section) Techniques and Theory of Coaching-Baseball.

330E-2-26 (2 per section) Techniques and Theory of Coaching-Track and Field.

330F-2-26 (2 per section) Techniques and Theory of Coaching-Wrestling.

330G-2-26 (2 per section) Techniques and Theory of Coaching-Tennis.

330H-2-26 (2 per section) Techniques and Theory of Coaching-Gymnastics.

330I-2-26 (2 per section) Techniques and Theory of Coaching-Golf.

330J-2-26 (2 per section) Techniques and Theory of Coaching-Badminton.

330K-2-26 (2 per section) Techniques and Theory of Coaching-Field Hockey.

330L-2-26 (2 per section) Techniques and Theory of Coaching-Softball.

330M-2-26 (2 per section) Techniques and Theory of Coaching-Volleyball.

335-3 General Medical Conditions for the Athletic and Physically Active Populations. This course will provide the athletic training student with the knowledge and skill necessary to recognize, manage, and refer general medical conditions and disabilities that occur to athletes and the physically active. Prerequisite: admission into the Athletic Training Education Program and PHSL 301 or consent of instructor. Lab fee: \$20.

341A-3 Assessment of Musculoskeletal Injuries-Upper Body. Assessment of upper body injuries and related illness. This course also includes laboratory experiences in clinical assessment of athletic related injuries and illness. Restricted to admission into Athletic Training Education Program or permission of instructor and PHSL 301. Lab fee: \$50.

341B-3 Assessment of Musculoskeletal Injuries-Lower Body. Assessment of lower body injuries and related illness. This course also includes laboratory experiences in clinical assessment of athletic related injuries and illness. Restricted to admission into Athletic Training Education Program or permission of instructor and PHSL 301. Lab fee: \$50.

342-3 Pharmacology for Sport and Allied Health Professionals. This course is designed to make the allied health and exercise professional aware of the effects of prescription, non-prescription, performance enhancing and street drugs on the performance of physically active persons. Prerequisite: PHSL 201, CHEM 140A or 200/201.

345-3 Psychological and Social Aspects of Sport and Physical Activity. This course exposes students to psychological and sociological concepts related to sport and physical education contexts. Primarily designed for future physical education teachers and coaches, the class examines how psychological and sociological principles relate to teaching and coaching contexts. Restricted to KIN Majors Only.

350A-1-3 Special Topics-Kinesiology. The class will focus on various topics depending on the needs and interests of students and the expertise of faculty. 1 to 3 credit hours; may be repeated three times for a max of 9 hours. Special approval needed from the instructor.

350B-1-3 Special Topics-Exercise Science. The class will focus on various topics depending on the needs and interests of students and the expertise of faculty. 1 to 3 credit hours; may be repeated three times for a max of 9 hours. Special approval needed from the instructor.

350C-1-3 Special Topics-Athletic Training. The class will focus on various topics depending on the needs and interests of students and the expertise of faculty. 1 to 3 credit hours; may be repeated three times for a max of 9 hours. Special approval needed from the instructor.

350D-1-3 Special Topics-Physical Education Teacher Education. The class will focus on various topics depending on the needs and interests of students and the expertise of faculty. 1 to 3 credit hours; may be repeated three times for a max of 9 hours. Special approval needed from the instructor.

350E-1-3 Special Topics-Sport Administration/Coaching. The class will focus on various topics depending on the needs and interests of students and the expertise of faculty. 1 to 3 credit hours; may be repeated three times for a max of 9 hours. Special approval needed from the instructor.

355A-2 to 14 (2 per section) Practicum-Aquatics. Restricted to written consent of instructor.

355B-2 to 14 (2 per section) Practicum-Special populations. Restricted to written consent of instructor.

355C-2 to 14 (2 per section) Practicum-Coaching. The 355C practicum requires a minimum of 90 hours of hands-on training under a certified coach. See Coaching minor description for other details. Mandatory Pass/Fail. Restricted to written consent of instructor. Prerequisites: KIN 201, 313, 324, 329, 345. Co-requisite course (concurrent enrollment allowed): KIN 329, 345.

355D-2 to 14 (2 per section) Practicum-Athletic Training. Restricted to written consent of instructor.

355E-2 to 14 (2 per section) Practicum-Dance. Restricted to written consent of instructor.

355F-2 to 14 (2 per section) Practicum-Exercise Science. Restricted to written consent of instructor. Fee: \$20.

355G-2 to 14 (2 per section) Practicum-Teaching of Sport. Restricted to written consent of instructor.

360-3 Introduction to Sport Administration. The course will provide students with the foundations and principles of

sport administration, including an overview of the structure of the sport industry and basic fundamental knowledge and skills necessary for the successful sport administrator. The course will address essential topics in sport administration, the history of sport administration, management and marketing principles, amateur and professional sport industry & career preparation.

364-3 Legal & Ethical Issues in Sport. This course provides an extensive overview of legal principles and ethical issues in sport. This course will begin with an introduction to the different fields of law & a survey of the broad issues related to sport law (federal amendment, torts, contracts, labor relations). The second half of this course examines the basic philosophical issues concerning ethics and moral reasoning and how these issues relate to sport.

365-3 Business Aspects of Sport. The course will provide students with basic knowledge and understanding of the principles, processes, and strategies related to financing, marketing and managing sport resources. The focus will be on applications of the principles and concepts of sport finance and marketing, and event management to the sport industry. The course will address a variety of current topics associated with the sport industry.

366-3 Sport Promotion Management. This course provides an introduction to promotions and communications within the sport industry. This course is designed to help students achieve a basic understanding of the principles, processes, and strategies pertaining to sport promotions and communications. Emphasis shall be placed on the application of promotional principles to the sport industry. This course addresses topics important to sport organizations, including sport consumers and their decisions, sport segmentation, the 4-Ps (Product, Price, Place, and Promotion), the role of sport media, media relations in sport, and sport public relations.

367-3 Sport Venue and Event Management. This course provides students with the essentials of planning, funding, and managing facilities and events within the sport industry. This course will focus on specific strategies for organizing and executing sporting events. Topics include meeting the challenges of managing sport facilities, issues involved with crowd & alcohol management, risk management, event planning, event logistics, budget development, sponsorship proposals, negotiations and contracts, working with customers and athletes, and event promotion plans.

370-3 Measurement, Evaluation and Assessment in Physical Education. The purpose of this course is to introduce students to the theory and practical application of measurement, evaluation and assessment in physical education. The course will provide an overview of multiple assessments of student learning in the psychomotor, cognitive and affective domains and cover basic statistical techniques and the interpretation of performance results.

380-2 Aerobics. A study of theoretical and practical framework within which the concepts of aerobic fitness exist. Both an evaluation and a hands-on experience with the direct and indirect procedures commonly used to determine oxygen uptake capacity and aerobic power. A thorough discussion of the meaning of aerobic fitness as it applies to general fitness of the adult and aging person. Prerequisite: KIN 320. Restricted to junior standing. Special approval needed from the instructor in the

semester prior to enrollment.

381-3 Exercise and Nutrition. This course develops the interrelationship of exercise and nutrition. The course begins with an overview of food nutrients and bioenergetics. It then examines optimal nutrition for physical activity, nutritional ergogenic aids, and weight control and disordered eating. Prerequisite: KIN 320. Restricted to junior standing.

382-3 Graded Cardiovascular Testing and Exercise Prescription. A study of the controlled use of exercise to evaluate the cardiovascular function of an adult population and in specific persons of middle and older aged groups. The scientific basis of recommending exercise programs as a preventive rather than a treatment of heart disease will be stressed. Prerequisite: KIN 320. Restricted to junior standing.

400-3 Psychology of Injury. This course will explore the theory and research related to the psychological aspects of injury and injury rehabilitation. The focus is on theory and application. Case studies will be used to explore assessment and intervention approaches relevant for different levels of athletic training, sports medicine and sport psychology professionals.

402-2 Exercise Programming for Cancer Survivors and Caregivers (Strong Survivors Staff Training). The primary goal of this course is to give both graduate and undergraduate students the necessary tools to successfully prescribe and administer safe and effective exercise programs and assessments for cancer survivors and caregivers as a staff member for the Strong Survivors Exercise and Nutrition Program for Cancer Survivors and Caregivers. The course will also give students a baseline of knowledge that will help prepare them to sit for cancer exercise trainer certification exams. Special approval needed from the instructor.

407-3 Rehabilitation of Athletic Injuries. This course provides the athletic training student with the theoretical background and practical application of principles and techniques of rehabilitation of athletic related injuries. This course also includes laboratory experiences in rehabilitation of athletic injuries. Restricted to admission into Athletic Training Education Program or permission of instructor. Laboratory fee: \$50.

408-3 Advanced Exercise Prescription. Advanced exercise prescription provides an analysis of physical fitness as it relates to the total well-being of the individual. The course contains specific units on fitness parameters, hypokinetic disease, stress, current levels of physical fitness, but emphasizes the creation of training programs. The course contains exercise prescription for healthy, at risk, overweight and chronically ill populations. Prerequisite: KIN 382 and KIN 320.

416-2 Introduction to Team Building. The purpose of this course is to acquaint students, teachers, coaches and administrators with the "team building model". The course will focus on icebreakers, trust and communication initiatives, problem solving skills and processing. The goal of this introductory course is for the participants to become familiar and acquire team building skills, to develop a workable team building model and initiate the plan in the classroom or workplace.

418-2 Administration of Aquatics. The study of comprehensive aquatic programs, their implementation and coordination.

420-3 Advanced Exercise Physiology. The general physiological effects of motor activity upon the structure and function of body organs; specific effect of exercise on the muscular

system. Prerequisite: PHSL 201 and KIN 320.

421-3 Principles of Skeletal Muscle Action. The neural, physiological and mechanical basis of skeletal muscle action and plasticity in relation to the expression of strength and power. Prerequisite: PHSL 201 and KIN 320.

426-3 Research in Athletic Training. Specifically designed for the student who wishes to become an athletic trainer and gain knowledge in the application and current research in therapeutic modalities.

427-3 Organization and Administration in Athletic Training. This course is designed to study and discuss the concepts of organization and administration in the health care of athletes and physically active individuals. Not for graduate credit. Restricted to admission into the Athletic Training Education Program or consent of instructor.

428-3 Physical Activity and Exercise for Older Adults. (Same as GRON 428) This course is designed to introduce the student to physical changes of the older person with reference to activity and exercise and to teach the student about rational activity and exercise programs for the older person with consideration of the care and prevention of typical injuries that may occur with such programs.

455-1 to 12 Internship in Sports Administration. The internship is a culminating experience directly related to the student's intended employment or area of interest. To enroll students must be of senior status (at least 90 credit hours completed) and have a 2.5 g.p.a or have approval from the instructor. Prerequisites include KIN 301, KIN 329, KIN 345, KIN 360, KIN 364, and KIN 365. All conditions of placement, conduct and evaluation of the internship will be under jurisdiction of the appropriate faculty.

493A-2 to 4 Individual Research-Dance. The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor.

493B-2 to 4 Individual Research-Kinesiology. The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor.

493C-2 to 4 Individual Research-Measurement. The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor.

493D-2 to 4 Individual Research-Motor Development. The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor.

493E-2 to 4 Individual Research-Physiology of Exercise. The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor.

493F-2 to 4 Individual Research-History and Philosophy. The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor.

493G-2 to 4 Individual Research-Motor Learning. The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor.

493H-2 to 4 Individual Research-Psycho-social Aspects. The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor.

493I-2 to 4 Individual Research-Sport Management. The selection, investigation, and writing of a research topic under supervision of an instructor. Written report required. Special approval needed from the instructor.

494A-1 Practicum in Kinesiology. Supervised practical experience at the appropriate level in selected kinesiology activities in conjunction with class work. Work may be in the complete administration of a tournament, field testing, individual or group work with special populations, administration of athletics or planning kinesiology facilities. Special approval needed from the instructor.

494B-1 Practicum in Kinesiology. Supervised practical experience at the appropriate level in selected kinesiology activities in conjunction with class work. Work may be in the complete administration of a tournament, field testing, individual or group work with special populations, administration of athletics or planning kinesiology facilities. Special approval needed from the instructor.

Kinesiology Faculty

Ackerman, Kenneth, Assistant Professor, *Emeritus*, M.A., Michigan State University, 1959.

Anton, Phillip M., Assistant Professor, Ph.D., University of Northern Colorado-Greeley, 2006.

Becque, M. Daniel, Associate Professor, Ph.D., University of Michigan, 1988.

Blackman, Claudia J., Assistant Professor, *Emerita*, M.S.Ed., Southern Illinois University, 1968.

Blinde, Elaine M., Professor, *Emerita*, Ph.D., University of Illinois, 1987.

Brechtelsbauer, Kay M., Assistant Professor, *Emerita*, Ph.D., Southern Illinois University, 1980.

Carroll, Peter, Assistant Professor, *Emeritus*, Ph.D., Pennsylvania State University, 1970.

Dirks, W. Edward, Instructor, *Emeritus*, M.S., Southern Illinois University, 1964; Certificate, Physical Therapy, Ohio State University, 1965.

Good, Larry, Associate Professor, *Emeritus*, Ph.D., Temple University, 1968.

Hartzog, Lewis, Instructor, *Emeritus*, M.E., Colorado State University, 1954.

Illner, Julee Ann, Assistant Professor, *Emerita*, M.S.Ed., Southern Illinois University, 1968.

Knapp, Bobbi, Assistant Professor, Ph.D., University of Iowa, 2008.

Knowlton, Ronald, Professor, *Emeritus*, Ph.D., University of Illinois, 1961.

Long, Linn, Assistant Professor, M.S., *Emeritus*, University of Colorado, 1967.

Okita, Ted, Professor, *Emeritus*, M.A., Northwestern University, 1964.

Olson, Michael, Associate Professor, Ph.D., Louisiana State University, 2006.

Park, Meungguk, Associate Professor, Ph.D., The Ohio State University, 2005.

Partridge, Julie, Associate Professor, Ph.D., University of Northern Colorado-Greeley, 2003.

Porter, Jared, Assistant Professor, Ph.D., Louisiana State University, 2008.

Valley, Julia, Assistant Professor, Ph.D., University of Illinois, 2013.

Vogler, E. William, Professor and *Chair*, Ed.D., University of Utah, 1980.

Wallace, Juliane, Associate Professor, Ph.D., Iowa State University, 2004.

West, Charlotte, Professor, *Emerita*, Ph.D., University of Wisconsin, 1969.

Wilson, Donna, Associate Professor, M.F.A., University of Oklahoma, 1975.

Yoh, Taeho, Associate Professor, Ph.D., Florida State University, 2001.

Landscape Horticulture

(SEE HORTICULTURE)

LANGUAGES, CULTURES, AND INTERNATIONAL TRADE

Faner 2166, forlang@siu.edu, 618-453-5571

The department offers a single major, in Languages, Cultures, and International Studies (LCIS), with a variety of specializations designed to allow students to pursue a range of different educational goals and prepare themselves for a variety of careers. All department programs share a core of courses in a foreign language, in which students will gain basic language proficiency and study the ways in which our languages affect what we believe and how we act on those beliefs. They will begin to experience a different culture from the inside, a perspective only language study can provide. In addition to this core of classes in language and culture, students choose among three broad areas of study: Language and Culture; Foreign Language and International Trade; and International Studies. These areas are introduced below; details on each program follow this introductory section.

LANGUAGE AND CULTURE SPECIALIZATIONS

These specializations provide a humanistic education that deepens students' knowledge of their chosen language and culture. Students may specialize in:

- Classics (CLAS: Latin, Greek)
- East Asian Language and Culture (EA: Chinese, Japanese)
- French (FR)
- German (GER)
- Spanish (SPAN)

Teacher Education Program. French, German, and Spanish students may choose to enter the Teacher Education Program and pursue a license to teach in Illinois. They may secure a K-12 teaching license in French, German, or Spanish while earning either a B.A. in the College of Liberal Arts or a B.S. in the College of Education and Human Services.

We also offer language and culture minors in the following areas:

- American Sign Language
- Chinese
- Classical Civilization
- East Asian Civilization
- French
- German
- Greek (Ancient)
- Japanese
- Latin
- Spanish

FOREIGN LANGUAGE AND INTERNATIONAL TRADE SPECIALIZATION (FLIT)

FLIT students add additional language and cultural proficiency to the core foreign language courses, while also completing an extensive suite of courses in business and economics. They complete their education with an internship. This area consists of a single specialization, Foreign Language and International Trade, though students will select language study in Chinese, French, German, Japanese, or Spanish.

INTERNATIONAL STUDIES SPECIALIZATIONS

Students in this area earn the major in Languages, Cultures, and International Studies (LCIS) with one of the following specializations:

- African and Middle Eastern Studies
- Asian and South Pacific Studies
- European Studies
- Latin American and Caribbean Studies

In addition to coursework in their region, students study global and comparative issues and gain fluency in a language relevant to their chosen region. We also offer a minor in International Studies.

Departmental Procedures

Advising, Assessment, and Graduation

All department majors must meet with the relevant area advisor before registering for classes. No course with a grade below C can be counted toward fulfillment of any departmental major or minor.

The department strongly recommends study abroad. Students interested in studying abroad should speak with their departmental advisor to ensure they will be able to transfer credit upon their return to SIUC.

Students in the Foreign Language and International Trade specialization must pass oral and written proficiency exams before doing internships, and students preparing for teacher education must pass oral and written proficiency exams before student teaching is begun. During the course of their study, department majors may be asked to gather materials for assessment portfolios and to ensure oral assessments are completed in a timely manner. Majors should check with the relevant advisor to confirm that they are completing all required assessment work. Failure to submit all materials in a timely manner may result in a delay in graduation.

Program Flexibility and Interdisciplinary Work

The department's flexible programs are designed to encourage interdisciplinary work. Numerous courses required for our

specializations also meet Core Curriculum or College of Liberal Arts requirements; details are spelled out below. Students in our language and culture specializations can readily accommodate a second major, if they so choose. Our International Studies and Foreign Language and International Trade programs incorporate coursework from other departments by design and are thus interdisciplinary by their very nature.

Writing Intensive Courses

In pursuit of proficiency in writing, and in keeping with the College of Liberal Arts Writing Across the Curriculum requirement, most departmental programs require an upper-level writing intensive class, as outlined below. Such courses will require students to write a minimum of 3500 words (counting revisions) in the target language, at least half of which must be in formal writing, such as reports, critical analyses, and research papers.

Departmental Minors

Students wishing to complete a minor must apply for approval of their program of study with the department; without this approval the minor will not be officially listed on the student's transcript at the time of graduation. Interested students should contact the department office for details. Minors in modern foreign languages (Chinese, French, German, Japanese, Spanish) must complete at least one regularly scheduled 300 or 400 level language course at Southern Illinois University Carbondale. See the individual area listings below for specific requirements.

Placement Policy

Students with expertise in a language should take a placement test to help them sign up for the proper class. A free online placement test is available for French, German, and Spanish; students interested in other languages offered by the department should contact the department office for guidance on placement. Students who have successfully completed one year of language study in high school should normally start at the second semester level at SIUC; students who have completed two years should normally start at the third semester. Those with three or more years in high school should contact the department office for guidance. For details please see the departmental webpage (www.languages.siu.edu).

Proficiency Credit Policy

Unit credit (without grade) on the basis of proficiency may be obtained in American Sign Language, Chinese, French, German, Greek, Japanese, Latin, and Spanish. This may be accomplished by taking a validating course or by examination. Credit through examination may be given for first and second year basic skills courses only.

Credit by Examination: Credit through examination may be given for first and second year basic skills courses. Students who desire credit must not have earned college credit in the language they wish to proficiency. See *Proficiency Examinations and CLEP* in Chapter Two of this catalog for University guidelines. CLEP examinations in French, German, and Spanish are offered by the SIUC Testing Services Office; credit is given by the year. The department offers proficiency credit by the semester (up to four semesters worth) in American Sign Language, Chinese, Japanese, Greek, and Latin. Proficiency credit may also be available for languages not taught by the department.

Contact the department office for details on the exams, or to arrange an examination. There is a \$100 fee for taking a departmental proficiency exam.

Credit by Validating Course: Basic language skills courses taken at SIUC, up to and including 320B, may serve as validating courses. Upon receiving a grade of A or B in a validating course, students who file the appropriate paperwork with the department will be granted validating credit for up to two of the immediately preceding basic skills courses. Contact the department for specific list of courses.

LANGUAGE AND CULTURE

Classics

B.A. in Languages, Cultures, and International Studies, Specialization in Classics

Classics is the study of Ancient Greece and Rome, civilizations which have had a deep impact on our world. Classics is a strongly interdisciplinary field, and Classics students will study the language, literature, culture, history, and material remains of these civilizations in courses taught by Classics faculty and a range of cooperating faculty from other departments. Classics students receive a liberal arts education which gives them the analytical tools to pursue a wide range of careers. Our program is flexible, allowing students to pursue their own interests within Classics and, should they so wish, a second major or degree in another field. Our interdisciplinary program requires only two years of language study, but we strongly advise students interested in pursuing graduate study in Classics or a related field to take as much Greek and Latin as they can.

University Core Curriculum Requirements.....41
 These 41 hours include the department-specific UCOL 101D (Foundations of Inquiry: Foreign Languages). All students specializing in Classics will also receive three hours in humanities Core credit for their first semester in these languages. See Chapter 3 for details on Core Curriculum requirements.

College of Liberal Arts Requirements.....12
 Students specializing in Classics will meet the College of Liberal Arts language requirement via their language study (six credit hours), and will require only the six hours in international coursework required by the College. See Chapter 4 for details on College of Liberal Arts requirements.

Classics courses and courses from related disciplines
 Students who do not take UCOL 101D (Foundations of Inquiry: Foreign Languages) as part of their Core Curriculum requirements are required to take FL 111 (one credit hour) in addition to meeting the requirements below. Transfer students must complete a minimum of 12 hours of their coursework at SIUC.

Classics Cultural Competencies:
A) Myth: One of the following:
 CLAS 230, ENGL 445, THEA 354A 3
B) Greek: One of the following:
 CLAS 270, CLAS 310, HIST 311, PHIL 304, PHIL 470A, PHIL 470B 3
 CLAS 310 may count for Greek or Roman culture, but not both,

unless taken twice; HIST 311 may count for Greek or Roman culture, but not both.

C) Roman: One of the following: CLAS 271, CLAS 310, HIST 311, HIST 412A, HIST 412B, HIST 413, PHIL 469 3
 CLAS 310 may count for Greek or Roman culture, but not both, unless taken twice; HIST 311 may count for Greek or Roman culture, but not both.

Classics Language Competency:
 Two years of Greek or Latin 3
 Classics specialists need to complete two years (twelve credit hours) in Latin or Greek, but of these twelve hours six are counted above toward the College of Liberal Arts language requirement and three are counted toward Core Curriculum humanities credit, leaving only three additional hours to list here.

Classics Electives:
 Courses at the 300 or 400 level approved by advisor 9

Classics Capstone:
 Capstone seminar (CLAS 491) 3
 We strongly recommend that students fulfill most of other Classics requirements before taking CLAS 491.

General Electives.....43
 Depending on their choices of Classics Cultural Competency courses and their Core Curriculum courses, students may need up to 30 additional hours in 300 and 400 level coursework to complete the 42 hour senior institution requirement.

Total.....120

Classics Specialization Suggested Curricular Guide

The guide below gives a course of study ideal for a student considering graduate study in Classics, and maximizes coursework in Latin and Greek. Students with other interests may cut back on the Latin and Greek and add other courses (and a second major, should they so choose).

FIRST YEAR	FALL	SPRING
CLAS 133A, 133B	3	3
CLAS 230, 271.....	3	3
UCOL 101D, CMST 101	3	3
ENGL 101, 102.....	3	3
CI 199 Intro College Research.....	1	-
Core Human Health, Core Math.....	2	3
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
CLAS 202A, 202B	3	3
CLAS 270, CLAS elective	3	3
CLAS 130A, 130B	3	3
Core Social Science	3	3
Core Fine Arts, Multicultural	3	3
<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING
CLAS 390.....	3	3
CLAS 201A, 201B	3	3
CLAS electives	3	3
Core Science	3	3

Electives	3	3
<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
CLAS 416.....	3	3
CLAS 390.....	3	3
General Electives (300/400).....	3	3
CLAS 491, Elective (300/400).....	3	3
Electives (one 300/400)	3	3
<i>Total</i>	15	15

Classical Civilization Minor

A minor in Classical Civilization requires 18 credit hours in Classics courses (CLAS) or related courses approved by the Classics advisor. These courses must include cultural competency courses in Myth, Greek culture, and Roman culture. The capstone seminar (CLAS 491) is also required. At least 9 of these hours must be completed at Southern Illinois University Carbondale.

Cultural Competencies:

A) Myth: One of the following:

CLAS 230, ENGL 445, THEA 354A 3

B) Greek: One of the following:

CLAS 270, CLAS 310, HIST 311, PHIL 304, PHIL 470A, PHIL 470B, POLS 304 3

CLAS 310 may count for Greek or Roman culture, but not both, unless taken twice; HIST 311 may count for Greek or Roman culture, but not both.

C) Roman: One of the following:

CLAS 271, CLAS 310, HIST 311, HIST 412A, HIST 412B, HIST 413, PHIL 469 3

CLAS 310 may count for Greek or Roman culture, but not both, unless taken twice; HIST 311 may count for Greek or Roman culture, but not both.

Capstone seminar CLAS 491..... 3

We strongly recommend that students fulfill most other Classics requirements before taking CLAS 491.

Electives approved by the advisor..... 6

Greek Minor

The Greek minor requires 18 credit hours. Students will complete two years of Greek, three hours of coursework in Greek culture, and CLAS 491 (Classics capstone seminar). Students in the College of Liberal Arts can count the first six hours of the minor toward the College language requirement. At least 9 of the hours counted toward the minor must be completed at Southern Illinois University Carbondale.

Linguistic Competency:

Two years of Greek 12

Cultural Competency:

One of the following: CLAS 270, CLAS 310, HIST 311, PHIL 304, PHIL 470A, PHIL 470B, POLS 304 3

Capstone seminar CLAS 491 3

We strongly recommend that students fulfill most other Classics requirements before taking CLAS 491.

Latin Minor

The Latin minor requires 18 credit hours. Students will com-

plete two years of Latin, three hours of coursework in Roman culture, and CLAS 491 (Classics capstone seminar). Students in the College of Liberal Arts can count the first six hours of the minor toward the College language requirement. At least 9 of the hours counted toward the minor must be completed at Southern Illinois University Carbondale.

Linguistic Competency:

Two years of Latin 12

Cultural Competency:

One of the following: CLAS 271, CLAS 310, HIST 311, HIST 412A, HIST 412B, HIST 413, PHIL 469 3

Capstone seminar CLAS 491 3

We strongly recommend that students fulfill most other Classics requirements before taking CLAS 491.

East Asian Language and Culture

B.A. in Languages, Cultures, and International Studies, Specialization in East Asian Language and Culture

China and Japan have rich, ancient cultures and also play an increasingly vital role in today’s world. Students pursuing the interdisciplinary East Asian Language and Culture Specialization will acquire proficiency in Chinese or Japanese, and take courses in the department and other departments on campus that introduce them to the culture of these countries. They will gain a basic knowledge of the history, culture, and literature of people who speak their chosen language, and will learn how to think critically across cultures through analysis of beliefs, media, customs, and artifacts. In the course of their language study, they will gain the ability to discuss how and why Chinese or Japanese differ from English, helping them to understand how language works in general and how English and Chinese or Japanese work in particular. Students in East Asian studies enjoy a wide range of career options in the public and private sectors, in the US or abroad. The East Asian Specialization is flexible enough to allow students to study a second field as well, widening their intellectual and career horizons still further.

University Core Curriculum Requirements.....41

These 41 hours include the department-specific UCOL 101D (Foundations of Inquiry: Foreign Languages). Students specializing in East Asian Language and Culture will receive three credit hours of Core humanities credit for a third semester or higher in Chinese or Japanese. See Chapter 3 for details on Core Curriculum requirements.

College of Liberal Arts Requirements.....12

East Asian specialization students will meet the six credit-hour College language requirement during the course of their language study. See Chapter 4 for details on College of Liberal Arts requirements.

East Asian Requirements

Students who do not take UCOL 101D (Foundations of Inquiry: Foreign Languages) as part of their Core Curriculum requirements are required to take FL 111 (one credit hour) in addition to meeting the requirements below. Transfer students must complete a minimum of 12 hours of their coursework at SIUC, including at least one 300 or 400 level class in their chosen language.

Three years of Chinese or Japanese (through 320B) 9
 East Asian specialists starting their language study at SIUC will need to complete three years (18 credit hours) in Chinese or Japanese to reach and complete 320B, but of these 18 hours six are counted above toward the College of Liberal Arts language requirement and three are counted toward Core Curriculum humanities credit, leaving only nine additional hours to list here. Students with prior experience in the language should begin at the appropriate higher level, and will require fewer total hours in language study. They will also receive up to six hours of validating credit by successfully completing an intermediate or advanced course with a grade of A or B. See the section on departmental procedures above for further information on placement and validating credit.

Additional 300 or 400 language courses in Chinese or Japanese 12
 Students must complete all the required language coursework in their single chosen language (Chinese or Japanese). Language courses include all courses taught in the target language, as well as JPN or CHIN 410.

Chinese 370 or Japanese 370..... 3
 Approved 300 or 400 level electives in Chinese/Japanese culture.....6
 Students are to select electives from courses taught by the department or in related fields, as approved by the area advisor.

General Electives:.....40
 Depending on choices in their Core Curriculum coursework and East Asian electives, students may need to take up to 21 hours in 300 and 400 level courses to meet the senior institution requirement.
 Total.....120

East Asian Language and Culture Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
Chinese or Japanese	3	3
ENGL 101, 102.....	3	3
UCOL 101D, Core Math	3	3
Core Social Science	3	3
Core Human Health, Core Fine Arts.....	2	3
Elective	1	-
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
Chinese or Japanese	3	3
CMST 101.....	3	-
Core Humanities	-	3
Core Science	3	3
CoLA International.....	3	3
General electives.....	3	3
<i>Total</i>	15	15

THIRD YEAR	FALL	SPRING
Chinese or Japanese (300/400).....	3	6
Core Multicultural	3	-

Chinese or Japanese 370	-	3
East Asian electives (300/400).....	3	3
General electives (300/400).....	6	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
Chinese or Japanese (300/400).....	6	3
General electives (300/400).....	6	3
General electives (any level).....	3	9
<i>Total</i>	15	15

Minor in Chinese or Japanese

Chinese or Japanese 100 level	6
Chinese or Japanese 201A and 201B	6
Chinese or Japanese 320A and 320B	6
Language elective approved by advisor.....	3
<i>Total</i>	21

Students must complete all the required coursework in their single chosen language (that is, in Chinese or Japanese). Students in the College of Liberal Arts can count the first six hours of the minor toward the College language requirement. At least 3 hours must be taken in a regularly scheduled 300 or 400 level course at SIUC.

East Asian Civilization Minor

East Asian Courses 15
 A minor in East Asian Civilization consists of 15 hours of coursework in Chinese, Japanese, or East Asian studies. Courses must be approved by the area advisor. At least 3 hours must be taken in a regularly scheduled course at SIUC.

French, German, and Spanish

B.A. in Languages, Cultures, and International Studies: Specializations in French, German, and Spanish

French, German, and Spanish are among the most commonly spoken languages in the world, and knowledge of them can open the door to a variety of job opportunities both in the US and abroad. Students in each of these three specializations will gain advanced-level language proficiency and knowledge of the rich history, culture, and literature of people who speak the target language. Students will learn how to think critically across cultures through analysis of beliefs, media, customs, and artifacts. In the course of their language study, students will gain the ability to discuss how and why their chosen language differs from English, helping them to understand how language works in general and how English and the language they study work in particular. The French, German, and Spanish specializations are flexible enough to allow students to study a second field as well, widening their intellectual and career horizons still further.

French, German, and Spanish students may choose to enter the **Teacher Education Program** in conjunction with the College of Education and Human Services and pursue a K-12 teaching license in the State of Illinois. Students so doing may choose to earn a B.A. through the College of Liberal Arts or a B.S. through the College of Education and Human Services.

Specializations in French, German, and Spanish (Without K-12 Teaching License)

University Core Curriculum Requirements.....41
 These 41 hours include the department-specific UCOL 101D (Foundations of Inquiry: Foreign Languages). Students who do not take UCOL 101D must take FL 111 (one credit hour) instead. Modern language students receive three credit hours of Core humanities credit for a third semester or higher in their language. See Chapter 3 for details on Core Curriculum requirements.

College of Liberal Arts Requirements.....12
 French, German, and Spanish students will meet the six credit-hour College language requirement during the course of their language study. See Chapter 4 for details on College of Liberal Arts requirements.

Courses in French, German, or Spanish
 Students who do not take UCOL 101D (Foundations of Inquiry: Foreign Languages) as part of their Core Curriculum requirements are required to take FL 111 (one credit hour) in addition to meeting the requirements below. Transfer students planning to complete the specializations in French, German, or Spanish must complete a minimum of 12 semester hours of courses, including at least one 300 or 400 level language course in that language, at Southern Illinois University Carbondale.

French, German, or Spanish through 320B..... 9
 French, German, and Spanish specialists starting their language study at SIUC will need to complete three years (18 credit hours) in their chosen language to reach and complete 320B, but of these 18 hours six are counted above toward the College of Liberal Arts language requirement and three are counted toward Core Curriculum humanities credit, leaving only nine additional hours to list here. Students with prior experience in the language should begin at the appropriate higher level and will require fewer total hours in language study. They will also receive up to six hours of validating credit by successfully completing an intermediate or advanced course with a grade of A or B. See the section on departmental procedures above for further information on placement and validating credit.

- Language electives at the 300 and 400 level*..... 21
- Two of these courses must be at the 400 level.
 - One of these courses must be in literature.
 - One of these courses must be in culture (including 370 or another course approved by the language advisor).
 - One of these courses must be writing intensive (either College of Liberal Arts Writing Across the Curriculum compliant or approved by the language advisor).

The same 300 or 400 class may count toward more than one of these requirements. Students must complete all the required coursework in their single chosen language (that is, in French, German, or Spanish). Departmental courses taught in English do not normally count toward these language specializations, but, with the approval of the language advisor, a student may count a departmental course taught in English or a relevant course taken in another department. In such cases, the advisor may require that assignments be done in the foreign language and may restrict this option to students with high language proficiency, such as those who have done intensive study abroad.

General Electives..... 37
 Depending on their choices of Core Curriculum classes, students may need to complete up to 15 hours in 300 or 400 level coursework to meet the senior institution requirement of 42 such hours.

Total.....120

French, German, and Spanish Specializations Suggested Curricular Guide (without K-12 teaching licensure)

FIRST YEAR	FALL	SPRING
Foreign Language (100).....	3	3
ENGL 101, 102.....	3	3
UCOL 101D, Core Math.....	3	3
Core Social Science.....	3	3
Core Human Health, Core Fine Arts.....	2	3
Elective.....	1	-
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
Foreign Language (200).....	3	3
CMST 101.....	3	-
Core Humanities.....	-	3
Core Science.....	3	3
CoLA International.....	3	3
Electives (300/400).....	3	3
<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING
Foreign Language (300).....	6	9
Core Multicultural.....	3	-
Electives (300/400).....	6	3
Elective (any level).....	-	3
<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
Foreign Language (300/400).....	6	6
Electives (any level).....	9	9
<i>Total</i>	15	15

TEACHER EDUCATION PROGRAM

French, German, or Spanish

Students specializing in French, German, or Spanish and pursuing a K-12 teaching license may choose to earn a B.A. from the College of Liberal Arts or a B.S. from the College of Education and Human Services. Students completing either degree will acquire the necessary training and licensure to pursue a career in foreign language education at the secondary level. Whichever degree they pursue, students must work closely with advisors in both the Department of Languages, Cultures, and International Trade and the Teacher Education Program (TEP) to ensure that they are meeting all degree and teaching licensure requirements in a timely manner.

**B.A. in Languages, Cultures, and International Studies,
College of Liberal Arts,
Specializations in French, German, and Spanish
with K-12 Teaching License**

University Core Curriculum Requirements.....41
These 41 hours include the department-specific UCOL 101D (Foundations of Inquiry: Foreign Languages). Students who do not take UCOL 101D must take FL 111 (one credit hour). Students pursuing teaching licensure must take EDUC 311 and EDUC 314 as part of their TEP requirements; EDUC 311 meets the multicultural requirement, and EDUC 314 covers three of their six social science hours for the Core. Language students in the TEP receive three credit hours of Core humanities credit for a third semester or higher in their language. See Chapter 3 for details on Core Curriculum requirements.

College of Liberal Arts Requirements.....12
French, German, and Spanish students will meet the six credit-hour College language requirement during the course of their language study, and will require only the six hours in international coursework required by the College. The international coursework requirement can be met by courses which also meet Core Curriculum requirements. See Chapter 4 for details on College of Liberal Arts requirements.

Language Area Requirements
Students who do not take UCOL 101D (Foundations of Inquiry: Foreign Languages) as part of their Core Curriculum requirements are required to take FL 111 (one credit hour) in addition to meeting the requirements below. Transfer students planning to complete the specializations in French, German, or Spanish must complete a minimum of 12 semester hours of courses, including at least one 300 or 400 level language course in that language, at Southern Illinois University Carbondale.

French, German, or Spanish through 320B12
French, German, and Spanish specialists starting their language study at SIUC will need to complete three years (18 credit hours) in their chosen language to reach and complete 320B, but of these 18 hours six are counted above toward the College of Liberal Arts language requirement, leaving only twelve additional hours to list here. Students with prior experience in the language should begin at the appropriate higher level, and will require fewer total hours in language study. They will also receive up to six hours of validating credit by successfully completing an intermediate or advanced course with a grade of A or B. See the section on departmental procedures above for further information on placement and validating credit.

FL 436 (Methods in Teaching World Languages)3

Language electives at the 300 and 400 level18

- Two of these language elective courses must be at the 400 level.
- One of these courses must be in literature.
- One of these courses must be in culture (including 370 or another course approved by the language advisor).
- One of these courses must be writing intensive (either College of Liberal Arts Writing Across the Curriculum compliant or approved by the language advisor).

The same 300 or 400 class may count toward more than one of

these requirements. Students must complete all the required coursework (outside FL 436) in their single chosen language (that is, in French, German, or Spanish). Departmental courses taught in English do not normally count toward these language specializations, but, with the approval of the language advisor, a student may count a departmental course taught in English or a relevant course taken in another department. The advisor may in such cases require that assignments be done in the foreign language and may restrict this option to students with high language proficiency, such as those who have done intensive study abroad.

Oral and written language proficiency
Teacher education candidates must pass oral and written language proficiency exams before they undertake their professional semester of student teaching off-campus.

Teacher Education Program requirements..... 27
See the Teacher Education Program listing in this catalog for details on education requirements. In addition to the 27 hours listed here, EDUC 311 and EDUC 314 are also required for the TEP program, but as these classes also count toward Core Curriculum requirements, these hours are counted with the Core Curriculum hours above and not listed again here.

General Electives.....17
Students who effectively double-dip by meeting TEP requirements while also meeting their Core Curriculum requirements will have 7 hours to spare for electives.

Total.....120

B.A. in Languages, Cultures, and International Studies, College of Liberal Arts (with teaching licensure, French, German, or Spanish) Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
Foreign Language (100 level).....	3	3
ENGL 101, 102.....	3	3
UCOL 101D, MATH 101.....	3	3
CMST 101, Core Social Science.....	3	3
Core Human Health, Core Fine Arts.....	2	3
<i>Total</i>	14	15
SECOND YEAR	FALL	SPRING
FL 201A, 201B.....	3	3
EDUC 311, EDUC 314.....	3	3
Core Science	3	3
Core Humanities, Elective.....	3	3
Electives	3	3
<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING
FL 320A, 320B.....	3	3
FL Electives (300 or 400).....	6	6
EDUC 313, 319.....	3	3
EDUC 301, 302.....	1	1
CI 360, Language 370	3	3
<i>Total</i>	16	16

FOURTH YEAR	FALL	SPRING
FL Electives (300 or 400).....	6	-
FL 436.....	3	-
EDUC 308.....	3	-
EDUC 303.....	1	-
EDUC 401A.....	-	12
Electives	4	-
<i>Total</i>	17	12

B.S. Languages, Cultures, and International Studies, College of Education and Human Services Specializations in French, German, and Spanish With K-12 Teaching License

University Core Curriculum Requirements 41
 These 41 hours include the department-specific UCOL 101D (Foundations of Inquiry: Foreign Languages). Students who do not take UCOL 101D must take FL 111 (one credit hour) instead. Students pursuing teaching licensure must take EDUC 311 and EDUC 314 as part of their TEP requirements, and can count them toward Core requirements as well; EDUC 311 meets the multicultural requirement, and EDUC 314 covers three of their six social science hours for the Core. Language students in the TEP receive three credit hours of Core humanities credit for a third semester or higher in their language. See Chapter 3 for details on Core Curriculum requirements.

Language Area Requirements

Students who do not take UCOL 101D (Foundations of Inquiry: Foreign Languages) as part of their Core Curriculum requirements are required to take FL 111 (one credit hour) in addition to meeting the requirements below. Transfer students planning to complete the specializations in French, German, or Spanish must complete a minimum of 12 semester hours of courses, including at least one 300 or 400 level language course in that language, at Southern Illinois University Carbondale.

French, German, or Spanish through 320B18
 French, German, and Spanish specialists starting their language study at SIUC will need to complete three years (18 credit hours) in their chosen language to reach and complete 320B. Students with prior experience in the language should begin at the appropriate higher level, and will require fewer total hours in language study. They will also receive up to six hours of validating credit by successfully completing an intermediate or advanced course with a grade of A or B. See the section on departmental procedures above for further information on placement and validating credit.

FL 436 (Methods in Teaching World Languages)3

Language electives at the 300 and 400 level.....18

- Two of these language elective courses must be at the 400 level.
- One of these courses must be in literature.
- One of these courses must be in culture (including 370 or another course approved by the language advisor).
- One of these courses must be writing intensive (either College of Liberal Arts Writing Across the Curriculum compliant or approved by the language advisor).

The same 300 or 400 class may count toward more than one of

these requirements. Students must complete all the required coursework (outside FL 436) in their single chosen language (that is, in French, German, or Spanish). Departmental courses taught in English do not normally count toward these language specializations, but, with the approval of the language advisor, a student may count a departmental course taught in English or a relevant course taken in another department. The advisor may in such cases require that assignments be done in the foreign language and may restrict this option to students with high language proficiency, such as those who have done intensive study abroad.

Oral and Written Language Proficiency

Teacher education candidates must pass oral and written language proficiency exams before they undertake their professional semester of student teaching off-campus.

Education Requirements27

See the Teacher Education Program for details on education requirements. In addition to the 27 hours listed here, EDUC 311 and EDUC 314 are also required for the TEP program, but as these classes also count toward Core Curriculum requirements, these hours are counted with the Core Curriculum hours above and not listed again here.

General Electives 13

Students who effectively double-dip by meeting TEP requirements while also meeting their Core Curriculum requirements will have 13 hours to spare for electives.

Total 120

B.S. in Languages, Cultures, and International Studies, College of Education and Human Services (with teaching licensure, French, German, or Spanish) Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
Foreign Language (100 level).....	3	3
ENGL 101, 102.....	3	3
UCOL 101D, MATH 101.....	3	3
CMST 101, Core Social Science.....	3	3
Core Human Health, Core Fine Arts.....	2	3
<i>Total</i>	14	15

SECOND YEAR	FALL	SPRING
FL 201A, 201B.....	3	3
EDUC 311, EDUC 314.....	3	3
Core Science	3	3
Core Humanities, Elective.....	3	3
Electives	3	3
<i>Total</i>	15	15

THIRD YEAR	FALL	SPRING
FL 320A, 320B.....	3	3
FL Electives (300 or 400).....	6	6
EDUC 313, 319.....	3	3
EDUC 301, 302.....	1	1
CI 360, Language 370	3	3
<i>Total</i>	16	16

FOURTH YEAR	FALL	SPRING
FL Electives (300 or 400).....	6	-
FL 436.....	3	-
EDUC 308.....	3	-
EDUC 303.....	1	-
EDUC 401A.....	-	12
Electives	4	-
<i>Total</i>	17	12

Minors in French, German, or Spanish

French, German, or Spanish 201A and 201B.....	6
French, German, or Spanish 320A and 320B.....	6
Approved language area electives.....	6
<i>Total (after first year)</i>	18

A minor in French, German, or Spanish requires 18 hours of coursework, not including first year language classes. Students starting a new language at SIUC will need to complete first year language study (2 three credit hours courses) before embarking on the second year. Students must complete all the required coursework in their single chosen language area (that is, entirely in French, German, or Spanish). At least 3 hours must be taken in a regularly scheduled 300 or 400 level course at SIUC.

Minor in American Sign Language

FL 120A and 120B.....	6
FL 220A and 220B.....	6
FL 370.....	3
<i>Total</i>	15

A minor in American Sign Language (ASL) will enable students to gain intermediate level proficiency in ASL while introducing them to deaf culture, literature, and education. Students must complete at least 3 hours toward the minor in a regularly scheduled class at SIUC.

Foreign Language and International Trade

B.A. in Languages, Cultures, and International Studies, Specialization in Foreign Language and International Trade

The Foreign Language and International Trade program combines education in the liberal arts with preparation for careers in the international business community. It is designed to combine skill in a foreign language with a fundamental understanding of international commerce. This is accomplished by a curriculum of studies which has two cores—one in language and one in international trade and related subject matters. This cross-disciplinary program allows for choice of language (Chinese, French, German, Japanese, or Spanish) as well as some options in electives so that different interests may be accommodated and individual goals may be realized. The chosen language cannot be the student’s native language, nor can it be English. Because of the demands made by such a course of studies, guidance throughout it is important; therefore all students must be advised by the FLIT Associate Director each semester.

At or near the end of the program of studies, application and expansion of the knowledge and skills gained by the student

through course work is provided by an internship. Prerequisite to the internship are senior standing, a minimum 2.75 SIUC GPA, and satisfactory completion of both oral and written language competency examinations before the internship begins. An “internship checklist” must be submitted to the FLIT Associate Director at least one year before the internship begins.

No grade lower than C will be accepted for any course required by the major (including Economics 302I, English 101 and 102, Foreign Language 301I, Mathematics 139 and Psychology 102) taken at any institution at any time. A minimum grade of B is required in the appropriate SIUC 320B language course. All off-campus courses fulfilling major requirements must be pre-approved by the Associate Director of FLIT. A minimum 2.75 SIUC GPA is required for graduation.

University Core Curriculum Requirements.....41
 These 41 hours include the department-specific UCOL 101D (Foundations of Inquiry: Foreign Languages). As part of their Core Curriculum requirements, FLIT students must take Economics 302I; English 101 and 102; Foreign Language 301I; Mathematics 139; and Psychology 102. FLIT students will receive 3 hours in Core humanities credit by completing 201A or higher in their chosen language.

College of Liberal Arts Requirements.....6
 The six hour language requirement will be met by FLIT students in the course of their language study (see below). FLIT students meet the additional six hour international coursework requirement by taking FL 301I and ECON 302I for their Core requirements listed above (and so those hours are not listed here). See Chapter 4 for details on College of Liberal Arts requirements.

Language Area Courses

Chinese, French, German, Japanese or Spanish through 320B..... 9
 To complete 320B, students who start their language study at SIUC will need to complete three years (18 credit hours) in their chosen language, but of these 18 hours six are counted above toward the College of Liberal Arts language requirement and three are counted toward Core Curriculum humanities credit, leaving only nine additional hours to list here. Students with prior experience in the language should begin at the appropriate higher level, and will require fewer total hours in language study. They will also receive up to six hours of validating credit by successfully completing an intermediate or advanced course with a grade of A or B. See the section on departmental procedures above for further information on placement and validating credit.

Chinese, French, German, Japanese or Spanish 370.....3

Chinese, French, German, Japanese or Spanish 435.....3

Language electives at the 300 and 400 level.....9

Students must complete all the required language coursework in their single chosen target language. In French, German, and Spanish, one of the 300 or 400 level language electives must be a writing intensive course (College of Liberal Arts Writing Across the Curriculum compliant or approved by the Associate Director of FLIT).

Other Departmental Requirements

FL 495 (Internship).....3

In addition, FL 111 (1 credit hour) is required for students who do not take UCOL 101D (Foundations of Inquiry: Foreign Languages).

Business Related Courses

Accounting 220, 230	6
Computer Science 200B or Information Systems & Applied Technologies 229	3
Economics 240, 241, 329	9
Finance 330	3
Management 202, 304, 345	9
Management 208 or Accounting 208 or Economics 308	3
Marketing 304; and either 336 or 435	6
Math 140 (prerequisite for several of the above).....	4
<i>Total Business Related Courses</i>	43
<i>General Elective</i>	3
<i>Total</i>	120

Foreign Language and International Trade Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
Foreign Language (100 level)	3	3
ENGL 101, 102.....	3	3
MATH 108 ¹ , 139.....	3	3
UCOL 101D, PSYC 102.....	3	3
Core Health, CMST 101.....	2	3
<i>Total</i>	14	15
SECOND YEAR	FALL	SPRING
Foreign Language (200 level)	3	3
MGMT 202, 208.....	3	3
ACCT 220, 230	3	3
CS 200B, Core Humanities.....	3	3
ECON 240, 241.....	3	3
<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING
Foreign Language (300 level)	3	3
MATH 140	4	-
Culture (CHIN/FR/GER/JPN370 or SPAN 370A,B).....	-	3
FL 301I, FIN 330	3	3
Core science, MGMT 304.....	3	3
Core Fine Arts, MKTG 304.....	3	3
<i>Total</i>	16	15
FOURTH YEAR	FALL	SPRING
Foreign Language (300/400).....	3	6
Business Language (CHIN/FR/GER/JPN/SPAN 435).....	3	-
MGMT 345, MKTG 435/336	3	3
ECON 302I, Core Science	3	3
ECON 329, FL 495 ²	3	3
<i>Total</i>	15	15

¹MATH 108 is not required but is a useful course to take before MATH 139 for students who do not have a strong background in math.

²Students usually go on their internship (FL 495) in the summer before or after their senior year, though the major part of the paperwork for FL 495 needs to be done in the semester before the internship.

International Studies

B.A. in Languages, Cultures, and International Studies, (LCIS), Specializations in:

- **African and Middle Eastern Studies**
- **Asian and South Pacific Studies**
- **European Studies**
- **Latin American and Caribbean Studies**

Students in international studies area earn the LCIS major with one of the four regional specializations listed above. All international studies students pursue a multidisciplinary program designed to provide them with a knowledge of comparative global and international issues and an understanding of other cultures, as well as a deeper acquaintance with their chosen region. Students will develop intercultural skills, acquire meaningful proficiency in a foreign language, and prepare for citizenship, both local and global, and for careers that benefit from an international perspective.

Our multidisciplinary program features three components: 1) a regional focus in one of four broad geographic areas, which determines the formal specialization under the major; 2) study of global and international comparative issues; and 3) foreign language competency. The choices within the regional areas are interdisciplinary but structured to provide depth in a particular area to balance the broad overview emphasized in the global comparative issues courses.

Because of the program’s multidisciplinary nature, courses must be selected in close consultation with the International Studies Advisor. Course descriptions are available under the appropriate department under which the individual courses are listed. Since the program emphasizes a closer familiarity with a specific region, it is strongly recommended that International Studies students take part in an overseas study program in the corresponding region, which can be arranged through the Study Abroad Programs office. Students may substitute study abroad for two appropriate courses in category III below (Regional Focus). International study opportunities are administered by the SIUC Study Abroad Programs office (www.ips.siu.edu/sa).

Admission to the program is open to incoming and current students. No course can be counted toward any International Studies specialization with a grade lower than C.

University Core Curriculum Requirements.....41
 These hours include the department-specific UCOL 101D (Foundations of Inquiry: Foreign Languages). International Studies students will receive three credit hours of Core humanities credit for a third semester or higher in their language. See Chapter 3 for details on Core Curriculum requirements.

The following Core Curriculum choices are recommended but not required for International Studies.

In Humanities: In addition to three hours of foreign language (201A or higher), three additional hours in humanities are

required. Recommended are: HIST 101A, 101B, PHIL 103A, 103B.

In Social Science (six hours are required): Recommended are: ANTH 104, ECON 113, GEOG 103, 300I, HIST 112, JRNL 306I, POLS 372I.

In Integrative Studies (three hours required): Recommended are: FL 301I, POLS 352I, SOC 304I, CMST 301I, WGSS 320I.

College of Liberal Arts Requirements.....12
 International Studies students will meet the six hour College of Liberal Arts language requirement in the course of their language study. They will meet the six hour international coursework requirement through required courses in Global and International Comparative Issues listed below. See Chapter 4 for details on College of Liberal Arts requirements.

International Studies Requirements

All courses should be approved in consultation with the International Studies Advisor, who may also approve equivalent courses not on this list. Students who do not take UCOL 101D (Foundations of Inquiry: Foreign Languages) as part of their Core Curriculum requirements are required to take FL 111 (one credit hour) in addition to meeting the requirements below.

I. Global and International Studies: Introductory Seminar - FL105.....1

II. Global and International Comparative Issues: 5 courses.....9

International Studies students must take five courses totaling 15 hours; six have been counted toward College of Liberal Arts requirements above, leaving only nine hours to count here. Choose five courses from the following: AFR 472; ANTH 202, 240D or B, 370, 426; CCJ 340; ECON 302I, 322, 329, 429; FIN 464; FL 301I; GEOG 300I, 304, 310I, 435, 439; HED 485; JRNL 306I; LING 320I, 341, 426; PHIL 441; POLS 207, 270, 352I, 372I, 373, 375, 403, 456, 476, 480; PSYC 470; SOC 304I, 307, 371, 437, 438, 476; CMST 301I, 341, 440, 441, 448; WGSS 320I, 426, 446, or approved equivalents.

III. Regional Focus: 5 courses.....15

Choose five courses from one of the following regions:

A. Africa and the Middle East: AFR 225, 271, 310A, 314A/B, 320, 375, 410H, 465; ANTH 310A/F, 410H; FR 200, 476; HIST 383, 384, 385, 387A/B, 486, 488, 489; PHIL 476; POLS 467; WGSS 200, 489.

B. Asia and the South Pacific: CHIN 370, 410, 435, 470; EA 300, 370; HIST 380A/B, 381, 471, 479, 480 A/B; JPN 370, 410, 435; PHIL 308I, 475, 477, 478, 479; POLS 461.

C. Europe: ANTH 310D; ENGL 453, 455, 464, 465; FR 200, 311, 370, 435, 460, 470; GER 337, 370, 381, 435, 460, 481; HIST 312, 320, 324, 328, 334, 337, 338, 340, 406B, 425A/B, 426, 427, 444; PHIL 482; POLS 459; SPAN 335, 370A, 411, 435; WGSS 200, 348, 406B.

D. Latin America and the Caribbean: ANTH 204, 206, 302, 310C/E/I, 430B/F; ECON 419; ENGL 446; FR 476; GEOG 303I; HIST 470; PHIL 360; POLS 316; SPAN 335, 370B, 434, 435.

IV. Senior project, paper, or presentation (FL 492).....1

V. Language proficiency: 320B plus one elective.....12

Students must demonstrate intermediate level proficiency in a language other than English by one of the following means:

a) Complete the sequence in the target language through 320B and at least one SIUC elective course in the target language of which 201B (or higher) is a prerequisite; or

b) Do coursework at another institution, pass a proficiency exam, or otherwise demonstrate that they have the equivalent level of language proficiency. For details on the precise level required in each language, and how to demonstrate this level of proficiency, contact the department.

Students without any prior experience in the language will need 21 hours of coursework in total, but as three hours have been counted above as humanities Core credit and six hours have been counted above under the College language requirement, only 12 hours remain to be counted here. Students with prior experience in the language should begin at the appropriate higher level, and will thus require fewer hours in language study. They will also receive up to 6 hours of validating credit by successfully completing an intermediate or advanced course with a grade of A or B. See the section on departmental procedures above for further information on placement and validating credit.

Total International Studies Requirements..... 47

Electives.....29

Most Global Comparative Issues courses and Regional Focus courses are at the 300 or 400 level, and if a student takes only 300 or 400 level classes to meet their Global and Regional requirements, those courses, together with their 300 and 400 level language courses, will put them only two credits short of the 42 credit senior institution requirement for 300 and 400 level course work. Students who choose to take 200 level courses to meet Global and Regional requirements will need to take two 300 or 400 level electives to meet the 42 hours senior institution requirement.

Total.....120

International Studies Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
Core Social Science	3	3
Core Humanities	-	3
Foreign Language (100 level).....	3	3
CMST 101, Core Health.....	3	2
UCOL 101D, FL 105	3	1
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
Core Science	3	3
Core Fine Arts, Math	3	3
Foreign Language (200 level).....	3	3
Global Comparative Issues (300/400)	3	3
Electives (300/400 level)	3	3
<i>Total</i>	15	15

THIRD YEAR	FALL	SPRING
Regional focus	6	3
Global Comparative Issues (300/400)	3	3
Foreign Language (300).....	3	3
Electives	3	6
<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
Regional focus (300/400 level)	3	3
Foreign Language (300/400), Elective ...	3	3
Global Comparative Issues (300/400)	-	3
Multicultural, Elective.....	3	3
Electives	6	2
FL 491.....	-	1
<i>Total</i>	15	15

Minor in International Studies

Global and International Studies:

Introductory Seminar (FL 105).....1

Global and International Comparative Issues (3 courses)..... 9

Regional Focus (3 courses).....9

See the lists above for Global and International Comparative Issues courses and Regional Focus courses. Course selections must be approved by the International Studies Advisor.

World Language Proficiency.....12

Students must demonstrate proficiency at the fourth-semester level (201B or higher), which can be met by earning a minimum grade of C in 201B, by validating credit, or by otherwise demonstrating the equivalent level of language proficiency. Students starting a new language at SIUC will require 12 hours of coursework to meet this requirement. Contact the department for details on validating credit and other ways to demonstrate the required level of proficiency.

Study Abroad (optional): Students are strongly encouraged to participate in a study-abroad program for at least one semester. 3 hours of study-abroad credits from the appropriate region may substitute for one course from the Regional Focus category.

Foreign Language Courses (FL)

For other foreign language courses see Chinese, Classics, East Asia, French, German, Japanese, and Spanish following foreign language courses.

100A-3 to 9 Variable Elementary Languages. Elementary skills in a language not otherwise taught in this department. Primary emphasis is on oral skills. The language to be taught will vary. Should be taken in A,B sequence if available, 100B will always be a continuation of 100A. Instructional proficiency fee: \$5.

100B-3 to 9 Variable Elementary Languages. Elementary skills in a language not otherwise taught in this department. Primary emphasis is on oral skills. The language to be taught will vary. Should be taken in A,B sequence if available, as 100B will always be a continuation of 100A. Prerequisite: FL 100A. Instructional proficiency fee: \$5.

105-1 International Studies Introductory Seminar. An introduction to the interdisciplinary field of global and international studies. Through readings, discussions, presentations, case studies, and interactive activities, this course will introduce students to the principal issues in the field of international studies, particularly the effects of globalization on economics, politics, media, health, labor, food, energy and the environment.

111-1 Introduction to Foreign Language Study. This course is required for majors in the Department of Languages, Cultures, and International Trade who do not take the department's UCOL 101 course. This one credit-hour course will meet one day a week together with that UCOL course to cover content relevant to foreign language study. Students will study how second languages are required and how language influences culture and is influenced by culture. Restricted to LCIS majors.

120A-3 Beginning Sign Language. This course is designed for students who have had limited or no prior knowledge of American Sign Language (ASL). The focus will be on developing visual readiness skills and developing both expressive and receptive skills in basic ASL for academic and social environments. The course includes an introduction to conversational vocabulary, finger spelling, grammatical principles and sign order rules (syntax). Information about the deaf community and deaf culture will also be introduced. Must be taken in A,B sequence. Lab fee: \$2 per credit hour.

120B-3 Beginning Sign Language. This course is designed for students who have had limited or no prior knowledge of American Sign Language (ASL). The focus will be on developing visual readiness skills and developing both expressive and receptive skills in basic ASL for academic and social environments. The course includes an introduction to conversational vocabulary, finger spelling, grammatical principles and sign order rules (syntax). Information about the deaf community and deaf culture will also be introduced. Must be taken in A,B sequence. Prerequisite for FL 120B: FL 120A must be completed with a passing grade. Lab fee: \$2 per credit hour.

200A-3 Masterpieces of World Literature-France and Francophone Countries. (University Core Curriculum) Readings and discussions of Western literature taken from the Middle Ages to modern times. All readings and lectures in English.

200B-3 Masterpieces of World Literature-Germany, Switzerland, Austria. (University Core Curriculum) Readings and discussions of Western literature taken from the Middle Ages to modern times. All readings and lectures in English.

200C-3 Masterpieces of World Literature-Spain. (University Core Curriculum) Readings and discussions of Western literature taken from the Middle Ages to modern times. All readings and lectures in English.

201-3 Native North American Literatures. (Same as ANTH 200) An introduction to Native American authors from North America. Readings will vary across time period, historical context, and tribal communities. Topics may include effects of and Native American responses to colonization, cultural adaptation, Native American identity, reservation and urban life, cultural revitalization, and others that reflect the multiple experiences of Native American peoples as expressed in Euro-American literary genres.

220A-3 Intermediate American Sign Language. This course is designed for students who have taken ASL 120A,B or had some prior training in American Sign Language (ASL). The focus will be on continuing to develop both expressive and receptive skills in basic ASL for academic and social environments. The course includes conversational vocabulary, finger spelling, grammatical principles, and sign order rules (syntax). Information about deafness, deaf history and deaf language/performing arts will be covered as well as unique aspects of the American deaf community and deaf culture. Must be taken in A,B sequence. Prerequisite: FL 120B with a passing grade, or one year of proficiency credit.

220B-3 Intermediate American Sign Language. This course is designed for students who have taken ASL 120A,B or had some prior training in American Sign Language (ASL). The focus will be on continuing to develop both expressive and receptive skills in basic ASL for academic and social environments. The course includes conversational vocabulary, finger spelling, grammatical principles, and sign order rules (syntax). Information about deafness, deaf history and deaf language/performing arts will be covered as well as unique aspects of the American deaf community and deaf culture. Must be taken in A,B sequence. Prerequisite: FL 220A with a passing grade.

258-1 to 4 Work Experience. Ungraded credit for work experience, which has taken place subsequent to admission to SIUC. Such experience must be related to student's major in a foreign language or FLIT. Mandatory Pass/Fail. Prerequisite: sophomore standing and approval by chair of foreign language major or by director if FLIT major.

298-3 Multicultural Applied Experience. (University Core Curriculum) (Multicultural Applied Experience Course) An applied experience, service-oriented credit in American diversity involving a group different from the student's own. Difference can be manifested by age, gender, ethnicity, nationality, political affiliation, race or class. Students should consult the department for course specifications regarding grading, work requirements, and supervision. Grade Pass/Fail. Prerequisite: written approval from the instructor of record.

301I-3 Cross-Cultural Orientation. (University Core Curriculum) Students are introduced to a wide variety of interaction patterns in cross-cultural social and professional settings. Through readings, interactive classroom activities, and out-of-class contact with the international community at Southern Illinois University Carbondale they acquire conceptual tools, which allow them to discover appropriate behavior patterns in diverse cultural settings.

302-3 Internship Extension. Facilitates the returned international intern to evaluate, appreciate and optimize the advantages of the international internship experience by sharing the international experience with as many members of the community as possible through a written report, oral presentations, mentoring, newsletter and broadcasting productions, and international student partnerships. Prerequisite: FL 202 and international internship experience.

370-3 Deaf Culture. This course is designed to introduce students to American Sign Language (ASL) literature and the history of Deaf culture. Information about the Deaf community, Deaf culture and history, ASL literature, including sign poetry and storytelling, folklore, and Deaf Theater will be covered.

436-3 Methods in Teaching World Languages. The course prepares future language teachers with the theoretical knowledge and the practical tools necessary to meet the demands of today's communicative language classroom. Based on insights from second language acquisition research and current trends and standards in the language teaching profession, students develop an informed and principled approach to teaching world languages effectively. Required of prospective language teachers in secondary schools. Prerequisite: concurrent or prior enrollment in 300-level course in French, German, Latin, or Spanish.

437-3 Introduction to Computer-Assisted Language Learning. (Same as LING 573) This hands-on course introduces essential concepts and skills for applying technology to language learning and instruction. Topics include online quizzes and activities, creating and editing multimedia objects for use in instructional materials, social networking, Web resources, evaluating commercial materials, digital storytelling and hypermedia. New developments in CALL are introduced as the state of the art progresses.

475V-1 to 40 Study Abroad in Vienna, Austria. One or two semesters at the University of Vienna and the Economics University, Vienna, Austria. All courses taught in German. Students may obtain 30 to 40 semester hours of credit in German language, literature and civilization, and with prior approval, in elective areas of study including music, art, architecture, history, anthropology, political science, physical education, business, economics, and sociology. This course or 475B is highly recommended for German and/or FLIT majors. Not for graduate credit. Students will be charged on the basis of 15 hours per semester regardless of the hours of credit actually earned. Prerequisite: 5 semesters of college German or equivalent with 3.0 grade point average.

480-3 Cross-Cultural Pragmatics. This course provides a comprehensive introduction to the study of pragmatics (i.e. language use in social context) in and across cultures. Students encounter pragmatics at work in the classic linguistic domains on and beyond the sentence level and will be exposed to the pragmatics of a wide range of world languages, including several Englishes, Spanish, French, German, Japanese, Finnish, Persian, Apache, and others. (Taught in English.) Restricted to senior standing or consent of instructor.

491-1 to 4 Independent Study: American Sign Language/Deaf Studies. Guided individual exploration of some area(s) of significance within the field of American Sign Language or deafness. Students taking class for graduate credit will do critical study of one aspect. May be repeated as topic varies. Special approval needed from the instructor.

492-1 to 3 Senior Project. Directed research, usually a paper or project, on a topic agreed to by the student and the advisor. The project should demonstrate the student's mastery of a problem or issue, the ability to think critically, conduct research, and to report the findings in an appropriate form (a paper or presentation). Normally taken during the last term. Not for graduate credit. Restricted to senior standing. Special approval needed from the instructor.

495-3 to 12 Internship. Provides structure for application and expansion of knowledge gained through extensive preparatory course work in the subject area for the internship, as well as in the foreign language, which has been studied. Normally taken

abroad, in a country where the foreign language acquired by the student is universally used. Not for graduate credit. Prerequisite: senior standing, minimum 2.75 GPA, a business language course and a culture course (see Foreign Language and International Trade for details), and written approval from the director of Foreign Language and International Trade. This approval is subject to satisfactory completion of both oral and written language competency exams before the internship begins.

Chinese Courses (CHIN)

120A-3 Elementary Chinese. Standard (Mandarin) Chinese. The basic skills of listening, speaking, reading, and writing. No previous knowledge of Chinese required. Must be taken in A,B sequence. Lab fee: \$2 per credit hour.

120B-3 Elementary Chinese. Standard (Mandarin) Chinese. The basic skills of listening, speaking, reading, and writing. No previous knowledge of Chinese required. Must be taken in A,B sequence. Prerequisite for 120B: CHIN 120A must be completed with a passing grade. Lab fee: \$2 per credit hour.

201A-3 Intermediate Chinese. Standard (Mandarin) Chinese. Development of listening, speaking, reading, and writing on the intermediate level. Must be taken in A,B sequence. Prerequisite: CHIN 120B with a grade of C or better, or consent of instructor.

201B-3 Intermediate Chinese. [IAI Course: H1 900] Standard (Mandarin) Chinese. Development of listening, speaking, reading, and writing on the intermediate level. Must be taken in A,B sequence. Prerequisite: CHIN 201A with a grade of C or better, or consent of instructor.

305-2 to 4 Individualized Language Study. Designed to improve language skills beyond the intermediate level. Tailored to the particular needs of students. Prerequisite: CHIN 201B or equivalent.

320A-3 Advanced Chinese. Standard (Mandarin) Chinese. Further development of listening, speaking, reading, and writing skills on the advanced level. Emphasis on developing proficiency in reading modern Chinese through cultural readings. Must be taken in A,B sequence. Prerequisite: grade of C or better in CHIN 201B or two years of proficiency credit or permission of section head.

320B-3 Advanced Chinese. Standard (Mandarin) Chinese. Further development of listening, speaking, reading, and writing skills on the advanced level. Emphasis on developing proficiency in reading modern Chinese through cultural readings. Must be taken in A,B sequence. Prerequisite: CHIN 320A with a grade of C or better or equivalent.

370-3 Contemporary China. A study of customs, habits, beliefs and traditions operating in China today. Taught in English. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: East Asian 102 or consent of instructor.

390-1 to 6 Independent Study in Chinese. Directed individual study of some question, author, or theme of significance in the field of Chinese literature, language, or culture. Special approval needed from the instructor.

410-3 The Linguistic Structure of Chinese. Phonology and syntax of Mandarin Chinese. Principal phonological features of major Chinese dialects. Special emphasis on the contrastive analysis between Mandarin Chinese and English. Theoretical implications of Chinese syntax for current linguistic theories.

This course satisfies the CoLA Writing Across the Curriculum requirement. Prerequisite: one year of Chinese.

435-3 Business Chinese. An overview of China's business through reading in Chinese dealing with the major aspects of China's foreign trade ranging from broad principles and policies to concrete details of operation and procedure. Enhancement of conversational skills for business contexts. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: CHIN 320 or equivalent.

470-3 Chinese Literature in Translation. Reading and analysis of selected Chinese works, authors, themes or genres in English translation with attention to literary genres and thought from ancient to contemporary times. Students taking this course for graduate credit will do a critical aspect. No knowledge of Chinese is required.

490-1 to 6 Advanced Independent Study in Chinese. Directed individual study of some question, author, or theme of significance in the field of Chinese literature, language, or culture. Special approval needed from the instructor.

Classics Courses (CLAS)

130A-3 Elementary Classical Greek. The object of this course is to give students a firm foundation in the grammar, vocabulary, and syntax of Ancient Greek in order to enable them to progress to the reading of the Greek classics and New Testament. Must be taken in A,B sequence. No previous knowledge of Greek required. Lab fee: \$2 per credit hour.

130B-3 Elementary Classical Greek. The object of this course is to give students a firm foundation in the grammar, vocabulary, and syntax of Ancient Greek in order to enable them to progress to the reading of the Greek classics and New Testament. Must be taken in A,B sequence. No previous knowledge of Greek required. Prerequisite: CLAS 130A must be completed with a passing grade. Lab fee: \$2 per credit hour.

133A-3 Elementary Latin. (Advanced University Core Curriculum Course) Students will acquire a firm foundation in the grammar, vocabulary, and syntax of Latin in order to enable them to progress to the reading of Latin literature in the original. Must be taken in A,B sequence. No previous knowledge of Latin required. Lab fee: \$2 per credit hour.

133B-3 Elementary Latin. (Advanced University Core Curriculum Course) Students will acquire a firm foundation in the grammar, vocabulary, and syntax of Latin in order to enable them to progress to the reading of Latin literature in the original. Must be taken in A,B sequence. No previous knowledge of Latin required. Prerequisite: CLAS 133A must be completed with a passing grade. Lab fee: \$2 per credit hour.

201A-3 Intermediate Greek. Reading and interpretation of selected works by authors such as Xenophon, Plato, Homer, and the New Testament writers. Must be taken in A,B sequence. Prerequisite: CLAS 130B with a grade of C or better, or one year of proficiency credit.

201B-3 Intermediate Greek. [IAI Course: H1 900] Reading and interpretation of selected works by authors such as Xenophon, Plato, Homer, and the New Testament writers. Must be taken in A,B sequence. Prerequisite: CLAS 201A with a passing grade.

202A-3 Intermediate Latin. [IAI Course: (b) H1 900] Reading from authors such as Livy, Caesar, and Cicero. Must be taken

in A,B sequence. Prerequisite: CLAS 133B with a grade of C or better, one year of proficiency credit.

202B-3 Intermediate Latin. Reading from authors such as Livy, Caesar, and Cicero. Must be taken in A,B sequence. Prerequisite: CLAS 202A with a passing grade.

230-3 Classical Mythology. (University Core Curriculum) [IAI Course: H9 901] An inquiry into the nature of myth and its relevance today while studying selected myths principally of the Greeks and Romans.

270-3 Greek Civilization. (University Core Curriculum) An introduction to the life and culture of ancient Greece. Greek contributions to western civilization in literature, art, history, and philosophy. No knowledge of Greek or Latin is required.

271-3 Roman Civilization. (University Core Curriculum) An introduction to the life and culture of ancient Rome. Rome's function in assimilating, transforming, and passing on the Greek literary and intellectual achievement. Rome's own contributions in the political, social, and cultural spheres. No knowledge of Greek or Latin is required.

304-3 Ancient Philosophy. (Advanced University Core Curriculum course) (Same as PHIL 304) The birth of Western philosophy in the Greek world, examining such Pre-Socratics as Anaximander, Heraclitus, Pythagoras, and Parmenides; focusing upon the flowering of the Athenian period with Socrates, Plato, and Aristotle. The course will conclude with a discussion of the Hellenistic systems of Stoicism, Epicureanism, and the Neo-Platonic mysticism of Plotinus of the Roman period. Fulfills CoLA Writing-Across-the-Curriculum requirement. Satisfies University Core Curriculum Humanities requirement in lieu of 102.

305-3 Classical Political Theory: Greeks, Romans and Christians. (Same as POLS 304) A survey of the works of important political thinkers in the ancient and medieval world including Homer, Thucydides, Plato, Aristotle, Cicero, Augustine, Maimonides, Averroes, and Thomas Aquinas.

310-3 to 9 (3 per topic) Art and Archaeology of the Ancient Mediterranean. (Same as ANTH 430D and AD 407) An introduction to art historical, archaeological, and historical approaches to the physical remains of the ancient Mediterranean. Emphasis normally on Greece or Rome. Can be repeated if offered on different topics. Occasionally offered overseas. No prerequisites.

310H-3 to 9 (3 per topic) Honors Art and Archaeology of the Ancient Mediterranean. (Meets with CLAS 310, ANTH 430D, and AD 407.) An introduction to art historical, archaeological, and historical approaches to the physical remains of the ancient Mediterranean. Emphasis normally on Greece or Rome. Can be repeated if offered on different topics. Occasionally offered overseas. Contingent on enrollment in the University Honors Program, and special approval from the instructor.

311-3 Greek and Latin Literature in Translation. Survey of literature from ancient Greece and/or Rome. No knowledge of Greek or Latin is required. No prerequisite. Repeatable for a total of 6 credits.

315I-3 to 9 Classical Themes and Contemporary Life: Seminar Series. (University Core Curriculum) [IAI Course: H9 900] Specific aspects of Classical Civilization are compared with aspects of our own society. In alternate years, the course will treat different themes, e.g., Drama's birthplace: Classical

Athens; Roman heroes and Anti-Heroes, or Athletics, Sports and Games in the Ancient World. When offered in Europe, the course will focus on how these values are reflected in architecture, art, the military and the arena from ancient times through the Renaissance and beyond.

354A-3 History of the Theater. (Same as THEA 354A) Theater history from ancient times to the 17th century.

390-3 to 9 (3 per topic) Reading in Greek. Reading and interpretation of Greek texts. Usually prose in the fall, poetry in the spring. Prerequisite: two years of Greek or consent of the instructor.

391-3 to 9 (3 per topic) Reading in Latin. Reading and interpretation of Latin texts. Usually prose in the fall, poetry in the spring. Prerequisite: two years of Latin or consent of the instructor.

391H-3 to 9 (3 per topic) Honors Reading in Latin. Reading and interpretation of Latin texts. Usually prose in the fall, poetry in the spring. Contingent on enrollment in the University Honors Program, and special approval from the instructor.

403-3 History of the English Language. (Same as ENGL 403) The development of the language from its Indo-European roots through Early Modern English and selected American dialects. Emphasis on the geographical, historical and cultural causes of linguistic change.

415-3 to 9 (3 per topic) Advanced Reading in Greek. Reading and interpretation of Greek texts at an advanced level. Satisfies CoLA Writing Across the Curriculum Requirement. Prerequisite: three years of Greek or consent of the instructor.

416-3 to 9 (3 per topic) Advanced Reading in Latin. Reading and interpretation of Latin texts at an advanced level. Satisfies CoLA Writing Across the Curriculum Requirement. Prerequisite: three years of Latin or consent of the instructor.

445-3 Cultural Backgrounds of Western Literature. (Same as ENGL 445) A study of ancient Greek and Roman literature, Dante's Divine Comedy, and Goethe's Faust, as to literary type and historical influence on later Western writers.

448A-3 Irish Literature Survey. (Same as ENGL 448A) An introductory survey in historical context of the literature of Ireland, including Gaelic literature in translation from the early Christian era (400 AD) to the late 18th century; the first two centuries of Irish literature in English (the 18th and 19th century); and the Celtic Twilight and the Irish Literary Renaissance.

469-3 Hellenistic and Roman Philosophy to Augustine. (Same as PHIL 469) The career of philosophy during the Hellenistic, Roman and Early Medieval period, especially as a means of personal salvation, exploring such figures and movements as: Epicurus, Stoicism, the Middle Academy, Skepticism, Gnosticism, Plotinus, Early Christianity, Augustine, and Boethius. Prerequisite: PHIL 304 or consent of instructor.

470A-3 Greek Philosophy-Plato. (Same as PHIL 470A) Survey of Plato's dialogues mostly selected from those of the middle period (Meno, Phaedo, Symposium, Republic, Phaedrus), perhaps along with some from the early period (especially Protagoras) and late period (Sophist, Timaeus). Prerequisite: PHIL 304 or consent of instructor.

470B-3 Greek Philosophy-Aristotle. (Same as PHIL 470B) A general survey of the Aristotelian philosophy including the theory of nature, metaphysics, ethics, and political philosophy.

Readings will consist of selections from the corpus. Prerequisite: PHIL 304 or consent of instructor.

488-3 Latin as a Research Tool. Concentrated and individualized training in the recognition and interpretation of basic and complex grammatical structures and in the systematic acquisition of the principles of word formation for vocabulary expansion. Techniques for intensive and extensive readings and for translation of unedited texts in the student's own field of study. Intended for graduate students. Undergraduates who wish to enroll are encouraged to consult with course instructor. With consent of student's own department, and with a grade of B or A, satisfies graduate program requirements for foreign language as a research tool.

491-3 to 9 (3 per topic) Classics Seminar. Intensive study of a select area of classics. Recent topics include Greek and Roman Religion, Socrates, and Homer. Capstone research course required for classics majors and minors, though others are welcome. Satisfies the CoLA Writing Across the Curriculum requirement. There are no formal prerequisites, but some knowledge of the ancient world will prove helpful (such as that provided by CLAS 230, 270, and 271). No knowledge of Latin or Greek is required.

491H-3 to 9 (3 per topic) Classics Honors Seminar. Intensive study of a select area of classics. Recent topics include Greek and Roman Religion, Socrates, and Homer. Capstone research course required for classics majors and minors, though others are welcome. There are no formal prerequisites, but some knowledge of the ancient world will prove helpful (such as that provided by CLAS 230, 270, and 271). No knowledge of Latin or Greek is required. Contingent on enrollment in the University Honors Program, and special approval from the instructor.

496-1 to 9 Independent Study in Classics. Guided research on problems in classics. The academic work may be done on campus or in conjunction with approved off-campus activities. This course satisfies the CoLA Writing Across the Curriculum requirement. Special approval needed from the instructor.

497H-3 Honors Thesis. Directed reading and research, culminating in a research thesis for the University Honors program. Contingent on enrollment in the University Honors Program. Not for graduate credit. Special approval needed from the instructor.

East Asian Courses (EA)

102-3 East Asian Civilization. (University Core Curriculum) [IAI course: H2 903N] An introduction to East Asian cultural traditions, literature, philosophy, history, art and social organization of China and Japan. Formerly FL 102. Credit will not be granted for both FL 102 and EA 102.

300-3 Masterpieces of Oriental Literatures. Lectures and collateral readings of representative oriental literary works in English translation with special attention to literary forms and thought from ancient to contemporary China and Japan. No knowledge of an oriental language required.

370-1 to 6 Topics in East Asian Cultural Traditions. Selected topics in East Asian cultural traditions. May be repeated to a total of six hours with the consent of the department. No prerequisite. Taught in English.

French Courses (FR)

123A-3 Elementary French. Introduction to listening, speak-

ing, reading, and writing French, in its cultural context. No previous knowledge of French required. Must be taken in A,B sequence. Lab fee: \$2 per credit hour.

123B-3 Elementary French. Introduction to listening, speaking, reading, and writing French, in its cultural context. No previous knowledge of French required. Prerequisite: FR 123A with a passing grade. Lab fee: \$2 per credit hour.

200-3 Women in French and Francophone Literatures. (University Core Curriculum) (Same as WGSS 200) This course offers a study of the representation of women in 20th century French and Francophone literatures. The class will study female characters as they are represented in novels, short stories and essays of contemporary French and Francophone writers, and will analyze the development of women as characters from a psychological, sociological, and literary point of view. All readings and lectures are in English.

201A-3 Intermediate French. Continued development of the four basic language skills of listening, speaking, reading and writing. Reading of material on contemporary France and selections from French literature. Must be taken in A,B sequence. Prerequisite: FR 101B with a grade of C or better, FR 123B with a grade of C or better, one year of proficiency credit, or equivalent.

201B-3 Intermediate French. [IAI Course: H1 900] Continued development of the four basic language skills of listening, speaking, reading and writing. Reading of material on contemporary France and selections from French literature. Must be taken in A,B sequence. Prerequisite: FR 201A with a grade of C or better, or equivalent.

220-3 Intermediate French Conversation. Development of oral skills on the intermediate level. Prerequisite: FR 123B with a grade of C or better, one year of proficiency credit, or the equivalent.

311-3 Modern French Literature. The themes, structures, and language of some major works of poets, novelists, and playwrights from the early Romantics through the Existentialists and authors of the Nouveau Roman. Taught in French with focus on the four language proficiency skills of listening, speaking, reading and writing. Prerequisite: A grade of C or better in FR 320A, or equivalent.

320A-3 Advanced Language Study. Continued practice of the four skills of listening, speaking, reading, and writing, with emphasis on writing. Prerequisite: A grade of C or better in FR 201B, or equivalent.

320B-3 Advanced Language Study. Continued practice of the four skills of listening, speaking, reading, and writing, with emphasis especially on writing. FR 320B is a writing intensive course that satisfies the CoLA Writing-Across-the-Curriculum requirement. Must be taken in A,B sequence. Prerequisite: A grade of C or better in FR 320A, or equivalent.

321-3 Advanced French Conversation. Improvement of self-expression and listening comprehension. Expansion of vocabulary and idioms emphasized through classroom and language laboratory work. Highly recommended for students with a major in French. Prerequisite: A grade of C or better in FR 201B, or equivalent.

330-3 Advanced Writing Skills. This course will help students make the transition from intermediate language courses to advanced courses that call for more sophisticated writing

skills. Selections of texts (from media, literature, etc.) and exercises will teach the skills necessary to read, analyze and summarize texts, as well as write critical analyses and argumentative essays. Taught in French with focus on the four language proficiency skills of listening, speaking, reading and writing. Prerequisite: A grade of C or better in FR 320A, or equivalent.

350-3 French Phonetics. Introduction to French phonetics involving perception and production of spoken French. Emphasis on corrective pronunciation and avoidance of English interference. Prerequisite: A grade of C or better in FR 201B, or equivalent.

370-3 Contemporary France. Survey of major historical events of 19th and 20th century France. Examination of contemporary French society focusing on topics such as politics, economy, education, arts and popular culture. Taught in French with focus on the four language proficiency skills of listening, speaking, reading and writing. Prerequisite: A grade of C or better in FR 320A, or equivalent.

375-1 to 6 Travel-Study in France. Travel-Study project, planned under supervision of French faculty and carried out in France. Prerequisite: A grade of C or better in FR 201B, or equivalent. Special approval needed from faculty.

390-1 to 6 Independent Study in French. Individual exploration of some question, author, or theme of significance within the field of French literature, language, or culture. Special approval needed from the instructor.

410-3 Selected Topics. Topics vary and are announced in advance; both students and faculty suggest ideas. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: A grade of C or better in FR 320A, or equivalent.

420-3 Introduction to French Literature and Cinema. This course will explore representative works in French from a variety of French and Francophone African authors and filmmakers. Students will be introduced to techniques of literary and filmic analysis through the reading of texts and the examination of films in French. FR 420 will be taught in French. Prerequisite: A grade of C or better in FR 320A or equivalent.

435-3 Living and Working in France. This course explores the French and Francophone business worlds from a variety of economic and cultural perspectives. Class work will focus on vocabulary, idioms and expressions used in oral and written business communications. Readings on authentic cultural practices will provide real-world contexts for students preparing to live and work in a French-speaking country. Taught in French. Prerequisite: A grade of C or better in FR 320A or equivalent.

440-3 Literature of the Enlightenment. Study and discussion of the novel, theater, and philosophic writing of 18th century France as literature and as expressions of the Enlightenment. Major attention given to Montesquieu, Voltaire, Diderot, and Rousseau. Prerequisite: A grade of C or better in FR 320A or equivalent. Special approval needed from the instructor.

450-3 Literary Movements of the 19th Century. Romanticism, Realism, and Naturalism in poems, novels and theater plays followed by an examination of the reaction to these movements and of the influence of symbolism. Prerequisite: A grade of C or better in FR 320A or equivalent. Special approval needed from the instructor.

460-3 Studies in Literature of the 20th Century. Examination of the major themes, forms, techniques and style of novelists from Gide and Proust to Robbe-Grillet and dramatists from

Giraudoux to Ionesco and Beckett. Prerequisite: A grade of C or better in FR 320A or equivalent.

470-3 The French and Their History. Study of major French historical events from Vercingetorix to the French Revolution. Examination of the political, philosophical, artistic movements and historic figures that shaped contemporary France. Taught in French. Prerequisite: A grade of C or better in FR 320A, or equivalent.

475-3 to 6 Travel-Study in France. Travel-study project, planned under supervision of French faculty and carried out in France. Amount of credit depending on scope of study. Prerequisite: A grade of C or better in FR 320A, or equivalent.

476-3 Francophone Cultures and Literatures. Representative works and authors of the francophone world outside of France with special reference to African, Caribbean and Canadian literatures. Prerequisite: A grade of C or better in FR 320A, or equivalent.

480-3 Studies of Masterpieces of French and Francophone Literatures. Selected readings from French and Francophone authors. Introduction to main literary movements from the Middle Ages to the 20th century. Prerequisite: A grade of C or better in FR 320A, or equivalent.

488-3 French as a Research Tool. Concentrated and individualized training in the recognition and interpretation of basic and complex grammatical structures and in the systematic acquisition of the principles of word formation for vocabulary expansion. Techniques for intensive and extensive readings and for translation of unedited texts in the student's own field of study. Intended for graduate students. With consent of student's department, and with a grade of B or A, satisfies graduate program requirement for foreign language as a research tool. Prerequisite: one year of French (French 123B with a grade of C or better, one year of proficiency credit, or the equivalent).

490-3 Advanced Independent Study in French. Individual exploration of some question, author, or theme of significance within the field of French and Francophone literatures or cultures. Prerequisite: A grade of C or better in FR 320A, or equivalent. Special approval needed from the instructor.

German Courses (GER)

101A-3 German Language and Culture I. (University Core Curriculum) This course offers an introduction to the language and culture of the German-speaking peoples. It combines an overview of German political, economic, social and aesthetic developments with the acquisition of elementary-level written and spoken German. No previous knowledge of German required. Must be taken in A,B sequence. Lab fee: \$2 per credit hour.

101B-3 German Language and Culture II. (University Core Curriculum) This course offers an introduction to the language and culture of the German-speaking peoples. It combines an overview of German political, economic, social and aesthetic developments with the acquisition of elementary-level written and spoken German. Must be taken in A,B sequence. Prerequisite: GER 101A with a passing grade, or equivalent. Lab fee: \$2 per credit hour.

126A-3 Elementary German. This course is to be used solely for 100-level German proficiency and transfer credit. It can be

used to fulfill college language requirements. It does not count toward the University Core Curriculum requirements.

126B-3 Elementary German. This course is to be used solely for 100-level German proficiency and transfer credit. It can be used to fulfill college language requirements. It does not count toward the University Core Curriculum requirements. Prerequisite: GER 126A.

201A-3 Intermediate German: Cultural Encounters. Continued grammar and vocabulary of development through reading, writing, listening, and speaking German. Up-to-date subject matter from film, politics, fine arts, literature and science will bring students to a deeper understanding of the German language and culture. Conducted primarily in German. Must be taken in A,B sequence. Prerequisite: GER 101B with a grade of C or better, or equivalent.

201B-3 Intermediate German: Cultural Encounters. [IAI Course: H1 900] Continued grammar and vocabulary development through reading, writing, listening, and speaking German. Up-to-date subject matter from film, politics, fine arts, literature and science will bring students to a deeper understanding of the German language and culture. Conducted primarily in German. Must be taken in A,B sequence. Prerequisite: GER 201A with a grade of C or better, or equivalent.

320A-3 Advanced Language Study. Continued practice of the four skills of listening, speaking, reading, and writing, with emphasis on writing. Must be taken in A,B sequence. Prerequisite: A grade of C or better in GER 201B, or equivalent.

320B-3 Advanced Language Study. Continued practice of the four skills of listening, speaking, reading, and writing, with emphasis especially on writing. GER 320B is a writing intensive course that satisfies the CoLA Writing-Across-the-Curriculum requirement. Must be taken in A,B sequence. Prerequisite: A grade of C or better in GER 320A, or equivalent.

336-3 The Germans I: From Tribes to Empire in History and Literature. The course introduces students to the cultural and political history of Germany from Germanic tribal times to the 18th century. Through readings, lectures and discussions in German, augmented by audio-visual media, students will become familiar with literary works in a historical context and gain an understanding of artistic movements and political developments in this period. Taught in German with focus on the four language proficiency skills of listening, speaking, reading, and writing. Prerequisite: GER 201B with a grade of C or equivalent.

337-3 The Germans II: From Reich to Republic in History and Literature. The course introduces students to the cultural and political history of Germany from the 19th century to the present. Through readings, lectures, and discussions in German, augmented by audio-visual media, students will become familiar with literary works in a historical context and develop an understanding of artistic movements and political developments in the modern period. Taught in German with focus on the four language proficiency skills of listening, speaking, reading and writing. Prerequisite: GER 201B with a grade of C or equivalent.

370-3 Contemporary Germany. Study of life in Germany since World War II including the customs and habits, thoughts and beliefs, as well as the broad complex of traditions basic to everyday life. Materials include literary and journalistic texts

as well as contemporary movies and podcasts. Taught in German with focus on the four language proficiency skills of listening, speaking, reading and writing. Prerequisite: GER 201B with a grade of C or equivalent.

381-3 Film and Literature. This course will introduce students to developments in German film making from the 1920s through the present from a historical perspective. Focusing on silent film, Expressionism, Weimar period, Third Reich, East German film, the New German Cinema, and Postmodernism, students will gain a familiarity with cinematic aesthetics and cultural issues as treated through the medium of film. Taught in German with focus on the four language proficiency skills of listening, speaking, reading and writing. Prerequisite: GER 201B with a grade of C or equivalent.

385-3 Reading German Poetry. This course introduces students to German poetry of the 18th, 19th and 20th centuries. Poetry is an important aspect of the German literary and musical tradition, and is a useful tool for all students, to understand the language and culture. Assignments will include reading and analyzing individual poems, musical settings of poems, and outside materials. Taught in German with focus on the four language proficiency skills of listening, speaking, reading and writing. Prerequisite: GER 201B with a grade of C or equivalent.

390A-1 to 3 Directed Language Learning Activity. Special projects such as translation practicum, German play production, German newsletter, instructional assistance, special presentations, or internship in a business firm in Germany. May count as the fifth semester required for Foreign Languages and Literatures 475A. Special approval needed from the instructor.

390B-1 to 3 Directed Language Learning Activity. Special projects such as translation practicum, German play production, German newsletter, instructional assistance, special presentations, or internship in a business firm in Germany. May count as the fifth semester required for Foreign Languages and Literatures 475A. Special approval needed from the instructor.

410-3 German for Writing Proficiency. This course teaches the advanced grammar, vocabulary, and stylistic principles students need to write expository prose, critical essays, business and personal correspondence in German. Through readings and discussions in German, it also expands vocabulary and speaking ability. The final exam in the course can be counted for the German writing proficiency examination. This course satisfies the CoLA Writing Across the Curriculum requirement. Prerequisite: GER 320B with a grade of B or the equivalent.

411-3 Linguistic Structure of Modern German. The descriptive study of phonology, grammatical structure, and vocabulary of modern German with consideration of its structural differences from English and application to teaching. Conducted in English. Prerequisite: A grade of C or better in GER 320A, or equivalent.

413-3 Linguistic Variation and Cultural Diversity in the German-Speaking World. Gain intimate knowledge of the German-speaking world about linguistic and cultural variety and identity. Featured varieties include written and spoken German, standard and vernacular, regional and urban dialects, youth and minority language usage, and more. Varieties are explored in structural terms and examined in the social and cultural contexts in which they occur. Course is conducted in German. Prerequisite: A grade of C or better in GER 320A, or equivalent.

435-3 Business German. An overview of German business, presented through lectures, readings, and discussions. Course-work with textbook and supplementary materials will focus on the major aspects of German business. Exercises will include vocabulary building, listening and reading comprehension, oral and written summarization, role playing in typical situations, mock telephone conversations, and business correspondence. Prerequisite: A grade of C or better in GER 320A, or equivalent.

460-3 German Theater: Literature on Stage. This course will explore developments in the German drama from the eighteenth century to the present, focusing on dramatic form and social, historical, and cultural contexts. Conducted in German. Prerequisite: A grade of C or better in GER 320A, or equivalent.

465-3 Self and Society: First-Person Narrative. This course will introduce beginning students to German literature written in first person. It serves as an introduction to the way the personal voice is constructed in texts, and students will develop their understanding of the German narrative tradition. We will collectively probe our notions of realism, believability, and truth as we read stories of self-conscious narrators. Conducted in German. Prerequisite: A grade of C or better in GER 320A, or equivalent.

481-3 Film in the Third Reich: the Manipulation of Mass Culture. This course provides a unique view into the relationship of fascist politics and mass culture through an examination of Nazi Germany's film culture. Students will analyze specific films, publications, and pronouncements from the Nazi Ministry of Propaganda, approaching the material from aesthetic, technical, narrative, and historical perspectives. (Taught in English).

488-3 German as a Research Tool. Concentrated and individualized training in the recognition and interpretation of basic and complex grammatical structures and in the systematic acquisition of the principles of word formation for vocabulary expansion. Techniques for reading and for translation of unedited texts in the student's own field of study. Intended for graduate students. With consent of student's department, and with a grade of B or A, satisfies graduate program requirement for foreign language as a research tool.

490-1 to 3 Independent Study in German. Project-study under supervision of German faculty. Amount of credit depends on scope of study. May be repeated as the topic varies, up to the maximum of six semester hours. Restricted to senior or graduate standing. Special approval needed from the supervising instructor.

493-3 to 9 Seminars in Special Topics in Literature and Language. Topics vary and are announced in advance; both students and faculty suggest ideas. May be repeated as the topic varies. Primarily for undergraduates. Prerequisite: A grade of C or better in GER 320A, or equivalent. Special approval needed from the instructor.

Japanese Courses (JPN)

131A-3 Elementary Japanese. Emphasis on basic skills of listening, speaking, reading, and writing. No previous knowledge of Japanese is required. Must be taken in A,B sequence. Lab fee: \$2 per credit hour.

131B-3 Elementary Japanese. Emphasis on basic skills of listening, speaking, reading, and writing. No previous knowl-

edge of Japanese is required. Must be taken in A,B sequence. Prerequisite: JPN 131A must be completed with a passing grade. Lab fee: \$2 per credit hour.

201A-3 Intermediate Japanese. Development of listening, speaking, reading, and writing on the intermediate level. Must be taken in A,B sequence. Prerequisite: JPN 131B with a grade of C or better, one year of proficiency credit, or consent of instructor.

201B-3 Intermediate Japanese. [IAI Course: H1 900] Development of listening, speaking, reading, and writing on the intermediate level. Must be taken in A,B sequence. Prerequisite: JPN 201A with a grade of C or better, or consent of instructor.

305-2 to 4 Individualized Language Study. Designed to improve language skill beyond the intermediate level. Tailored to the particular needs of students. Prerequisite: JPN 201B or equivalent.

320A-3 Advanced Japanese. Further development of listening, speaking, reading, and writing on the advanced level. Emphasis on developing proficiency in reading modern Japanese through cultural readings. Must be taken in A,B sequence. Prerequisite: grade of C or better in JPN 201B or two years of proficiency credit or permission of section head.

320B-3 Advanced Japanese. Further development of listening, speaking, reading, and writing on the advanced level. Emphasis on developing proficiency in reading modern Japanese through cultural readings. Must be taken in A,B sequence. Prerequisite: JPN 320A with a grade of C or better or equivalent.

321-2 Conversational Japanese. Practice in spoken Japanese and practical writing skills (e.g., writing memos, letters, notes). Activities include practice of routines of Japanese etiquette, discussions of Japanese television and film, prepared and impromptu group discussion and speeches, writing and performing a play in Japanese. Not open to native speakers without permission. Prerequisite: JPN 201A or consent of instructor.

360-3 Reading and Writing Japanese. Practice in reading Japanese for comprehension and writing for practical communication. Introduces a variety of written media (e.g., Japanese comic books, newspaper, magazines, children's books, school textbooks) and teaches the fundamentals of Japanese word processing. Taught primarily in Japanese. Prerequisite: JPN 201B or the equivalent.

370-3 Contemporary Japan. A study of customs, habits, beliefs, values and etiquette in Japanese culture. Instruction in English. Prerequisite: East Asian 102 or consent of instructor.

375-1 to 6 Travel Study in Japan. Supervised travel-study in Japan. Special approval needed from faculty.

390-1 to 6 Independent Study in Japanese. Directed individual study of some question, author, or theme of significance in the field of Japanese literature, language, or culture. Special approval needed from the instructor.

410-3 The Linguistic Structure of Japanese. Inductive approach to the analysis of various aspects (such as phonology, morphology, syntax) of Japanese grammar with emphasis on syntactic structures within any of the current theoretical frameworks such as pragmatics, functionalism and formal linguistics. May include contrastive analysis between Japanese and English, and close examination of theories of comparative-historical linguistics of Japanese and Korean. This course sat-

ifies the CoLA Writing Across the Curriculum requirement. Special approval needed from the instructor.

435-3 Business Japanese. An introduction to the language and culture of the Japanese business world and to the structure of the Japanese business economy. The emphasis will be on learning appropriate levels of formality and politeness in oral communication and on achieving competency in the specialized language of business. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: JPN 320A,B or equivalent.

490-1 to 6 Advanced Independent Study in Japanese. Directed individual study of some questions, author, or theme of significance in the field of Japanese literature, language, or culture. Special approval needed from the instructor.

Spanish Courses (SPAN)

140A-3 Elementary Spanish. The basic skills of listening, speaking, reading, and writing. No previous knowledge required. Must be taken in A,B sequence. Lab fee: \$2 per credit hour.

140B-3 Elementary Spanish. The basic skills of listening, speaking, reading, and writing. No previous knowledge required. Must be taken in A,B sequence. Prerequisite: A passing grade in SPAN 140A, or equivalent. Lab fee: \$2 per credit hour.

141A-3 Intensive, 1st-Year Spanish. The basic skills of listening, speaking, reading, and writing. Intended for students who can keep up with an accelerated pace and are able to devote multiple hours into studying outside of class each day. It covers material normally covered in 16-week semesters in SPAN 140. No previous knowledge required, but highly recommended. Must be taken in A,B sequence. Lab fee: \$2 per credit hour.

141B-3 Intensive, 1st-Year Spanish. The basic skills of listening, speaking, reading, and writing. Intended for students who can keep up with an accelerated pace and are able to devote multiple hours into studying outside of class each day. It covers materials normally covered in 16-week semesters in SPAN 140. No previous knowledge required, but highly recommended. Must be taken in A,B sequence. Prerequisite: A passing grade in SPAN 141A, or equivalent. Lab fee: \$2 per credit hour.

175-5 Accelerated Elementary Spanish Grammar Review. Elementary Spanish covered in one semester. The basic skills of listening, speaking, reading, and writing. Prerequisite: two years of high school Spanish, or equivalent. Lab fee: \$2 per credit hour.

201A-3 Intermediate Spanish. Continued development of the four basic language skills. Must be taken in A,B sequence. Prerequisite: A grade of C or better in SPAN 140B or SPAN 175, one year of proficiency credit, or equivalent.

201B-3 Intermediate Spanish. [IAI Course: H1 900] Continued development of the four basic language skills. Must be taken in A,B sequence. Prerequisite: A grade of C or better in SPAN 201A, or equivalent.

221A-3 Spanish Conversation for the Professions-Spanish for Business and Finance. Practice in spoken Spanish tailored to fit professions or careers. Topics are discussions on everyday situations in the selected profession. May be taken in any order. Frequent short talks by students. Does not count toward the major or minor in Spanish. Prerequisite: SPAN 140B or two years of high school Spanish.

221B-3 Spanish Conversation for the Professions-Span-

ish for Law Enforcement. Practice in spoken Spanish tailored to fit professions or careers. Topics are discussions on everyday situations in the selected profession. May be taken in any order. Frequent short talks by students. Does not count toward the major or minor in Spanish. Prerequisite: SPAN 140B or two years of high school Spanish.

221C-3 Spanish Conversation for the Professions-Spanish for Medical Personnel. Practice in spoken Spanish tailored to fit professions or careers. Topics are discussions on everyday situations in the selected profession. May be taken in any order. Frequent short talks by students. Does not count toward the major or minor in Spanish. Prerequisite: SPAN 140B or two years of high school Spanish.

221D-3 Spanish Conversation for the Professions-Spanish for Social Work. Practice in spoken Spanish tailored to fit professions or careers. Topics are discussions on everyday situations in the selected profession. May be taken in any order. Frequent short talks by students. Does not count toward the major or minor in Spanish. Prerequisite: SPAN 140B or two years of high school Spanish.

221E-3 Spanish Conversation for the Professions-Spanish for Other Professions. Practice in spoken Spanish tailored to fit professions or careers. Topics are discussions on everyday situations in the selected profession. May be taken in any order. Frequent short talks by students. Does not count toward the major or minor in Spanish. Prerequisite: SPAN 140B or two years of high school Spanish.

221F-3 Spanish Conversation for the Professions-Teachers & School Personnel. Practice in spoken Spanish tailored to fit the School Environment. The course elicits prepared and impromptu group discussions on situations in the selected profession. Students present frequent dialogues and/or talks. This course does not count toward the major or minor in Spanish, but it's strongly recommended. Prerequisite: SPAN 140B or two years of high school Spanish. Recommended: Spanish 201B.

304-3 Hispanic Film and Conversation. This course provides extensive practice in oral and written Spanish and an introduction to topics in Hispanic culture through film. Taught in Spanish with focus on the four language proficiency skills of listening, speaking, reading and writing. Prerequisite: A grade of C or better in SPAN 201B, or equivalent.

306-3 Intermediate Readings in Spanish. Designed to improve reading skills in Spanish. Taught in Spanish with focus on the four language proficiency skills of listening, speaking, reading and writing. Prerequisite: A grade of C or better in SPAN 201B, or equivalent.

310-3 Introduction to Hispanic Literature. Introduction to Hispanic literature and literary analysis through representative works from at least three different genres. Taught in Spanish with focus on the four language proficiency skills of listening, speaking, reading and writing. Prerequisite: A grade of C or better in SPAN 320A, or equivalent.

320A-3 Advanced Language Study. Continued practice of the four skills of listening, speaking, reading, and writing, and emphasis on writing. Prerequisite: A grade of C or better in SPAN 201B, or equivalent.

320B-3 Advanced Language Study. Continued practice of the four skills of listening, speaking, reading, and writing, with emphasis especially on writing. Spanish 320B is a writing

intensive course that satisfies the CoLA Writing-Across-the-Curriculum requirement. Must be taken in A,B sequence. Prerequisite: A grade of C or better in SPAN 320A, or equivalent.

335-3 Introduction to Business Spanish. The language of the Hispanic business community in readings, correspondence, and documents. Taught in Spanish with focus on the four language proficiency skills of listening, speaking, reading and writing. Prerequisite: A grade of C or better in SPAN 201B, or equivalent.

370A-3 Hispanic Culture. An introduction to Spanish culture, past and present. At least half the course will focus on contemporary culture. Readings and discussions will focus on popular culture as well as high culture. Taught in Spanish with focus on the four language proficiency skills of listening, speaking, reading and writing. Need not be taken in sequence. Prerequisite: A grade of C or better in SPAN 320A, or equivalent.

370B-3 Hispanic Culture. An introduction to Latin American culture, past and present. At least half of the course will focus on contemporary culture, and readings and discussions will focus on popular culture as well as high culture. Taught in Spanish with focus on the four language proficiency skills of listening, speaking, reading and writing. Need not be taken in sequence. Prerequisite: A grade of C or better in SPAN 320A or equivalent.

375-1 to 6 Travel-Study in Latin America or Spain. Travel-study course or project planned under supervision of Spanish faculty and carried out in a Spanish-speaking country. Prerequisite: SPAN 201A with a grade of C or better.

390-1 to 2 Independent Study in Spanish. Individual exploration of some question, author, or theme of significance within the field of Spanish literature, language, or culture. Special approval needed from the instructor.

401-3 to 12 Studies on a Selected Topic. Study of a topic in Spanish or Spanish American Literature, Culture, Film, or Linguistics. Prerequisite: SPAN 320A or consent of the instructor.

410-3 Advanced Spanish Composition. This course teaches the advanced grammar, vocabulary, and stylistic principles students need to write expository prose, critical essays, and personal correspondence in Spanish. Not for graduate credit. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: A grade of C or better in SPAN 320B, or equivalent.

411-3 Linguistic Structure of Spanish. Theory and practice in Spanish pronunciation and study of Spanish grammatical structure, in contrast to English, with application to teaching. Not for graduate credit in foreign language programs. Prerequisite: A grade of C or better in SPAN 320B, or equivalent.

412-3 History of the Spanish Language. Survey of internal and external history, from Vulgar Latin to Modern Spanish. Not for graduate credit in foreign language programs. Prerequisite: A grade of C or better in SPAN 320B, or equivalent.

414-3 Translation Techniques. A practical introduction to the field of professional translation, from and into Spanish. Prerequisite: A grade of C or better in SPAN 320B, or equivalent.

420-3 Studies in Literature of the Middle Ages. Studies of the origins of Spanish literature emphasizing works such as the *Cantar de M^oo Cid*, *Libro de buen amor*, and *La Celestina*. Prerequisite: A grade of C or better in SPAN 320B, or equivalent.

430-3 The Golden Age: Drama. Plays of Lope de Vega, Calde-

ron, Tirso de Molina, and others. Prerequisite: A grade of C or better in SPAN 320B, or equivalent.

431-3 Cervantes. Study of Miguel de Cervantes' masterpiece *Don Quixote* and of other Cervantine works. Prerequisite: A grade of C or better in SPAN 320B, or equivalent.

432-3 The Golden Age: Prose and Poetry. The most representative prose and poetry written during the 16th and 17th centuries in Spain. Prerequisite: A grade of C or better in SPAN 320B, or equivalent.

434-3 Colonial Literature. Study of the literature of Latin America before 1825. Prerequisite: A grade of C or better in SPAN 320B, or equivalent.

435-3 Business Spanish. Discussion and practice of the vocabulary, styles, and forms used in Spanish business correspondence, as well as report writing and documents dealing with trade, transportation, payment, banking and advertising. Does not count toward the M. A. in Foreign Languages. Prerequisite: A grade of C or better in SPAN 320B, or equivalent.

450A-3 18th & 19th-Century Spanish Literature-Neoclassicism and Romanticism. Eighteenth and nineteenth century Spanish literature. Prerequisite: A grade of C or better in SPAN 320B, or equivalent.

450B-3 18th & 19th-Century Spanish Literature-Realism and Naturalism. Eighteenth and nineteenth century Spanish literature. Prerequisite: A grade of C or better in SPAN 320B, or equivalent.

451-3 Studies in Latin American Literature of the 19th Century. Modernism, Romanticism, Realism and Naturalism in Spanish America. Prerequisite: A grade of C or better in SPAN 320B, or equivalent.

460A-3 Modern and Contemporary Spanish Literature and Culture. The Generations of '98 and '27. Prerequisite: A grade of C or better in SPAN 320B, or equivalent.

460B-3 Modern and Contemporary Spanish Literature and Culture. Post-War & Contemporary Literature & Culture. Prerequisite: A grade of C or better in SPAN 320B, or equivalent.

461-3 Studies in Latin American Literature of the 20th Century. The main currents and outstanding works in the literature of Spanish America since 1900. Prerequisite: A grade of C or better in SPAN 320B, or equivalent.

475-3 to 6 Travel-Study in Latin America or Spain. Travel-study course or project planned under supervision of Spanish faculty and carried out in a Spanish-speaking country. Prerequisite: SPAN 320A with a grade of C or better.

488-3 Spanish as a Research Tool. Concentrated and individualized training in the recognition and interpretation of basic and complex grammatical structures and in the systematic acquisition of the principles of word formation for vocabulary expansion. Techniques for intensive and extensive readings and for translation of unedited texts in the student's own field of study. Intended for graduate students. With consent of student's department, and with a grade of B or A, satisfies graduate program requirement for foreign languages as a research tool. Prerequisite: one year of Spanish or equivalent.

490-1 to 3 Advanced Independent Study. Individual exploration of some topic in Hispanic literature, language, or culture. Special approval needed from the instructor.

Languages, Cultures, and International Studies Faculty

Albuxech, Lourdes, Associate Professor, Ph.D. University of California Riverside, 1997.

Allen, Mont, Assistant Professor, Ph.D., University of California, Berkeley.

Bell, Maria Rosa, Lecturer, M.A., Southern Illinois University Carbondale, 1989.

Betz, Frederick, Professor, *Emeritus*, Ph.D., Indiana University, 1973.

Bricker, Mary, Assistant Professor, Ph.D., University of Illinois Urbana-Champaign.

Cáceres, Alejandro, Associate Professor, Ph.D., Indiana University, 1992.

Chonez, Kathy G., Lecturer, ABD, Indiana University, 1996.

Daffner, Carola, Assistant Professor, Ph.D., Vanderbilt University, 2008.

Hartman, Steven Lee, Associate Professor, *Emeritus*, Ph.D., University of Wisconsin, 1971.

Haubenreich, Jacob, Assistant Professor, Ph.D., University of California, Berkeley.

Johnson, David M., Associate Professor and *Chair*, Ph.D., University of North Carolina, Chapel Hill, 1996.

Karayiannis, Dimitrios H., Lecturer, M.A., Southern Illinois University Carbondale, 1990.

Keller, Thomas, Associate Professor, *Emeritus*, Ph.D., University of Colorado Boulder, 1975.

Kim, Alan Hyun-Oak, Associate Professor, Ph.D., University of Southern California, 1985.

Liedloff, Helmut, Professor, *Emeritus*, Ph.D., Philips University, Germany, 1956.

Maisier, Véronique, Associate Professor, Ph.D., University of Paris-Sorbonne, 1998.

O'Brien, Joan, Professor, *Emerita*, Ph.D., Fordham University, 1961.

Smith, Jennifer, Associate Professor, Ph.D., Indiana University, 2005.

Smith, Shawn, Lecturer, Ph.D., Indiana University, 2005.

Stahl, Lidia, C., Lecturer, M.A., Southern Illinois University Carbondale, 1981.

Taoka, Yasuko, Associate Professor, Ph.D., The Ohio State University, 2007.

Thibeault, Brooke, Senior Lecturer and Associate Director of Foreign Language and International Trade, M.S., Southern Illinois University Carbondale, 2001.

Thibeault, Thomas F., Associate Professor, *Emeritus*, Ph.D., University of Salzburg, Austria, 1989; 1990.

Timpe, Eugene F., Professor, *Emeritus*, Ph.D., University of Southern California, 1960.

Walker, Pamela J., Lecturer, M.A., Gallaudet University, 1984.

Winston-Allen, C. Anne, Professor, *Emerita*, Ph.D., University of Kansas, 1979.

Latin

(See Languages, Cultures, and International Studies)

Latino and Latin American Studies

(Minor)

The Latino and Latin American Studies minor is interdisciplinary, designed to provide undergraduates with an enhanced understanding of the culture, history, language, literature, and arts of both Latinos in the United States and the people of Latin America. The minor consists of a minimum of 15 hours that are to be selected from the university's offerings on these topics and organized to reflect each individual student's interests. Through coursework in Latino and Latin American Studies, students may prepare themselves for careers in teaching, government, the media, health care, business, law, and the arts, among others. The requirements for the Latino and Latin American Studies minor are listed below.

LATINO AND LATIN AMERICAN STUDIES MINOR

Successful completion of the Latino and Latin American Studies minor consists of satisfying a language requirement as well as all course requirements.

Language Requirement: A minimum of one year (two courses) or equivalent of Spanish, satisfaction by coursework or exam.

Course Requirement: 15 credit hours, including 6 hours of required core courses and 9 hours of electives (with no more than 3 of the 9 hours of electives from the student's major).

Required Core courses: one of ANTH 204, 310E, 310I, 328B, 328C; one of HIST 370A or 370B.

Electives can be chosen from the following (note that some have prerequisites or restrictions): AFR 360; ANTH 204, 205, 206, 302, 310C, 310E, 310I, 416, 420, 430B, 430F; CCJ 203; ECON 419; ENGL 205, 446; HIST 361, 365, 370A, 370B, 371, 470; LING 416; PHIL 211; POLS 215, 366; PSYC 223; SOC 215, 438, SPAN 310, 370B, 434.

Leisure Services Management/Leisure Studies

(SEE RECREATION)

Liberal Arts (College, Courses)

Courses (LAC)

100-1 Strategies for Academic Success. Intended for liberal arts students on academic probation, this course is designed to assist students in their re-entry to college. Topics will cover academic, personal and career issues as well as various resources available for students on campus. Course is restricted to College of Liberal Arts students. Special approval needed from the instructor.

250-3 Fine and Performing Arts in University Life. This course links participation in university and community fine and performing arts activities to learning in the liberal arts. Students are required to attend six events and write six papers. Mandatory Pass/Fail.

260-3 Humanities in University Life. This course links participation in university and community humanities lectures and presentations to learning in the liberal arts. Students are required to attend six events and write six papers. Mandatory Pass/Fail.

270-3 Diversity in University Life. This course links participation in university and community multicultural events, lectures, and presentations to learning in the liberal arts. Students are required to attend six events and write six papers. Mandatory Pass/Fail.

280-3 Social Sciences in University Life. This course links participation in university and community social science lectures and presentations to learning in the liberal arts. Students are required to attend six events and write six papers. Mandatory Pass/Fail.

288-1 Study Abroad Orientation. A pre-departure orientation course designed to prepare study abroad/exchange students for maximum learning during their overseas experience. Topics will include logistics, intercultural communication skills, health and safety issues, educational systems abroad and re-entry. Enrollment is restricted to consent of Study Abroad Programs.

300I-3 Social Perspectives on Environmental Issues. (Same as AGRI/ABE 300I) (University Core Curriculum) Case studies (e.g., rural village in developing nation; small town in the U.S.; city in developing nation) are used to learn how different societies and groups deal with their specific environmental issues, and how culture and economic factors affect their perspectives and actions.

301-2 Professional Development. This course is designed to prepare liberal arts students for the transition from the academic community into the workforce. Students will develop a personal career development strategy, learn how to conduct a job search in their chosen career field, and acquire professional development skills needed to succeed in various work environments. Mandatory Pass/Fail.

303-1 to 9 (1 to 3 per semester) Interdisciplinary Studies. Offered in a variety of forms, including lectures, readings, research, or field study. Initiated by at least two faculty members from different departments. Approval by the dean is required during the semester prior to its offering. May be repeated to equal a total of nine credits.

388-1 to 45 Study Abroad. Provides credit toward the undergraduate degree for study at accredited foreign institutions or approved overseas programs. Final determination of credit is made on the student's completion of the work. One to eighteen hours per semester, one to nine hours for summer, maximum of 45. Requires special approval by Study Abroad Programs. Course may be pass/fail at the discretion of the academic unit.

Linguistics (Department, Major, Courses, Faculty)

Language is both a means of social communication and a unique property of the human mind. As such, linguistics - the scientific study of language - has a broad appeal to students who are interested in the social sciences, the humanities, computer science, or the life sciences. The undergraduate program in linguistics helps students understand the diversity of human modes of communication, the social and psychological origins of language, and the processes by which languages are learned and lost. A major in linguistics thus provides students with a focused but broad-based education in the liberal arts. In addition, the way linguists think about their subject has greatly influenced the development of other disciplines such as anthropology, computer science, language teaching, philosophy, psychol-

ogy, and sociology. A degree in linguistics will thus be of great value to students intending to pursue careers in those fields.

Graduates of the linguistics program who enter the workforce immediately after graduating find employment in a wide variety of settings as: teachers, writers, translators, editors, civil servants, community developers, etc. Graduates who go on to advanced study find themselves well prepared for professional careers in fields such as linguistics, language teaching, educational administration, language planning, language research, speech pathology, lexicography, publishing, and foreign service.

Two tracks are available in the B.A. degree in Linguistics-the first track provides students with a solid grounding in linguistic theory and application; the second track focuses primarily on teaching English to new speakers of the language in an ESL or Bilingual setting. Majors in both tracks are required to obtain a grade of C or better in each of the core courses.

The ENL track is a Department of Linguistics Program that does not lead to State of Illinois Certification via completion of coursework in the College of Education and Human Services.

Since the study of linguistics involves familiarity with languages other than one's native language, knowledge of a foreign language is a requirement for a degree in linguistics. This requirement, which also satisfies the foreign language requirement of the College of Liberal Arts, involves either one-year of an uncommon or non-Western language or two years of any foreign language. International students whose native language is not English and who have successfully satisfied the requirement of International Undergraduate Admissions for English language proficiency will also have satisfied the Linguistics Department foreign language requirement by offering English as their foreign language.

The linguistics track of the major consists of a minimum of 33 semester hours. This includes 12 hours of required foundation courses and 21 hours chosen from linguistic electives covering a broad range of subfields within the discipline. This flexibility allows linguistics students to double-major in a variety of other fields.

Required courses: (12 semester hours)

- 200 Language, Society and the Mind
- 300 Introduction to Descriptive Linguistics
- 405 Introduction to Phonological Theories
- 408 Introduction to Syntactic Theory

The 21 hours of electives may include (but are not limited to) course on the following list. They must include 15 ours at the 400-level and a linguistics course designated Writing Across the Curriculum (WAC). Up to 6 hours may be drawn from other departments such as English, Psychology, Anthropology, Foreign Languages and International Trade, Subject to approval of the Linguistics faculty.

Sampling of acceptable electives (21 semester hours)

- 320I Language, Gender, and Power
- 340 Second Language Acquisition
- 400 Semantics
- 402 Phonetics
- 406 Historical Linguistics (WAC)
- 415 Sociolinguistics
- 426 Gender, Culture, and Language
- 440 Topics in Linguistics (may be repeated)
- 443 Bilingual

445 Psycholinguistics

452 Field Methods in Linguistics (may be repeated)

The major in linguistics with specialization in English as a New Language (ENL-also known as ESL/Bilingual Education) consists of 33 semester hours comprising a core of basic courses in the structure of the English language and pedagogical methods. The core of the ENL track consists of 21 semester hours in Linguistics 201, 300, 331, 340, 341, 353, and 472. In addition, 12 semester hours of electives must be selected from Linguistics 382, 415, 440, 443, 445, 454, 456, 470, 471, or 497.

Bachelor of Arts Degree in Linguistics, College of Liberal Arts

<i>University Core Curriculum Requirements</i>	41
College of Liberal Arts Academic Requirements (See Chapter 4)	14
<i>Requirements for Major in Linguistics</i>	33
Core courses: Linguistics 200, 300, 405, and 408 each with a grade of C or better	12
Electives: 21 credits hours, 9 of which must be at the 400 level. The remainder may be at the 300- or 400-level. 3 of the 12 hours may be taken outside the linguistics department with the permission of the department's undergraduate advisor.....	12
<i>Foreign Language Requirements</i> (satisfies the College foreign language requirement)	6-16
<i>Electives</i>	16-26
Total	120

Theoretical Linguistics Track Suggested Curricular Guide (4 year)

FIRST YEAR	FALL	SPRING
UCOL 101.....	3	-
ENGL 101, 102*	3	3
Core Curriculum	6	9
LING 200, Elective.....	3	3
Total	15	15

SECOND YEAR	FALL	SPRING
Core Curriculum	9	9
LING 300, Elective.....	3	3
Foreign Language (LING 480A,B)**	3	3
Total	15	15

THIRD YEAR	FALL	SPRING
LING elective	3	-
LING 405, 408.....	-	6
LING Elective.....	3	-
CoLA Writing, CoLA Int'l.....	3	6
Electives	6	3
Total	15	15

FOURTH YEAR	FALL	SPRING
LING 406/452.....	-	3
LING Electives.....	6	3

Electives	9	9
Total	15	15

* Non-native English speakers may substitute LING 101/102 for ENGL 101/102.

** Linguistics majors satisfy Foreign Language requirement with one year of LING 480 (less commonly taught languages) or two years of Spanish, German, or French.

Theoretical Linguistics Track Suggested Curricular Guide (2 year transfer)

FIRST YEAR	FALL	SPRING
UCOL 101.....	3	-
LING 200, 300, elective	9	-
LING 405, 408.....	-	9
LING Elective.....	-	3
Foreign Language (LING 480A,B)**	3	3
Total	15	15

SECOND YEAR	FALL	SPRING
LING Electives.....	6	3
LING 406/452.....	-	3
CoLA Writing, CoLA Int'l.....	3	6
Electives	6	3
Total	15	15

** Linguistics majors satisfy Foreign Language requirement with one year of LING 480 (less commonly taught languages) or two years of Spanish, German, or French.

Bachelor of Arts Degree in Linguistics, Specialization in ESL/Bilingual Education, College of Liberal Arts

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Requirements</i> (See Chapter 4)	14
<i>Requirements for Major in Linguistics, English as a New Language</i>	33
Core courses: Linguistics 201, 300, 331, 340, 341, 353, 472, each with a grade of C or better.	
Electives: Choose four from the following courses: LING 300, 382, 415, 440 (may be taken twice with different topics), 443, 445, 454, 456, 470, 471, or 497.	
<i>Foreign Language Requirements</i> (satisfies the College foreign language requirement).....	6-16
<i>Electives</i>	16-26
Total	120

ENL Linguistics Track Suggested Curricular Guide (4 year)

FIRST YEAR	FALL	SPRING
Core Curriculum	9	9
UCOL 101.....	3	-
ENGL/LING 101, 102	3	3
LING 201	-	3
Total	15	15

SECOND YEAR	FALL	SPRING
Core Curriculum	9	9

LING 300, Elective.....	3	3
Foreign Language	3	3
<i>Total</i>	15	15

THIRD YEAR	FALL	SPRING
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LING 353	3	-
LING 340, 341	-	6
LING Elective.....	3	-
CoLA Writing	3	6
Electives	6	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
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LING 331	-	3
LING 472	3	-
LING Electives	3	3
Electives	9	9
<i>Total</i>	15	15

ENL Linguistics Track Suggested Curricular Guide (2 year)

FIRST YEAR	FALL	SPRING
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UCOL 101	3	-
LING 300	3	-
LING 353	3	-
LING elective	3	-
LING 201	-	3
LING 340	-	3
LING 341	-	3
Foreign Language	3	3
Elective	-	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
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LING 472	3	-
LING 331	-	3
LING Electives	6	3
CoLA Writing	3	6
Electives	3	3
<i>Total</i>	15	15

Linguistics Minor

The minor in linguistics 18 hours of study and draws upon core courses from the Department of Linguistics. It introduces students to the science of language and to aspects of linguistic structure and language use. A minor in linguistics may be of special interest to students in anthropology, computer science, English, foreign languages and literatures, mathematics, philosophy, psychology, sociology, communication studies, and communication disorders and sciences.

Course requirements for the minor in linguistics are LING 200 and 300, plus at least four additional LING courses (12 semester hours) including two (6 semester hours) at the 400-level. LING 480A does not count toward the minor in linguistics.

Courses (LING)

001-1 Foundation English 1. Foundation English focuses on reading and listening, with some functional writing and basic interpersonal speaking. Students at this level are true beginners. Goals: ability to comprehend pre-grade reading starting with alphabet and number recognition. Begin using basic grammatical structures and vocabulary related to classroom and survival situations. English life and introduction to American culture are developed through reading and listening. Prerequisite: CESL diagnostics with a grade of satisfactory.

002-1 Foundation English 2. Foundation English focuses on reading and listening, with some functional writing and basic interpersonal speaking. Students at this level have some skills, but are below LING 010. Goals: ability to comprehend pre-grade reading starting with alphabet and number recognition. Begin using basic grammatical structures and vocabulary related to classroom and survival situations. English life and introduction to American culture are developed through reading and listening. Prerequisite: CESL diagnostics with a grade of satisfactory or successful completion of LING 001 (FE 1).

010-1 General English 1. General English 1 focuses on reading and listening, with some functional writing and basic interpersonal speaking. Goals: ability to comprehend 2-4th grade reading and listening texts, development of life skills English, and orientation to American culture through reading and listening. Prerequisite: CESL diagnostics with a grade of satisfactory or successful completion of LING 002 (FE 2).

020-1 General English 2. General English 2 focuses on reading and listening, with sentence and paragraph-level writing and integrated reading and listening texts. Goals: ability to comprehend 4-7th grade reading texts and media, write descriptive, narrative and opinion paragraphs, and listen for both main ideas and details. Prerequisite: CESL diagnostics with a grade of satisfactory or successful completion of LING 010 (GE 1).

030-1 Advanced English 1. AE 1 focuses on comprehending, summarizing, and responding to short and extended narrative texts written at 8-12th grade level. Goals: to identify/discuss author purpose, target audience, major/minor characters, and points of view; to recognize/identify the characteristics and structures of narrative texts; to identify issue and thesis statements and pro/con main ideas versus details; to follow events so as to sequence and predict orally and in writing; to participate in the writing process, learning techniques for pre-writing, idea and topic refinement, addition of details and structural improvements, drafting using the computer as a writing tool, and conferencing before revision and final presentation in newsletter or simple essay form. Prerequisite: CESL diagnostics with a grade of satisfactory or successful completion of LING 020 (GE 2).

040-1 Advanced English 2. Focusing on societal issues (e.g., effects of changing familial structures, gender roles in society, effects of modernization, social ethics) to provide a context for language. Learners are regularly involved in summarizing, evaluating, and responding to expository media written at the 9-12th grade level. Prerequisite: CESL diagnostics with a grade of satisfactory or successful completion of LING 030 (AE 1).

050-1 English for Academic Purposes 1. Introduction to and

practice of academic skills and strategies with content-based materials drawn from introductory freshmen-level texts. Focus on the ability to decode, comprehend, infer, learn, remember, and anticipate academic textual information. Prerequisite: CESL diagnostics with a grade of satisfactory or successful completion of AE 2.

060-1 English for Academic Purposes 2. In preparation for undergraduate studies, EAP 2 emphasizes the linguistic and cultural skills necessary to function and survive an American undergraduate-level classroom. Activities to include critical reading/thinking skills and strategies as applied to longer texts. Given teacher support and guidance, demonstrate ability to understand, study, and be tested over extensive (chapter-long written and 10-60 minute video) academic materials written above the 12th grade level. Participate in writing workshop to construct, revise, and critique supported writing, both argumentative and informative. Prerequisite: CESL diagnostics with a grade of satisfactory or successful completion of LING 050 (EAP 1).

070-1 CESL-Graduate Student English. In preparation for graduate studies, GSE emphasizes linguistic and cultural skills necessary to function and survive an American graduate-level classroom. Activities include critical reading/thinking skills and strategies as applied to longer academically-focused texts. Demonstrate ability to comprehend, summarize, discuss, present, and answer essay questions on graduate-level academic materials. Demonstrate ability to take and use well-organized notes. Write an academically supported research paper of a minimum of ten pages using accurate APA in-text and bibliographic citations. Prerequisite: CESL diagnostics with a grade of satisfactory or successful completion of LING 060 (EAP 2).

100-3 Speaking and Listening in English as a Second Language. Oral conversational and academic English. An elective for students who do not speak English as their first language. Classes are offered at beginning, intermediate and advanced levels. May be repeated at three different levels for a maximum of 9 credit hours. Mandatory Pass/Fail.

101-3 English Composition I for ESL Students. (University Core Curriculum) [IAI Course: C1 900] The first course in the university's two-course required composition sequence designed for ESL students. This course helps ESL writers become more comfortable with and proficient in academic writing in English. To this end, Linguistics 101 teaches students processes and strategies for planning, drafting, revising and editing their English writing for academic audiences. Course assignments focus on writing from primary and secondary sources. ESL equivalent to University Core Curriculum English 101.

102-3 English Composition II for ESL Students. (University Core Curriculum) [IAI Course: C1 901R] The second course in the university's two-course required composition sequence designed for ESL students. This course helps ESL writers become more comfortable with and proficient in research writing for academic audiences. Linguistics 102 focuses on writing from secondary sources, teaching students processes and strategies for planning, drafting, revising and editing papers that incorporate published material. All aspects of the research process are addressed, from locating and evaluating relevant sources to incorporating and documenting these sources in papers written for various purposes. Students must earn a grade of C or bet-

ter in LING 101 or ENGL 101 before beginning LING 102. For credit in the University Core Curriculum, students must earn a "C" or better in 102. Equivalent to University Core Curriculum ENGL 102. Prerequisite: LING 101 or ENGL 101.

104-3 Grammar in Language. Description and explanation of the major grammatical categories and structures found in a wide variety of languages, including English. Consideration of the role of language structures in such topics as the nature, origin, acquisition, and variation of language. Course is designed to give students insight into the basic concepts of grammar and show their interrelationship, importance, and functioning in human language.

200-3 Language, Society and the Mind. (University Core Curriculum) What distinguishes humans from other animals? This course addresses how language is a uniquely human phenomenon by exploring issues in language and society and psychological aspects of language use. Topics include language in conversation, differences between speakers of different ages/genders/regions/social groups, first and second language acquisition, bilingualism, language meaning and change, and the relationship between language and culture.

201-3 Language Diversity in the USA. (University Core Curriculum) An examination of different varieties of English and the growing presence of other languages in the United States. Local, regional and national perspectives are used to review current patterns of language diversity and to explore the impact of language issues on policies and practices in education, the legal system and the work place.

290-3 Advanced English Composition for ESL Students. This course helps ESL writers refine their writing in English, with a focus on broadening their understanding of the rhetorical expectations of the types of writing done in their professional disciplines, both in academia and in industry. Assignments focus on the exploration of research methods and writing tasks involved in various fields and in the job application process. Students must earn a grade of C or better in LING 102 or ENGL 102 before beginning LING 290. Prerequisite: LING 101 or ENGL 101 and LING 102 or ENGL 102.

298-1 Multicultural Applied Experience. (Multicultural Applied Experience Course) An applied experience, service-oriented credit in American diversity involving a group different from the student's own. Difference can be manifested by age, gender, ethnicity, nationality, political affiliation, race or class. Students can sign up for the one-credit experience in the same semester they fulfill the multicultural requirement for the University Core Curriculum or coordinate the credit with a particular core course on American diversity, although neither is required. Students should consult the department for course specifications regarding grading, work requirements and supervision. Graded Pass/Fail.

300-3 Introduction to Descriptive Linguistics. An introductory survey of descriptive and theoretical linguistics: assumptions, methods, goals, terminology, and data manipulation.

301-3 Language in Culture and Society. (Same as ANTH 301) The problem of the uniqueness of human language and how it fits into culture and society. The origin and development of language. Topics covered include animal and human communication, language and world view, and the meaning of meaning.

320I-3 Language, Gender and Power. (University Core Curriculum) (Same as WGSS 320I) This course looks at language practices and men and women from different cultures in terms of how speech reflects and shapes their social identities. Perspectives from the field of communication studies, linguistics, anthropology, psychology, and sociology will be used.

330-3 Language and Behavior. A wide-ranging examination of the implications of language study for people's view of themselves and their place in the world. Topics deal with the pervasiveness of verbal and non-verbal language in various aspects of modern society.

331-3 Pedagogical Grammar. Explores relationship among language structure, learning and teaching in order to understand the role of grammar in TESOL. Makes students more aware of how the English language works, the kinds of language that ESL learners (K-adult) produce and why they proceed through certain stages, and understand the role and effects of grammatical consciousness-raising on the development of ESL. Prerequisite: LING 300 and LING 353 or consent of department.

340-3 Second Language Acquisition. Introduction to key concepts and major theoretical and methodological issues in SLA research. Examines major developments in SAL in phonology, morphology, lexis, syntax, semantics and discourse and provides students with hands-on experience in describing and accounting for L2 data. An opportunity to design and implement a data-based study in an area of interest to students. Prerequisite: LING 300 or consent of instructor.

341-3 Introduction to Intercultural Communication. (See CMST 341)

353-3 Theory and Methods of TESOL. Theory and methods to teach ESL/EFL. Promotes eclecticism through reflective practice; overview of methods from early grammar translation to cognitive and communicative, integrated skills, technology and content-based approaches. Lecture, readings, discussion, demonstration, material review, lesson planning, micro-teaching.

382-3 Course Design for TESOL. Overview of issues and procedures in the design and implementation of courses for TESOL. Particular attention is given to recent developments such as content-based instruction. All major course components such as setting of objectives, syllabus design, content specification and evaluation are considered. In addition, resources available for addressing these issues will be discussed. Prerequisite: LING 300 and LING 353, or consent of instructor.

400-3 Formal Semantics. This course will introduce and develop formal mechanisms to encode meaning in natural language. We will deeply explore the topics of predisposition, definiteness, quantification, and semantic modeling. Mastery of these topics can be applied to many other semantic phenomena. By the end students will be able to:

- Understand and evaluate scholarly literature in semantics
- Approach problems in natural language from the perspective of a formal semanticist
- Understand and describe the role of semantics in generative approaches to language
- Produce novel work in semantics

402-3 Phonetics. Theory and practice of articulatory phonetics.

403-3 English Phonology. Study of English phonology, including phonetics, phonemics and prosodics. Prerequisite:

LING 300 or Graduate status or consent of department.

404-3 American Dialects. Regional variation and social stratification of American English. Phonological and syntactic differences among the major dialects of American English. Prerequisite: LING 300 or Graduate status or consent of department.

405-3 Introduction to Phonological Theories. A survey of various phonological theories from the 19th century up to the present, including theoretical issues arising there from and relationships among the theories. Limited data analysis within the perspectives of the different theories. Not for graduate credit. Prerequisite: LING 300 and LING 402 or consent of department.

406-3 Introduction to Historical Linguistics. (Same as ANTH 406) An introductory survey of historical and comparative linguistics, including terminology, assumptions and methods of investigation. Satisfies the CoLA Writing-Across-the-Curriculum requirement. Not open to graduate students in Linguistics. Prerequisite: LING 300, LING 405, and 408 or consent of department.

408-3 Introduction to Syntactic Theory. This course is an introduction to the major concepts and issues in generative grammar. Data from English and other languages will be examined and students will be provided with numerous opportunities to solve problems in syntax. Students will also be given an opportunity to carry out an individual project in syntax. Not for graduate credit. Prerequisite: LING 300 or consent of department.

415-3 Sociolinguistics. (Same as ANTH 415) History, methodology, and future prospects in the study of social dialectology, linguistic geography, multilingualism, languages in contact, pidgin and creole languages, and language planning. Prerequisite: LING 300 or Graduate status or consent of instructor.

416-3 Spanish in the U.S.A. (Same as ANTH 416) This course offers a survey of the historical, social, political, linguistic and educational issues surrounding the Spanish language in the United States. Topics to be addressed include Spanish language use and bilingualism, language maintenance and shift, education of Latino populations, Hispanic diversity, and Latino literature.

426-3 Gender, Culture and Language. (Same as WGSS 426 and ANTH 426) This course is designed for students who have had some exposure to gender studies. It will focus on readings in language and gender in the fields of anthropological- and socio-linguistics. Issues to be addressed are the differences between language use by men/boys and women/girls, how these differences are embedded in other cultural practices, and the various methodologies and theories that have been used to study gendered language use.

430-3 to 6 (3,3) Grammatical Structures. Detailed analysis of the structure of particular languages. May be repeated to a total of six hours credit with consent of department. Prerequisite: LING 300 or Graduate status or consent of department.

440-3 to 9 (3 per topic) Topics in Linguistics. Selected topics in theoretical and applied linguistics. May be repeated to a total of nine hours credit under different topics. Not for graduate credit.

442-3 Language Planning. Survey of the field of language planning: definitions and typologies, language problems, language treatment, attitudes and beliefs about language, rela-

tions between language planning processes and other kinds of social and economic planning, linguistic innovations and other processes of language change, implementation of language policies. Prerequisite: LING 300 or Graduate status or consent of department.

443-3 Bilingualism. (Same as PSYC 443) Examines the linguistic, psycholinguistic, sociolinguistic and educational aspects of bilingualism, particularly as pertaining to the care and education of bilingual children. Useful for teachers, speech therapists, doctors, psychologists, counselors, and others working with bilinguals. Practical applications and data-based research. Not for graduate credit. Prerequisite: LING 300 or consent of instructor.

445-3 Psycholinguistics. (Same as PSYC 445) A broad spectrum introduction to psycholinguistics. Topics to be covered include general methodology for the study of psycholinguistics, the nature of language, theories of human communication, language comprehension and production, first and second language acquisition, meaning and thought, natural animal communication systems and language and the brain. Prerequisite: LING 300 or Graduate status or consent of instructor.

450-3 to 6 (3,3) Language Families. A synchronic survey of particular language families or sub-families. May be repeated to a total of six hours credit with consent of department. Prerequisite: LING 300 or Graduate status or consent of instructor.

452-3 Field Methods in Linguistics. At a time when minority languages are dwindling and becoming extinct, language documentation is more important than ever. This course has two pedagogical goals, related to the documentation of understudied languages. The first goal is to train students on the methods of eliciting and evaluating data to construct a detailed linguistic description and analysis of an unknown language, essentially from scratch, by working with a native speaker of the language. The second goal is for students to discover specific details of the structure of the language under investigation and document them for posterity.

454-3 Observation and Practice in TESOL. Focused observation of a wide variety of classes in English as a second language and in foreign languages. Some supervised teaching or tutoring. Analysis of textbooks for TESOL. Not for graduate credit. Prerequisite: LING 353 or consent of department.

456-3 Contrastive and Error Analysis. Examination of the interference of other languages into the English of ESL learners on the levels of phonetics, phonology, morphology, syntax, lexicon, semantics, and orthography. Study of written and spoken errors, diagnosis of errors, and development of techniques for correction. Not for graduate credit. Prerequisite: LING 340 or consent of instructor.

470-3 Foundations of Bilingual Education. Provides a broad overview of the field of bilingual education, including related terminology; historical, political, social, theoretical, international, economic, cultural, and legal aspects of bilingual education; and educational program models for serving LEP students.

471-3 Bilingual Education Methods and Materials. Methods and materials for: bilingual content, biliteracy, sheltered and multicultural instruction and for ELLS with disabilities; techniques for advocacy for ELLS, writing funding proposals, and conducting program reviews and workshops. Includes ma-

terials reviews, lesson planning and micro-teaching.

472-3 Second Language Assessment. Assessment concepts and terminology; how to select, administer, and interpret standardized tests for English learners; develop traditional and alternative classroom tests of language and content instruction. Course includes lectures, readings, class discussions, and individual and group projects.

480A-3 to 12 Less Commonly Taught Languages. Elementary course in less commonly taught language. Languages vary. Section (A) corresponds to first semester, section (B) of the same language is a continuation of section (A). Must be taken in (A), (B) sequence when available. Sequence may be repeated with a different language. Students must earn a grade of C or better in LING 480A before beginning LING 480B.

480B-3-12 Less Commonly Taught Languages. Elementary course in less commonly taught language. Languages vary. Section B is a continuation of section A. Must be taken in A,B sequence when available. Sequence may be repeated with a different language. Students must earn a grade of C or better in LING 480A before beginning LING 480B. Prerequisite: LING 480A.

497-1 to 8 Readings in Linguistics. Directed readings in selected topics in linguistics. Not for graduate credit. Special approval needed from the instructor.

Linguistics Faculty

Angelis, Paul J., Associate Professor, *Emeritus*, Ph.D., Georgetown University, 1968.

Baertsch, Karen S., Associate Professor, Ph.D., Indiana University, 2002.

Berry, James, Lecturer, Ph.D., Arizona State University, 2011.

Brutten, Sheila R., Associate Professor, *Emerita*, M.A., Southern Illinois University Carbondale, 1965.

Carstens, Vicki, Professor and *Chair*, Ph.D., UCLA, 1991.

Chang, Soo Jung, Senior Lecturer, Ph.D., University of Georgia, 2009.

Charkova, Krassimira, Senior Lecturer, Ph.D., Southern Illinois University Carbondale, 2001.

Cheng, Dongmei, Lecturer, Ph.D., Northern Arizona University, 2013.

Dotson, John E., Professor, *Emeritus*, Ph.D., Johns Hopkins University, 1969.

Friedenberg, Joan, Professor, *Emerita*, Ph.D., University of Illinois, 1979.

Fuller, Janet M., Associate Professor, Ph.D., University of South Carolina, 1997.

Gilbert, Glenn G., Professor, *Emeritus*, Ph.D., Harvard University, 1963.

Halliday, Laura J., Senior Lecturer, Ph.D., Southern Illinois University Carbondale, 2005.

Kim, Alan Hyun-Oak, Associate Professor, Ph.D., University of Southern California, 1985.

Lakshmanan, Usha, Professor, Ph.D., University of Michigan, 1989.

Montavon, Mary V., Lecturer, *Emerita*, Ph.D., University of Illinois, 2003.

Parish, Charles, Professor, *Emeritus*, Ph.D., University of New Mexico, 1959.

Perkins, Allen Kyle, Professor, *Emeritus*, Ph.D., University of Michigan at Ann Arbor, 1976.

Punske, Jeffrey, Assistant Professor, Ph.D., University of Arizona, 2012.

Management

(Department, Major, Minor, Courses, Faculty)

Management is the art of decision-making, supervision and strategic planning for effective use of physical and human resources to achieve high performance. The curriculum provides a broad exposure to the key functions of management. It helps develop technical, technological and human resource management skills needed in modern enterprises. The management curriculum develops valuable methods, tools, techniques and skills while emphasizing creative thinking and problem solving. Students can satisfy the general requirements of a management major and direct their programs of study toward several career tracks. These specializations include General Management, Entrepreneurship, Global E-Business, Supply Chain Management, Personnel Management, and Management of Health-Care Enterprises.

General Management. Managers make and implement decisions through and with people working together toward common goals. The Curriculum focuses on the organizational and environmental factors that influence individuals and groups, particularly in work settings. This includes developing leadership, organizational and behavioral skills that support high performance organizations.

Entrepreneurship. Entrepreneurship is the initiation and management of a new venture or revitalizing an existing firm. This specialization explores the special problems associated with starting a new venture and operating an independent, and often small, business venture.

Global E-Business. Many businesses and organizations operate and compete in a global arena centered on web-based E-commerce technologies that involve transacting business and collaborating with customers, employees, and business partners. This Curriculum integrates many traditional information systems courses with important emphases related to managing E-business systems, processes, technologies and models in a worldwide setting.

Supply Chain Management. In today's global competitive environment, organizations must efficiently manage the flow of materials, goods, services, and information throughout the value chain, from suppliers to customers. Customers require high quality products and services at competitive prices, when they want them, where they want them. Supply Chain management ensures the smooth flow of materials and efficient transformation of various inputs into goods and services while maintaining high quality.

Personnel Management. The Personnel Management specialization trains students in managerial strategies and programs for making the most effective use of the skills and abilities of organizational personnel. It considers processes such as employee selection, training, career development, diversity, motivation, team-work, and performance appraisal, as well as the impact of

cultural, environmental, social, and legal influences on managerial practice.

Management of Health-Care Enterprises. This specialization focuses on the application of sound principles of management and leadership to the effective operation of health care facilities and health service organizations. It focuses on general principles of individual, group, and organizational effectiveness and the application of those principles to the unique societal, structural, legal, and political challenges faced by the health care field.

Students in the six specializations in management prepare for career opportunities in both profit and non-profit, service and manufacturing organizations. The flexibility provided by our six specializations creates a wide variety of employment opportunities. Additionally, students may seek careers as consultants with any of the various consulting firms.

A specialization in General Management provides students with an excellent background for entry-level positions as management trainees, supervisors, personnel specialists, or human resource coordinators.

A specialization in Entrepreneurship provides training in the basics of small business management, marketing and financial planning and budgeting. These skills are necessary for starting and running small businesses, franchise operations and family concerns.

A specialization in Global E-Business can prepare students for positions in the national and international arena dealing with electronic commerce and business. These can include web designer, e-business consultant, database and data administration, systems development, and e-business management.

A specialization in Supply Chain Management prepares students for entry-level positions as operations supervisors, operations schedulers, logistics planners, or buyers.

A specialization in Personnel Management prepares students for positions such as personnel manager, recruiter, or director of personnel.

A specialization in Management of Health-Care Enterprises can prepare students for many different possible positions in health-care organizations or in companies that do business with health-care organizations. These could include office manager, assistant administrator, or project coordinator.

Students majoring in other areas such as accounting, finance, or marketing can obtain a double major in management that will facilitate upward mobility in their careers.

A major in Management*(as described below) requires students to earn a minimum grade of *C* in each of the courses taken to satisfy the requirements for the Management major, and students must earn a minimum 2.0 grade point average for those major courses. Additionally, for prerequisite purposes for all MGMT-numbered courses having a MGMT-numbered course as a prerequisite: a student must have a grade of *C* or better in each MGMT-numbered prerequisite course including ACCT/FIN/MGMT 208.

The Capstone Option for Transfer Students

The Capstone Option is available to students who have earned an Associate in Applied Science (AAS) degree or have the equivalent and who have a cumulative 2.0/4.0 gpa on all accredited coursework prior to the completion of the AAS, as calculated by

SIU. The Capstone Option reduces the University Core Curriculum requirements from 41 to 30 hours, therefore reducing the time to degree completion. See Chapter 3 for more information on this option. Students who apply for the Capstone Option will work with the College of Business Advisement Office for approval of the Capstone Option and will complete a personal contract for a degree completion plan.

Technology Fee and Differential Tuition

The College of Business assesses College of Business majors a technology fee of \$6.00 per credit hour for Fall and Spring semesters up to twelve semester hours and Summer up to six semester hours. The technology fee is being phased out and will be subsumed under the differential tuition surcharge (see item below). Consequently, students will be charged either the technology fee or the differential tuition surcharge but not both.

Starting Fall 2008, the College of Business has implemented a differential tuition surcharge of 15% of applicable tuition for declared College of Business majors who are new students. The differential tuition surcharge will be assessed at the in-state tuition rate. If students are charged the differential tuition surcharge, the technology fee (in above item) will not be assessed. Starting Fall 2008, the College of Business has implemented a “minor program fee” for other than College of Business majors that is equal to 15% of 15 credit hours of applicable tuition for declared College of Business minors. This fee is applicable for new students.

Bachelor of Science Degree in Management, College of Business

<i>University Core Curriculum Requirements</i>	41
<i>Professional Business Core</i> (See Chapter 4)	45
<i>Requirements for Major in Management*</i>	21

*Minimum grade of C required for all classes in major area.

Management Core 341, 380, 483	9
Specialization (Choose one)	12
General Management:	
Select four: MGMT 352, 385, 420, 431, 446, 474, 485, 495	
Entrepreneurship:	
FIN 350, MGMT 350, 471; select one:	
MGMT 420, 422, 431, 495	
Global E-Business:	
Select four: MGMT 360, 362, 411, 420, 421, 422, 456, 495	
Supply Chain Management:	
MGMT 352, 452; select two: MGMT 420, 456, 495, IT 465, 470A, 470B	
Personnel Management:	
MGMT 385; select three: MGMT 352, 431, 474, 485, 495, PSYC 307, 420	
Management of Health-Care Enterprises:	
MGMT 385, HCM 360; select two: MGMT 420, 474, 485, 495, HCM 384, 385, 388, 420	
<i>Approved Electives</i>	13
<i>Total</i>	120

Management Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCC Fine Arts, UCC Human Health ...	3	2

MATH 108/Approved Elective ⁴ ,		
MATH 140	3	4
UCC Science	3	3
ENGL 101, 102	3	3
UCOL 101, PSYC 102 ¹ /SOC 108	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
CMST 101, ENGL 291	3	3
UCC Humanities, FIN 270	3	3
ACCT 220, 230	3	3
MATH 139, ACCT/FIN/MGMT 208	3	3
ECON 240, 241	3	3
<i>Total</i>	15	15

THIRD YEAR	FALL	SPRING
UCC Humanities, UCC Integrative	3	3
BUS 302, MGMT 341	2	3
MGMT 345, 380	3	3
FIN 330, MGMT 318	3	3
MGMT 304, MKTG 304	3	3
Approved Elective ⁴	2	-
<i>Total</i>	16	15

FOURTH YEAR	FALL	SPRING
MGMT 483, 481	3	3
Specialization ³	3	3
Specialization ³	3	3
300-400 CoB Elective, Approved		
Elective	3	3
Approved Electives ⁴	3	2
<i>Total</i>	15	14

¹Personnel Management specialization should take PSYC 102.

²The combination of Finance 280 (Business Law I) and Finance 380 (Business Law II) may be substituted for Finance 270 and is highly recommended for Accounting majors.

³Major option or Major specialization.

⁴120 semester hours are required for graduation. Approved electives should be selected in consultation with academic advisor to meet this requirement.

Management Minor

For College of Business majors, a minor in Management consists of a minimum of 15 semester hours, including Management 345 and twelve approved credit hours in Management at the 300 level or above. For non-College of Business majors, a minor in Management consists of a minimum of 15 semester hours, including Management 304, 318, 345 and six credit hours in Management at the 300 level or above. An advisor within the College of Business must be consulted before selecting Management as a minor. All prerequisites for the Management minor classes must be satisfied.

A minor from the College of Business requires students to earn a minimum grade of C in each of the courses taken to satisfy the requirements for their minor, and students must earn a minimum 2.0 grade point average for those minor courses.

Courses (MGMT)

170-3 Introduction to Business. Survey of business. General knowledge of the modern business world, the composition and functions of the business organization, as well as business as a social institution. Does not satisfy a College of Business requirement. Restricted to freshmen and sophomores.

202-3 Business Communications. Creating and managing written and oral administrative communications including the analysis, planning and practice of composing different types of internal and external communications in various administrative and business contexts. Prerequisite: ENGL 101 or ENGL 102. Course material fee: \$98.

208-3 Business Data Analysis. (Same as ACCT 208 and FIN 208) [IAI Course: BUS 901] Uses of data in policy formulation are discussed. Emphasis is placed on the conversion of raw information into statistics, which are useful to the decision-maker. Problems stress solution to questions typically raised in businesses. Prerequisite: MATH 139. Course material fee: \$128.

304-3 Introduction to Management. Basic concepts of the administrative process are considered with emphasis on executive action to develop policy, direction, and control based on traditional and behavioral science approaches to decision making. Restrictions: College of Business majors or minors, junior standing; or departmental approval required. Course material fee: \$123.

318-3 Production-Operations Management. This course is an introduction to the design, planning, and control of manufacturing and service operations. Topical coverage includes operations strategy, process management, project management, Total Quality Management, and Just-in-time/Lean operations, as well as traditional techniques for facility location, layout, and inventory management. Prerequisite: MATH 139 or MATH 140, ACCT/FIN/MGMT 208 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing; or departmental approval required. Course material fee: \$128.

341-3 Organizational Behavior. The study of behavioral issues in management, including analyses of individual, group, and intergroup relations under a broad range of organizational settings. Includes discussion of theory, cases, and managerial applications. Prerequisites: MATH 139; ACCT/FIN/MGMT 208 and MGMT 304 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing; or departmental approval required.

345-3 Computer Information Systems. Integrates topics of management and organization, information, computers, and the systems approach. Emphasizes planning, design, and implementation of information systems to aid in knowledge work. Application of computer technologies to develop, manipulate, and analyze systems including enterprise resource planning systems. Hands-on problem solving in Excel, Access and ERP software. Restrictions: College of Business majors or minors, junior standing.

350-3 Small Business Management. Identification of small business, its importance and relationship to the United States economy, and the opportunities and requirements unique to operation and management. Personal characteristics, interpersonal relationships, organizational systems, and decision-mak-

ing processes are examined for their contribution to the success or failure of the firm. Restrictions: College of Business majors or minors, junior standing; or departmental approval required.

352-3 Management Science. This course is an introduction to mathematical model building. The focus of this course is on modeling business problems and the solution techniques commonly used to solve such models. Topical coverage includes decision theory, mathematical programming, network models, scheduling models, queuing models, and simulation. Prerequisite: MATH 139, MATH 140; ACCT/FIN/MGMT 208, MGMT 318, MGMT 345 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing; or departmental approval required.

360-3 Database Management. This course provides an introduction to database design and database management in business. It covers analysis, design, and implementation of organizational databases including data modeling, database management systems, data-based information systems design, security, and data quality assurance. Prerequisite: MGMT 345 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing; or departmental approval required. Course material fee: \$140.

362A-3 to 9 Business Applications Programming-Visual Basic.Net. An introduction to the principles of computer programming and business applications development tools. Includes basic programming constructs, language elements, graphical, user interface design, and database programming in integrated development environments. Prerequisite: MGMT 345 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing; or departmental approval required.

362B-3 to 9 Business Applications Programming-ERP Languages. An introduction to the principles of computer programming and business applications development tools. Includes basic programming constructs, language elements, graphical, user interface design, and database programming in integrated development environments. Prerequisite: MGMT 345 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing; or departmental approval required.

362C-3 to 9 Business Applications Programming-Java. An introduction to the principles of computer programming and business applications development tools. Includes basic programming constructs, language elements, graphical, user interface design, and database programming in integrated development environments. Prerequisite: MGMT 345 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing; or departmental approval required.

362D-3 to 9 Business Applications Programming-Visual C++. An introduction to the principles of computer programming and business applications development tools. Includes basic programming constructs, language elements, graphical, user interface design, and database programming in integrated development environments. Prerequisite: MGMT 345 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing; or departmental approval required.

362E-3 to 9 Business Applications Programming-Other. An introduction to the principles of computer programming and business applications development tools. Includes basic pro-

programming constructs, language elements, graphical, user interface design, and database programming in integrated development environments. Prerequisite: MGMT 345 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing; or departmental approval required.

380-3 Managing Information Systems. Management issues related to information and information technology that confront today's diverse organizations. Topics include integration and use of information systems within organizations and organizational partners, business planning for information systems, legal and ethical considerations with information systems, social and technological trends. Prerequisite: MGMT 345 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing; or departmental approval required.

385-3 Personnel and Human Resources Management. (Same as PSYC 322) An introduction to the development, application, and evaluation of policies, procedures, and programs for the recruitment, selection, development and utilization of human resources in an organization. Prerequisites: MATH 139, ACCT/FIN/MGMT 208 and MGMT 304 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing; or departmental approval required.

411-3 Enterprise Networks and Communications. (Same as ACCT 411) This course focuses on the application of data communications and network technologies for improving business. Coverage includes, but is not restricted to, an introduction to the principles of data transmission technology, various communication architectures and protocols, basic network design principles, Internet and Intranet technologies, data security issues and elements of network management. Not for graduate credit. Prerequisite: MGMT 345 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing; or departmental approval required.

420-3 Introduction to Project Management. Application of project management principles for improving business. Coverage includes, but is not limited to: introduction to the principles of project management, Project Management Institute (PMI) guidelines, US and international project management scenarios, and working together as a project management team. Students will work with Project Management Body of Knowledge (PMBOK) guidelines. Students will accrue enough education hours to sit for the PMI CAPM certification. Restrictions: College of Business majors or minors, junior standing; or departmental approval required.

421-3 Information Systems Analysis and Design. Strategies and techniques for structured analysis and design in the development of information systems. System development using structured tools/techniques for describing process flows, data flows, and data structures. Alternative methods of system development are also discussed. Not for graduate credit. Prerequisite: MGMT 360 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing; or departmental approval required.

422-3 Business Systems Development. An introduction to web-based, e-business development. Hands-on exercises in Java-Script, Active Server Pages.Net and related tools for web design, client scripting, server scripting, and web database transactions. Not for graduate credit. Prerequisite: MGMT 360 with a grade of C or better. Restrictions: College of Business majors

or minors, junior standing; or departmental approval required.

431-3 Organizational Design and Structures. The study of modern theories of complex organizations. Particular emphasis is placed on open-systems perspectives of administrative theory and the adaptation of the organization to a changing environment. Not for graduate credit. Prerequisite: MGMT 341 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing; or departmental approval required.

446-3 Leadership and Managerial Behavior. This course will concentrate on leader and manager behavior at middle and upper organizational levels. Emphasis will be placed on leader and manager effectiveness and the factors that impact effectiveness. Not for graduate credit. Prerequisite: MGMT 341 with a grade of C or better. Restricted to College of Business major or minor, junior standing. Course material fee: \$100.

452-3 Supply Chain Transportation and Logistics. This course examines the areas of transportation and logistics as they relate to supply chain management. Not for graduate credit. Prerequisite: MGMT 318 with a grade of C or better. Restricted to College of Business major or minor, junior standing.

456-3 Managing Global E-Business Systems. The organizational and managerial issues affecting global e-business today are addressed. Topics included are corporate strategy and IT architecture in a global marketplace; outsourcing impacts on e-business; legal, social, and ethical issues; information security; and e-business models and IT. Not for graduate credit. Prerequisite: MGMT 345 with a grade of C or better. Restrictions: College of Business majors or minors; or departmental approval required.

471-3 Seminar in Entrepreneurship. Investigation of selected special or advanced topics in seminar format. Topics may include but are not limited to entrepreneurship, small business analysis, or topics related to the ownership and management of a business. Activities will include library and field research, data analysis, report writing, and active participation in seminar presentations and discussions. Designed particularly for the student who has completed FIN 350 and MGMT 350 and has discussed personal small business or entrepreneurial objectives with the instructor prior to registration. Restrictions: College of Business majors or minors, junior standing; or departmental approval required.

474-3 Management's Responsibility in Society. Analysis of the cultural, social, political, economic, and immediate environment of the organization. Particular emphasis is given to the manner in which the manager adapts to and is influenced by the environment and its conflicting demands. Not for graduate credit. Restrictions: College of Business majors or minors, senior standing; or departmental approval required. Course material fee: \$133.

481-3 Administrative Policy. Development of organizational strategies and policies within environmental and resource limitations. Emphasis upon the application and integration of basic principles from all areas of business by case problem analysis, simulation exercises, and group participation. Not for graduate credit. Prerequisites: MGMT 304, MGMT 318 with grades of C or better, FIN 330, and MKTG 304. Restrictions: College of Business majors or minors, senior standing.

483-3 Advanced Production-Operations Management. An in-depth study of production and inventory management with

a focus on preparation for the American Production and Inventory Control Society (APICS) certification examinations. Topics covered include planning for material and capacity requirements, scheduling, Theory of Constraints, Just-in-Time and Total Quality Management. Not for graduate credit. Prerequisite: MGMT 318 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing; or departmental approval required.

485-3 Organizational Change and Development. Analysis of problems in personnel management with emphasis on current trends and techniques. Case problems, special reports and experiential approaches are used as a basis for examining ways of using an organizations' human resources to best advantage. Not for graduate credit. Prerequisite: MGMT 341 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing; or departmental approval required.

491-1 to 6 Independent Study. Utilizes special faculty resources to enable individually, the exploration of an advanced area of study through research by means of data analysis and/or literature search. Not for graduate credit. Restrictions: College of Business majors, junior standing, and departmental approval required.

495-3 Internship in Management. Supervised work experience that relates to the student's academic program and career objectives. Not repeatable for credit. Not for graduate credit. Mandatory Pass/Fail. Restrictions: Management majors, junior standing, and departmental approval required.

497-3 Special Topics in Management. An exploration of selected current topics in management with in emphasis on covering a particular area in depth. Timely topics are announced in advance, and both faculty and students may suggest topics. Students may repeat enrollment in the course as the topic varies. Restriction: College of Business majors or minors, junior standing; special approval needed from the department.

Management Faculty

Bateman, David N., Professor, *Emeritus*, Ph.D., Southern Illinois University, 1970.

Dai, Ye, Assistant Professor, Ph.D., University of Texas at Austin, 2012.

DeYong, Gregory D., Assistant Professor, Ph.D., Indiana University 2010.

Goodale, John C., Associate Professor, Ph.D., University of Utah, 1996.

Karau, Steven J., Professor, Ph.D., Purdue University, 1993.

Larson, Lars L., Associate Professor, *Emeritus*, Ph.D., University of Illinois, 1971.

Litecky, Charles R., Professor, *Emeritus*, Ph.D., University of Minnesota, 1974.

McKinley, William, Professor, *Emeritus*, Ph.D., Columbia University, 1983.

Melcher, Arlyn J., Professor, *Emeritus*, Ph.D., University of Chicago, 1964.

Mykytyn, Jr., Peter P., Professor and *Chair*, Ph.D., Arizona State University, 1985.

Nelson, H. James, Associate Professor, Ph.D., The University of Colorado, 1999.

Nelson, Kay M., Professor, Ph.D., The University of Texas at Austin, 1995.

Nelson, Reed E., Professor, *Emeritus*, Ph.D., Cornell University, 1983.

Pearson, John M., Professor, D.B.A., Mississippi State University, 1991.

Sekaran, Uma, Professor, *Emerita*, Ph.D., University of California at Los Angeles, 1977.

Stubbart, Charles I., Associate Professor, *Emeritus*, Ph.D., University of Pittsburgh, 1983.

Tadisina, Suresh, Professor, *Emeritus*, Ph.D., University of Cincinnati, 1987.

Vicars, William M., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University, 1969.

White, Gregory P., Professor, *Emeritus*, Ph.D., University of Cincinnati, 1976.

Marketing (Department, Major, Courses, Faculty)

Marketing involves a system of interrelated activities used to develop, price, promote and distribute goods and services to customers, creating exchanges that satisfy individual and organizational goals. It is the marketing function that links the production of goods and services with their use. Effective marketing is essential to organizations in their efforts to achieve a competitive advantage that can be sustained. Without this, growth and survival of the organization are threatened.

The bachelor's degree program in marketing encompasses the entire key marketing functions, including those in e-commerce. Graduates may take advantage of challenging and dynamic career opportunities in large and small businesses, in government, and in non-profit organizations. Careers in the field of marketing cut across many industries and involve a variety of organizations. Some of the career options open to the marketing major include industrial selling and sales management, retailing, advertising, marketing research, distribution, international marketing and marketing management.

A major in Marketing requires students to earn a minimum grade of C in each of the courses taken to satisfy the requirements for the Marketing major*(as described below), and students must earn a minimum 2.0 grade point average for those major courses.

The Capstone Option for Transfer Students

The Capstone Option is available to students who have earned an Associate in Applied Science (AAS) degree or have the equivalent and who have a cumulative 2.0/4.0 GPA on all accredited coursework prior to the completion of the AAS, as calculated by SIU. The Capstone Option reduces the University Core Curriculum requirements from 41 to 30 hours, therefore reducing the time to degree completion. See Chapter 3 for more information on this option. Students who apply for the Capstone Option will work with the College of Business Advisement Office for approval of the Capstone Option and will complete a personal contract for a degree completion plan.

Technology Fee and Differential Tuition

The College of Business assesses College of Business majors a technology fee of \$6.00 per credit hour for Fall and Spring semesters up to twelve semester hours and Summer up to six semester hours. The technology fee is being phased out and will be subsumed under the differential tuition surcharge (see item

below). Consequently, students will be charged either the technology fee or the differential tuition surcharge but not both. Starting Fall 2008, the College of Business has implemented a differential tuition surcharge of 15% of applicable tuition for declared College of Business majors that are new students. The differential tuition surcharge will be assessed at the in-state tuition rate. If students are charged the differential tuition surcharge, the technology fee (in above item) will not be assessed. Starting Fall 2008, the College of Business has implemented a “minor program fee” for other than College of Business majors that is equal to 15% of 15 credit hours of applicable tuition for declared College of Business minors. This fee is applicable for new students.

Bachelor of Science Degree in Marketing, College of Business

<i>University Core Curriculum Requirements</i>	41
<i>Professional Business Core</i> (See Chapter 4)	45
<i>Requirements for Major in Marketing*</i>	24
*Minimum grade of C required for all classes in major area.	
Marketing Core 305, 329, 363, 390, 493	15
Marketing Electives	9
<i>Approved Electives</i>	10
Total	120

Marketing Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCC Human Health, UCC Fine Arts ...	2	3
ENGL 101, 102.....	3	3
UCC Science.....	3	3
UCOL 101, PSYC 102/SOC 108	3	3
MATH 140, 139	4	3
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
ACCT 220, 230	3	3
ECON 241, 240.....	3	3
ACCT/FIN/MGMT 208, FIN 270 ²	3	3
UCC Integrative Studies, UCC Humanities.....	3	3
CMST 101, ENGL 291	3	3
<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING
MGMT 304, 345	3	3
MKTG 304, 305	3	3
FIN 330, MKTG 390	3	3
MKTG Elective.....	-	3
UCC Humanities, Approved Elective ¹ ...	3	2
300-400 CoB prefix Elective, BUS 302 ..	3	2
<i>Total</i>	15	16
FOURTH YEAR	FALL	SPRING
MKTG Elective.....	3	3
MGMT 318, 481.....	3	3
MKTG 329, 493	3	3
MKTG 363.....	3	-

Approved Elective ¹	3	5
Total	15	14

¹120 semester hours are required for graduation. Approved electives should be selected in consultation with academic advisor to meet this requirement.

²The combination of Finance 280 (Business Law I) and Finance 380 (Business Law II) may be substituted for Finance 270 and is highly recommended for Accounting majors.

Marketing Minor

A minor in Marketing consists of a minimum of 15 semester hours, including marketing 304, 305 and nine credit hours in Marketing at the 300 level or above. All prerequisites for these classes must also be satisfied. Marketing 390, 493, 495 and 499 may not be taken as part of the minor in Marketing. An advisor within the College of Business must be consulted before selecting this field as a minor.

A minor from the College of Business requires students to earn a minimum grade of C in each of the courses taken to satisfy the requirements for their minor, and students must earn a minimum 2.0 grade point average for those minor courses.

Courses (MKTG)

304-3 Marketing Management. An introduction to issues involved in managing the firm’s marketing activities in a dynamic environment. Introduces and discusses how concepts such as branding, pricing, promotion, and distribution enhance customer value and satisfaction. Examines how firms leverage technology to improve the efficacy of both traditional and e-commerce marketing activities. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required.

305-3 Consumer Behavior. Examines the psychological and sociological factors that influence consumption and decision-making. Studies the practical implications of consumer attitudes and behavior for such marketing activities as merchandising, market research, distribution, product development, pricing, branding, and e-commerce. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required. Course material fee: \$129.

329-3 Marketing Channels. The methods and processes used in the distribution of consumer and industrial products and services. Emphasis is upon the ways in which certain basic distribution functions are carried out in the traditional channel system as well as e-commerce. The roles of a variety of sellers and buyers in for-profit and not-for-profit manufacturers, wholesalers, retailers and e-businesses as parts of this system are analyzed. Prerequisite: MKTG 304 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required.

336-3 International Business. Business activities of firms and social organizations are examined in an international/global environment. The course examines the fundamental concepts and principles of international/global business. It analyzes the marketing, finance, accounting, managerial, logistics, and production functions of international/global operations. It examines the changing technological environment as it impacts international/global business, including the realm of e-commerce.

Prerequisite: MKTG 304 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required.

350-3 Small Business Marketing. Deals with principles involved in locating market opportunities and developing growth plans for traditional and electronic commerce businesses. Taught from the point of view of the owner manager. Not approved as an elective for marketing majors. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required.

363-3 Strategic Promotion Management. The planning and management of marketing communication activities including advertising, personal selling, sales promotion, public relations, packaging and branding. The emphasis in the course is on strategic issues rather than tactical details. A consulting project involving a real client is usually required. Prerequisite: MKTG 304 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required.

364-3 Internet Marketing and Social Media. Introduction to digital marketing and marketing on the internet, including email marketing, social networks, search engine advertising and optimization, blogging, virtual communities, viral and affiliate marketing, mobile marketing, and online B2B communications. Focus is on how firms can use these new mediums to communicate with target audiences, deepen their relationships with online customers, and promote their products/services. Prerequisite: MKTG 304 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required.

380-3 Professional Sales. Analysis of professional selling activities and how they fit into the firms promotional efforts. The course examines the dynamics of selling in traditional and e-commerce settings. The course emphasizes preparing the student via video taping to make sales presentations in business settings. Prerequisite: MKTG 304 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required.

390-3 Marketing Research and Analysis. The application of traditional and electronic media procedures and theories appropriate to solving marketing problems related to customer and competitive intelligence and marketing information systems. Prerequisites: MATH 139; ACCT/FIN/MGMT 208 and MKTG 304 with a grade of C or higher. Restrictions: College of Business majors, junior standing; departmental approval required.

401-3 Retail Management. Designed to present and integrate basic principles in decision areas such as location, layout, organization, personnel, merchandise control, pricing, sales promotion, traditional and e-commerce marketing strategies, and channel development considerations. A strategic managerial perspective of retail merchandising. Prerequisite: MKTG 304 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required.

405-3 Brand Management. This course is about branding, and the ways brands acquire and maintain economic and non-economic value. During our time together, we will explore the origins, power, theory, meaning, relevance and practice of brands, brand development, brand metrics and brand manage-

ment. Prerequisite: MKTG 304 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required.

435-3 International Marketing. Analysis of international operations. Emphasis on the factors influencing marketing to and within foreign countries and the alternative methods of operations open to international firms including e-commerce. Prerequisite: MKTG 304 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required.

438-3 Sales Management. Analysis of the sales effort within the marketing system. Philosophies, concepts and judgment criteria of the sales function in relation to the total marketing program. Emphasis on the integration of computer- and internet-based technologies in the strategic development and operations of the sales force. Prerequisite: MKTG 304 and MGMT 304 with grades of C or better. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required.

463-3 Advertising Management. Deals with advertising from the viewpoint of business management. Discussion of integrated marketing communication and problems of integrating advertising strategy into the firm's total marketing program. Course discusses the role of advertising in different business environments such as technology driven markets and electronic commerce. Prerequisite: MKTG 304 and MKTG 363 with grades of C or better. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required.

489-3 Services Marketing. An exploration of the special challenges of services marketing, including analyzing and developing solutions for new service design and innovation; branding and selling services; service quality and customer satisfaction; infusion of services into manufacturing industries; service delivery and distribution including through intermediaries and electronic channels; self-service technology and smart services; pricing and ROI of services; and service failure and recovery. Prerequisite: MKTG 304 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required.

490-3 Marketing Evaluation and Metrics. The course teaches mathematical tools to aid in the decision-making that occurs in many if not most marketing positions. Students will apply basic economic, financial, and accounting techniques to solve marketing problems. Prerequisite: MKTG 304 with a grade of C or better, MATH 139, ACCT 220 and 230, FIN 330, ACCT/FIN/MGMT 208, MGMT 345. Restrictions: College of Business majors or minors, junior standing or higher.

493-3 Marketing Strategy. Integrates all marketing concepts discussed in core required marketing courses. The course is aimed at developing the student's ability to think comprehensively, and to apply marketing concepts in traditional and e-marketing problems. Prerequisite: MKTG 305, 329, 363 and 390 with grades of C or better. Restrictions: Marketing major or departmental approval required.

495-3 Internship in Marketing. Provides the student an opportunity to participate in an internship program coinciding with areas of interest. Not for graduate credit. Mandatory Pass/Fail. Prerequisite: MKTG 304, 305 and one additional market-

ing course pertinent to internship excluding MKTG 350, a 3.0 GPA or better in marketing courses and a 3.0 GPA or better in SIUC upper division College of Business courses. Restrictions: College of Business majors, junior standing or higher. Special approval needed from the instructor and department.

496-3 Field Seminar in International Business. Coursework and field study related to international business issues. Students will complete coursework on campus and then travel to international locations (e.g., Europe, Asia, or South America) for scheduled business visits with companies operating in those locations (both international and domestic businesses). Students will also complete additional report writing upon return from their international trip. Fees: package cost for air transportation, land travel in and between countries, lodging, and some meals, in addition to tuition and on-campus costs. Prerequisite: MKTG 304. Restrictions: College of Business majors or minors, junior standing or higher; or departmental approval required.

497-3 to 9 (3/3/3) Special Topics in Marketing. An exploration of selected current topics in marketing with an emphasis on covering a specific area in great depth. Topics are announced in advance; both students and faculty may suggest ideas. Students may repeat enrollment in the course as the topic varies. Prerequisite: MKTG 304 with a grade of C or better. Restrictions: College of Business majors or minors, junior standing or higher; Special approval needed from the department.

499A-1 to 3 per section Marketing Insights. Provides the student an opportunity to participate in an independent study, or seminar coinciding with areas of interest. May be repeated for credit only when topics vary. Not for graduate credit. Prerequisites: MKTG 304, 305, 363, plus two Marketing electives excluding MKTG 350, a 3.4 SIUC GPA or better in all Marketing courses and a 3.0 SIUC GPA or better in upper division College of Business courses. Restrictions: Marketing major, junior standing or higher, special approval needed from the instructor and departmental chair in the semester prior to enrollment; or departmental approval required.

499B-1 to 3 per section Marketing Insights. Provides the student an opportunity to participate in an independent study, or seminar coinciding with areas of interest. May be repeated for credit only when topics vary. Not for graduate credit. Prerequisites: MKTG 304, 305, 363, plus two Marketing electives excluding MKTG 350, a 3.4 SIUC GPA or better in all Marketing courses and a 3.0 SIUC GPA or better in upper division College of Business courses. Restrictions: Marketing major, junior standing or higher, instructor and department chair approval required in the semester prior to enrollment; or departmental approval required.

499C-1 to 3 per section Marketing Insights. Provides the student an opportunity to participate in an independent study, or seminar coinciding with areas of interest. May be repeated for credit only when topics vary. Not for graduate credit. Prerequisites: MKTG 304, 305, 363, plus two Marketing electives excluding MKTG 350, a 3.4 SIUC GPA or better in all Marketing courses and a 3.0 SIUC GPA or better in upper division College of Business courses. Restrictions: Marketing major, junior standing or higher, instructor and department chair approval required in the semester prior to enrollment; or departmental approval required.

499D-1 to 3 per section Marketing Insights. Provides the student an opportunity to participate in an independent study, or seminar coinciding with areas of interest. May be repeated for credit only when topics vary. Not for graduate credit. Prerequisites: MKTG 304, 305, 363, plus two Marketing electives excluding MKTG 350, a 3.4 SIUC GPA or better in all Marketing courses and a 3.0 SIUC GPA or better in upper division College of Business courses. Restrictions: Marketing major, junior standing or higher, instructor and department chair approval required in the semester prior to enrollment; or departmental approval required.

Marketing Faculty

Adjei, Mavis, Associate Professor and *Chair*, Ph.D., University of Mississippi, 2006.

Altobello, Suzanne, Associate Professor, Ph.D., University of Notre Dame, 1999.

Bruner, Gordon C., II, Professor, *Emeritus*, Ph.D., University of North Texas, 1983.

Clark, Terry, Professor, Ph.D., Texas A&M University, 1987.

Fraedrich, John P., Professor, Ph.D., Texas A & M University, 1988.

Jarvis, Cheryl B., Professor, Ph.D., Indiana University, 1999.

King, Maryon F., Associate Professor, *Emeritus*, Ph.D., Indiana University, 1989.

Knowles, Lynette L., Associate Professor, Ph.D., Ohio State University, 1990.

Lee, Jaehoon, Assistant Professor, Ph.D., University of Texas at San Antonio, 2011.

Nowlin, Edward L., Assistant Professor, Ph.D., University of Nebraska-Lincoln, 2009.

Summey, John H., Associate Professor, *Emeritus*, Ph.D., Arizona State University, 1974.

Mass Communication and Media Arts

(College, Minor, Courses)

Game Design and Development Minor

The minor in Game Design and Development (GDD) is a multidisciplinary minor offered by the School of Information Systems and Applied Technologies (ISAT), and the College of Mass Communication and Media Arts (MCMA). The purpose of this minor is to prepare students who wish to enter the field of game design and development. The Game Design and Development minor requires 18 credits. The courses required to complete this minor include: ISAT 340 or CP 260, IST 209G, RTD 487, RTD 361, IST 392 or MCMA 499, and one elective course. The approved electives for this minor are: IST 306, IST 312, IST 426, IST 446, RTD 331, RTD 496, CP 361, CP 454, CP 470C, CP 470W, and CP 472. All prerequisites for these courses must be fulfilled prior to enrollment in each course. All courses for this minor must be completed with a grade of C or better. All students who wish to enroll in this minor must do so through the ISAT advisor or the Cinema and Photography or Radio-Television, and Digital Media advisors. MCMA students may not count a course taken to fulfill the requirements of this Minor as one of the courses required to fulfill either an RTD or CP major.

Required:

CP 260 - Understanding Visual Media
 or ISAT - 340 Introduction to Video Gaming Industry
 IST 209G - Introduction to Game Programming
 RTD 361 - Sound Mix in Popular Culture
 RTD 487 - 3D Animation I: Modeling
 IST 392 - Special Projects
 or MCMA 499 - Independent Study

Elective Courses:

IST 306 - Android Application Development
 IST 312 - Programming II
 IST 426 - Application Development Environments -
 IST 446 - Software Engineering and Management
 RTD 331 - Digital graphics Foundations
 RTD 496 - Sound and Moving Image
 CP 361 - History of New Media
 CP 454 - Animated Film Production
 CP 470C - Advanced Topics Photography
 CP 470W - Advanced Topics Screenwriting
 CP 472 - Problems Creative Production Cinema

Courses (MCMA)

200-3 Media and Information Literacy. (University Core Curriculum) The course will introduce students to the many roles media have in everyday lives, and their influence on individuals and societies. It will provide skills to critically analyze various contents offered by media (e.g., news, advertising, video games, facebook pages)-in all its forms: television, radio, print, internet, and mobile media; and an understanding of the institutions that produce these media and their economic and political interests. In this course we will ask ourselves: what does an educated person need to know about media today in order to take full advantage of everything they are offering us, and yet guard against potential negative influences?

204-3 Alternative Media in a Diverse Society. (University Core Curriculum) The freedoms guaranteed in the First Amendment have resulted in a multitude of alternatives to the establishment media. These alternative media give voice to a range of communities ignored or suppressed by the dominant culture. Publications, alternative art spaces, film, radio and television messages and the groups and individuals who create them are examined.

396-3 Publishing on the WWW. The class provides instruction in designing for the WWW. Students learn the basics of HTML, and are provided an opportunity to develop literacy in networked, interactive communication. Students learn the basics of good interface design and apply these skills in interactive multimedia such as interactive news and information display, training development, business marketing applications, asynchronous learning materials, and entertainment products. Lab fee: \$50.

497-1 to 6 Special Interdisciplinary Study. Designed to offer and test new and experimental courses and series of courses within the College of Mass Communication and Media Arts. Incorporation course fee: \$25.

499-1 to 3 Independent Study. (Same as IST 392) Supervised research, project, or creative work. The area of study is proposed by the student with the approval of a Mass Communication and Media Arts faculty member. Not for graduate credit. Special approval needed from the instructor.

Mathematics (Department, Major, Courses, Faculty)

Opportunities for mathematics majors have expanded greatly in recent years. Mathematics majors become actuaries, statisticians, mathematical computer scientists, applied mathematicians, operations research analysts and mathematical researchers. Mathematics is growing and changing and holds fascinating challenges for inquiring minds.

As an undergraduate mathematics major at Southern Illinois University Carbondale, you may work toward a Bachelor of Science degree in the College of Science or the College of Education and Human Services, or a Bachelor of Arts degree in the College of Liberal Arts. The classes in the mathematics major curriculum are small and are taught by senior faculty members. A strong support system of college and departmental advisement is available to you at SIU throughout the year.

A student planning for employment with a bachelor's degree should consider a minor or a second major in some field in which mathematics is applied. Many students earn a double major in mathematics and computer science. All of the bachelor's degree programs in mathematics, including the Bachelor of Science degree in the College of Education and Human Services, have sufficient flexibility to allow you to prepare for alternate career possibilities.

To prepare to major in mathematics at SIU, you should have a solid high school preparation in algebra, geometry in two and three dimensions, and trigonometry, including a substantial study of functions and graphing. Students transferring to SIU after two years at a community college should have completed the calculus sequence, linear algebra and a course in a high-level computer programming language.

As a mathematics major at SIUC, you will meet with a Department of Mathematics advisor at least once each semester for planning and departmental approval of courses appropriate to your goals and interests.

A grade of *C* or better is required in every mathematics course used to satisfy departmental requirements. A student cannot repeat a course or its equivalent in which a grade of *B* or better was earned without the consent of the department.

Double majors in mathematics and related fields

Special provisions are made for students to earn a double major in mathematics and a field in which mathematics is extensively applied. The courses MATH 447, 449, 471, 472, and 475 carry credit in both mathematics and computer science. See Bachelor of Science Degree, College of Science for specific requirements in mathematics for students who also earn a major or minor in computer science.

For students pursuing a double major in math and engineering, physics, or chemistry, the mathematics requirements are Math 150, 250, 251, 305 and five additional mathematics courses numbered above 300, including at least three courses above 400, and including two of the three areas of algebra, analysis, probability and statistics. A mathematics department advisor must approve the courses.

Students majoring in business may obtain a second major in mathematics. The requirements are Mathematics 150, 221, 250, 251, and five approved mathematics courses at the 300-400 level, of which at least four are at the 400-level. Recommended

courses for this program include Mathematics 471, 472, 475, 483, 484; Management 352, 360, 456; Economics 315, 465; Finance 310, 331, and 341.

Option in Statistics

A student majoring in mathematics in the College of Science or the College of Liberal Arts may choose to concentrate in statistics. For this option, the 300- and 400-level course requirements include: 302; either 417 or 421; either 305 or 472; one of 352, 450, or 455; 480; 483; at least two of 473, 481, 484, 485 and one additional approved upper division mathematics course.

Bachelor of Science Degree in Mathematics, College of Science

University Core Curriculum Requirements 41
 College of Science Academic Requirements 12¹

- Biological Sciences: 6 hours (not University Core Curriculum courses)
- Mathematics: completed with the Mathematics major
- Physical Sciences: 6 hours (not University Core Curriculum courses)
- Supportive Skills: a two-semester sequence in a foreign language, or three years of one foreign language in high school with no grade lower than C.

Requirements for Major in Mathematics 45¹

- Mathematics 150, 221, 250, 251 14
- Computer Science 202 or approved substitute 4
- Mathematics 302 3
- At least one course from each of the following groups:..12
 (One group may be waived for students with a minor in CS)
- Group A: Algebra/Discrete Math/Linear Algebra: 319, 349, 419, 421
- Group B: Analysis: 352, 450, 455
- Group C: Applied Math/Numerical Analysis: 305, 471, 472, 475
- Group D: Probability/Statistics: 380, 480, 483

Four additional courses in mathematics numbered above 299 (excluding 300I, 311, 321, 322, 411, 412)12
 Each student’s program must include at least 5 mathematics courses at the 400 level and must be approved by a mathematics department advisor.

Courses taken Pass/Fail will not count toward the major.

Electives 22
 Total 120

¹A total of nine hours of biological sciences, mathematics, and physical science course work are accounted for in the 41-hour University Core Curriculum requirement. The student must work with the Advisement Office to ensure that SIUC’S 42 Senior-Hours requirement is met by appropriate choices of core, college, and elective coursework.

Mathematics Suggested Curricular Guide, College of Science

FIRST YEAR	FALL	SPRING
MATH 111 ¹	4	-
MATH 150	-	4
CS 202.....	-	4
ENGL 101, 102.....	3	3
UCOL 101.....	3	-
Foreign Language	3	3
<i>Total</i>	13	14

SECOND YEAR	FALL	SPRING
MATH 221, Humanities	3	3
MATH 250, 251	4	3
MATH 302 or 305.....	-	3
Human Health, Social Science	2	3
CMST 101.....	3	-
PLB 200 or ZOOL 118	4	-
Biology	-	3
<i>Total</i>	16	15

THIRD YEAR	FALL	SPRING
Two 300-400 level Math ³	6	6
Humanities, Social Science	3	3
(MATH 300I recommended for Humanities)		
PHYS 205A, 255A ²	4	-
PHYS 205B	-	4
Elective	3	3
<i>Total</i>	16	16

FOURTH YEAR	FALL	SPRING
Two 300-400 level Math ³	6	6
Fine Arts, Multicultural	3	3
Elective	6	6
<i>Total</i>	15	15

¹Fulfills University Core Curriculum foundation skills.
²Fulfills University Core Curriculum science requirement.
³Must be approved by a mathematics advisor.

Bachelor of Arts Degree in Mathematics, College of Liberal Arts

University Core Curriculum Requirements 41¹
 College of Liberal Arts Academic Requirements 12

- English Composition (beyond the Core requirement).....3
- One approved writing intensive course (consult Liberal Arts advisement)3
- Foreign Language

Requirements for a Major in Mathematics 45¹

- Mathematics 150, 221, 250, 251 14
- Computer Science 202 or approved substitute 4
- Mathematics 302..... 3

At least one course from each of the following groups: ..12
 (One group may be waived for students who have a minor in Computer Science)

- Group A: Algebra/Discrete Math/Linear Algebra: 319, 349, 421
- Group B: Analysis: 352, 450, 455
- Group C: Applied Math/Numerical Analysis: 305, 471, 472, 475
- Group D: Probability/Statistics: 380, 480, 483

Four additional courses in mathematics numbered above 299 (excluding 300I, 311, 321, 322, 411, 412) 12

Secondary Concentration Requirements 6-9

Six to nine hours approved by the Mathematics Department in one of the following areas: engineering, computer science, physics, economics, business. Or any minor in Liberal Arts or Science.

Electives to make a total of 120 hours 13-16
 Total 120

SECOND YEAR	FALL	SPRING
MATH 221	3	-
MATH 251, 483	3	4
ACCT 220, 230	3	3
CMST 101, MATH 400	3	4
Foreign Language	3	3
<i>Total</i>	15	14

THIRD YEAR	FALL	SPRING
MATH 401,402/ MATH 403,404.....	3	3
MATH 484, English Composition	3	3
MATH 302, Math Group C ³	3	3
Humanities (MATH 300I recommended)	3	3
Science	3	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
Math Group A ² , Math Group B ³	3	3
FIN 330, 361.....	3	3
MATH 474, Social Science Core.....	3	3
Writing intensive course, Elective	3	2
Fine Arts, Multicultural	3	3
<i>Total</i>	15	14

¹Fulfills University Core Curriculum Foundation Skills. With strong high school preparation, the student may be able to begin with MATH 150.
²ECON 240 satisfies one Core Social Science requirement.
³Must be approved by a mathematics advisor.

Bachelor of Science Degree in Mathematics, College of Education and Human Services

University Core Curriculum Requirements to include
 ENGL 101 & 102, PSYC 102, Math 300I, EDUC 311, 314.....41¹
*Requirements for major in Mathematic.....*46-47¹

Content Courses	42-43 ¹
Mathematics 150, 221, 250, and 251 or 305	14 ¹
Computer Science 202 or approved substitute	4
Mathematics 302, 319, 335, 349, 352 or 452	15
At least two additional approved 400-level mathematics courses excluding 411, 412.....	9-10
Methods Course, Mathematics 311A,B	4
Professional Education and Licensure Requirements	28
Education 308, 311, 313, 314, 316, 317, 401A	
Prerequisites for admission to TEP	
EDUC 210	3
Other requirements for certification	
CI 360	3
Other requirements for licensure	
Electives to make 120 hours	
<i>Total</i>	120

¹Three hours of mathematics course work required for the major and 9 hours of coursework required for the TEP are included in the University Core Curriculum.

Unconditional admission into the Teacher Education Program requires a 2.5 average in MATH 150, 221, 250; and 251 or 305 in addition to College of Education and Human Services requirements for admission to the TEP.

Retention in the Teacher Education Program and approval for student teaching requires a 2.75 average in the major and departmental approval.

Mathematics majors are required to meet with a departmental advisor for approval of their courses prior to registering each semester.

Concentration in Mathematics for Elementary Education
 Consult with College of Education and Human Services and with Mathematics advisors about the latest requirements.

Mathematics Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
MATH 150, 250	4	4
ENGL 101, 102.....	3	3
UCOL 101, PSYC 102	3	3
Science Core ¹ , MATH 221.....	3	3
Fine Arts ¹ , Humanities core ¹	3	3
<i>Total</i>	16	16

SECOND YEAR	FALL	SPRING
MATH 305/251, CS 202	3	4
MATH 302, 483	3	4
Human Health ¹	-	2
SPCM 101	3	-
EDUC 210, Science core ¹	3	3
EDUC 314, 311	3	3
<i>Total</i>	15	16

THIRD YEAR	FALL	SPRING
MATH 300I, 352/452.....	3	3
MATH 349, 335	3	3
EDUC 313, 319.....	3	3
Elective, EDUC 316	3	3
CI 360, MATH 400-level	3	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
MATH 311	4	-
MATH 400-level ²	6	-
EDUC 317, 401A.....	2	12
EDUC 319.....	3	-
<i>Total</i>	15	12

¹Consult with College of Education and Human Services academic advisor for appropriate course.
²Must be approved by mathematics department advisor.

Mathematics Minor

A non-teaching minor consists of Mathematics 150 and 12 hours of mathematics courses at the 200 level or above, including at least three hours at the 400 level (excluding 220, 257, 282, 300I, 311, 321, 322, 411, 412). All courses used for the minor must be completed with a grade of C or better. The 400-level mathematics courses must be taken at SIU Carbondale.

The departmental advisor must approve the student's minor program. Elementary and secondary education students interested in adding a certification or endorsement in mathematics should see a mathematics department advisor to obtain a list of specific requirements.

Honors

Mathematics 395 and 495 are used for individual honors work for upper level undergraduates in mathematics. Concurrent participation in the University Honors Program is encouraged.

Placement

In addition to having taken the prerequisite mathematics courses, students are required to present a satisfactory placement score as a condition for registration in mathematics courses. Contact the Department of Mathematics for current information regarding placement.

Courses (MATH)

A hand-held calculator with function keys appropriate to the course is required of each student in 108, 109, 111, 139, 140, 141, 150, 250, 251, and 282. NO calculators are allowed for the final exam in Math 107 and 108. ONLY an approved scientific calculator will be permitted for the final examination in Math 109, 111, 139, 140, 150, and 250. The student should consult the course instructor about which calculators are permitted.

101-3 Introduction to Contemporary Mathematics. (University Core Curriculum Course) [IAI Course: M1 904] Elementary mathematical principles as they relate to a variety of applications in contemporary society. Exponential growth, probability, geometric ideas and other topics. This course does not count towards the major in mathematics. Prerequisite: MATH 107 with a grade of C or better or high school Geometry and Algebra 2 with a grade of C or better, and satisfactory placement score. \$93 fee will cover student access to mylabsplus. Platform is used for assessment and online access to learning aids and e-textbook.

105-3 College Algebra and Mathematical Modeling for Teachers. A course in college algebra designed for the pedagogical and content needs of K-8 teachers. Equations and inequalities involving, linear, polynomial, rational, absolute value, exponential and logarithmic functions, and systems of linear equations; the algebra of functions (polynomials, rational, exponential, logarithmic), graphing functions; domain and range. Conic sections. Modeling and solving real-world problem situations. Use of technology as appropriate to interpret data and create mathematical models. Core Standards Mathematical Practices will be infused throughout. No credit may be earned for MATH 105 if there is prior credit in MATH 106, 108, or 111. Prerequisite: Three years of college preparatory mathematics including Algebra I, Geometry and Algebra II AND satisfactory placement score.

106-3 College Algebra Enhanced. (University Core Curriculum) The course leads students through an intensive review of foundational algebra concepts followed by a careful study of functions (polynomial, rational, exponential, logarithmic), graphing, solving equations including systems. Two lecture and three lab hours per week. Credit is given for only one of MATH 106, 108, 111. Prerequisite: Three years of college preparatory mathematics including Algebra I, Geometry and Algebra II AND satisfactory placement score. Digital Course Materials and CAI (Computer Aided Instruction) Fee: \$183.

107-3 Intermediate Algebra. Properties & operations of real numbers. Polynomials, factoring, algebraic fractions, expo-

nents, roots, and radicals. First and second-degree equations and inequalities. Functions, graphing, systems of equations and inequalities. Exponential and logarithmic functions. Does not satisfy the University Core Curriculum mathematics requirement and does not count toward the hours required for graduation. Prerequisite: satisfactory placement score. \$93 fee will cover student access to mylabsplus. Platform is used for assessment and online access to learning aids and e-textbook.

108-3 College Algebra. (Advanced University Core Curriculum Course) The algebra of functions (polynomials, rational, exponential, logarithmic), graphing, conic sections, solving equations including systems. Not open to students with prior credit in MATH 106 or MATH 111. Prerequisite: Three years of college preparatory mathematics including Algebra I, Geometry and Algebra II AND satisfactory placement score. \$153 course fee will cover student access to Mylabsplus. Platform is used for assessment and online access to learning aids and e-textbook.

109-3 Trigonometry and Analytic Geometry. (Advanced University Core Curriculum Course) Trigonometric and inverse trigonometric functions, complex numbers, conic sections, polar coordinates. Credit is not given for both 109 and 111. Prerequisite: MATH 108 or 106 or equivalent, with C or better. New students must present satisfactory placement scores.

110-3 Non-Technical Calculus. (University Core Curriculum) The elements of differentiation and integration. The emphasis is on the concepts and the power of the calculus rather than on technique. It is intended to provide an introduction to calculus for non-technical students. Does not count towards the major in mathematics. No credit hours may be applied to fulfillment of any degree requirements if there is prior credit in Mathematics 140, 141 or 150. Prerequisite: 3 years of college preparatory mathematics including algebra I, algebra II and geometry with C or better. Students must present satisfactory placement scores or obtain the permission of the Department of Mathematics.

111-4 Precalculus. (Advanced University Core Curriculum Course) Intensive review of college algebra and trigonometry necessary for Calculus I. Algebra of rational and transcendental functions, graphing, trigonometric identities, laws of sines and cosines, conics, complex numbers, polar coordinates. Not open to students with credit in 106, 108 or 109. Prerequisites: High school advanced algebra and trigonometry with at least C and satisfactory placement score.

120-3 Mathematics Content and Methods for the Elementary School I. (Same as CI 120) Modern approaches to mathematics instruction for the elementary grades. Mathematics content includes problem solving, intuitive set theory, development of whole numbers, integers and rational numbers and the fundamental arithmetic operations. Place value. Prime numbers and divisibility properties. Computation includes students' informal mathematics, mental computation and estimation, algorithms and the appropriate use of calculators. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Three hours lecture/laboratory per week. Prerequisite: Three years of college preparatory mathematics including Algebra I, Algebra II and Geometry and satisfactory placement score.

125-4 Technical Mathematics with Applications. (Advanced University Core Curriculum course) Emphasizes the applications of algebra and trigonometry in technical fields. Topics in algebra include functions and graphs, systems of linear equations, quadratic equations, higher degree equations and variation. Topics in trigonometry include the trigonometric functions, laws of sines and cosines, complex numbers, exponential and logarithmic functions. Meets University Core Curriculum requirement in mathematics for Applied Sciences and Arts students. Prerequisite: Mathematics 107 or two years of high school algebra or equivalent, with a grade of C or better. Enrollment restricted to students in the College of Applied Sciences and Arts or permission of department.

139-3 Finite Mathematics. (Advanced University Core Curriculum Course) Set concepts and operations, combinations, permutations, elementary probability theory including Bayes Formula, linear systems of equations, matrix algebra, row reduction, introduction to linear programming and simplex method. This course does not count toward the major in mathematics. Prerequisite: MATH 108 with grade of C or better AND satisfactory placement score. Satisfies UCC Mathematics in lieu of 110 or 101.

140-4 Short Course in Calculus. (Advanced University Core Curriculum Course) Techniques of differentiation, increasing and decreasing functions, curve sketching, max-min problems in business and social science; partial derivatives; LaGrange multipliers; elementary integration techniques. Not open to students with prior credit in 141 or 150. Does not count toward the major in mathematics. Prerequisite: MATH 108 with grade of C or better AND satisfactory placement score. Satisfies University Core Curriculum Mathematics requirement in lieu of 110 or 101.

141-4 Short Course in Calculus for Biological Sciences. (Advanced University Core Curriculum Course) [IAI Course: M1 900] Techniques of differentiation and integration. Applications to population and organism growth and other biological science problems. Not open to students with prior credit in 150 or 140. Does not count toward the major in mathematics. Prerequisite: High school advanced algebra and trig or MATH 111 or 108 plus 109 with C or better, AND satisfactory placement score. Satisfies University Core Curriculum Mathematics requirement in lieu of 110 or 101.

150-4 Calculus I. (Advanced University Core Curriculum course) [IAI Course: MTH 901] [IAI Course: M1 900-1] Major concepts and techniques of single variable calculus with careful statements but few proofs. Differential and integral calculus of the elementary functions; analytic geometry. Only 2 hours credit toward graduation if there is prior credit in 140 or 141. Prerequisite: High school advanced algebra and trig or MATH 111 or 108 plus 109 with C or better, AND satisfactory placement score. Satisfies University Core Curriculum Mathematics requirements in lieu of 110 or 101.

220-3 Mathematics Content and Methods for the Elementary School II. (Advanced University Core Curriculum Course) (Same as CI 220) Modern approaches to mathematics instruction for the elementary grades. Mathematics content focuses on rational and irrational numbers. Ordering of numbers. Decimal representations. Percents. Ratio and Proportion. Perimeter and area concepts. Pythagorean Theorem. Concept

of square root and nth root. Exponent notation. Elementary geometry. Triangles, quadrilaterals, polygons, angles associated with a polygon. Reflectional and rotational symmetry. Congruence and Similarity. Tessellations. Transformations: translations, rotations, reflections. Measurement of perimeter, area, surface area, volume, mass, temperature. Conversion of measurements. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Prerequisite: MATH 120 or Curriculum and Instruction 120 or equivalent with a grade of C or better.

221-3 Introduction to Linear Algebra. Vector spaces, linear functions, systems of equations, dimensions, determinants, eigenvalues, quadratic forms. Prerequisite: MATH 150 with a grade of C or better.

250-4 Calculus II. (Advanced University Core Curriculum Course) [IAI Course: MTH 902] [IAI Course: M1 900-2] Develops the techniques of single-variable calculus begun in Calculus I and extends the concepts of function, limit, derivative and integral to functions of more than one variable. The treatment is intuitive, as in Calculus I. Techniques of integration, introduction to multivariate calculus, elements of infinite series. Prerequisite: MATH 150 with C or better AND satisfactory placement score. Satisfies University Core Curriculum Mathematics requirement in lieu of 110 or 101.

251-3 Calculus III. (Advanced University Core Curriculum Course) [IAI Course: M1 900-3] [IAI Course: MTH 903] Further topics in calculus. Definite integrals over solid regions, applications of partial derivatives, vectors and vector operations, derivatives of vector functions, line integrals, Green's Theorem. Prerequisite: MATH 250 with C or better. Satisfies University Core Curriculum Mathematics requirements in lieu of 110 or 101.

257-1 to 12 Concurrent Work Experience. As an instructional aide, the student will do tutoring under the direction of an established teacher and under the supervision of a representative of the Department of Mathematics. Special approval needed from the department. Mandatory Pass/Fail.

282-3 Introduction to Statistics. (Advanced University Core Curriculum Course) Designed to introduce beginning students to basic concepts, techniques, and applications of statistics. Topics include the following: organization and display of data, measures of location and dispersion, elementary probability, statistical estimation, and parametric and nonparametric tests of hypotheses. Prerequisite: MATH 108 with C or better. Satisfies University Core Curriculum Mathematics requirement in lieu of 110 or 101.

300I-3 History of Mathematics. (University Core Curriculum) This course examines how diverse cultures and history from the ancient past to the present have shaped the development of mathematical thought and how developing mathematical ideas have influenced history and society. Particular attention will be given to the evolution of the concepts of number and space; the emergence and applications of calculus, probability theory, non-Euclidean geometries and technology; and to the changes in the concept of mathematical rigor. Does not count towards the mathematics requirements of the mathematics major. Open to all students. Prerequisite: MATH 150.

302-3 Mathematical Communication and the Transition

to Higher Mathematics. A course in communicating mathematical ideas with a special emphasis on reading, writing, and critiquing mathematical proofs. Topics covered include logic, proofs, set theory, relations, functions. Additional illustrative topics will be drawn from linear algebra, number theory, complex variables, and geometry. Prerequisite: MATH 221 and MATH 250 with a grade of C or better.

305-3 Introduction to Ordinary Differential Equations I. [IAI Course: MTH 912] Solution techniques for differential equations with emphasis on second order equations, applications to physical sciences, series solutions. Prerequisite: MATH 250 with a grade of C or better.

311A-3 Teaching of Secondary Mathematics I. The nature and objectives of the standards-based secondary mathematics curriculum, particularly the means of introducing new ideas into the high school program. An important focus will be state and national teaching and learning standards and the use of technology. Heavy emphasis will be placed on development of formative and summative assessment measures and the use of such assessments in planning future instruction and remediation. For students preparing to be secondary mathematics teachers. Does not count toward a mathematics major in the Colleges of Liberal Arts or Science. Prerequisites: EDUC 313, EDUC 301 and MATH 349 with grades of C or better. Concurrent enrollment in MATH 335 and MATH 352 required.

311B-3 Teaching of Secondary Mathematics II. The nature and objectives of the standards-based secondary mathematics curriculum, particularly the means of introducing new ideas into the high school program. An important focus will be state and national teaching and learning standards and the use of technology. Emphasis in part II will be on the development of a complete curriculum, understanding the secondary curriculum as a dynamic system and the use of standardized testing to adjust curriculum and remediate students. Must be taken in A-B sequence. For students preparing to be secondary mathematics teachers. Does not count toward a mathematics major in the Colleges of Liberal Arts or Science. Prerequisite: MATH 311A with a grade of C or better. Concurrent enrollment in MATH 319 required.

318-2 An Introduction to Mathematics Software. This course is an introduction to the use of Maple, a modern computer algebra system, as a computational and experimental tool in mathematics. The preparation of reports using text, graphics and mathematics is emphasized. Topics will include: solving equations, plotting techniques, special packages, programming with Maple V. Prerequisite: MATH 150 with B or better or MATH 250 with C or better.

319-3 Introduction to Abstract Algebra I. Basic properties of groups and rings: Binary operations, groups, subgroups, permutations, cyclic groups, isomorphisms, Cayley's theorem, direct products, cosets, normal subgroups, factor groups, homomorphisms, rings, integral domains. Prerequisite: MATH 302 with C or better.

321-3 Mathematics Content and Methods for the Elementary School III. (Same as CI 321) Modern approaches to mathematics instruction for the elementary grades. Mathematics content focuses on: straight-edge and compass constructions. Justification and proof of geometric properties. Three dimensional geometry. Coordinate geometry. Transformations ex-

pressed in coordinate notation. Analysis of linear relationships geometrically and algebraically. Modeling various "real-world" situations by linear equations and inequalities. Setting up and solving equations and inequalities. Exploration of statistical data. Representation of data, interpretation of data, misrepresentation of data. Introduction to the fundamental ideas of statistics; measures of spread and central tendency. Introduction to the fundamental concepts of probability. Counting techniques needed for calculating probabilities. Dependent and independent events. Conditional probability. Odds, expected value. Simulation. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Prerequisite: MATH 220 or Curriculum and Instruction 220 or equivalent with a grade of C or better.

322-3 Mathematics Content and Methods for the Elementary School IV. (Same as CI 322) Modern approaches to mathematics instruction for the elementary grades. Mathematics content focuses on: algebra and algebraic thinking, geometry, relations and functions and their applications to real-life problems. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Prerequisite: MATH 321 or Curriculum and Instruction 321 with a grade of C or better.

335-3 Concepts of Geometry. Introduction to the foundations of Euclidean and non-Euclidean geometry with an emphasis on axiom systems, models, and counterexamples. Topics include metric geometry, betweenness, plane separation, congruence, absolute plane geometry, the critical function, and parallelism. Prerequisite: MATH 302 with C or better, or MATH 250 with C or better and concurrent enrollment in MATH 302.

349-3 Introduction to Discrete Mathematics. Numbers, sets, relations and functions; elementary enumeration; introduction to graph theory; logic, partially ordered sets and Boolean algebra; mathematical induction; recurrence relations. Prerequisite: MATH 221 and MATH 250 with C or better; Co-requisite: MATH 302 or prior completion of MATH 302.

352-3 Theory of Calculus. An introduction to understanding and writing proofs in mathematical analysis, through a careful study of limits, continuity, the derivative, and the integral. Prerequisite: MATH 302 with C or better.

380-3 Elements of Probability. Probability as a mathematical system. Axioms, permutations and combinations, random variables, generating functions, limit theorems, and Monte Carlo procedure. Prerequisite: MATH 250 and Computer Science 202.

388-3 Integrated Math Content and Methods for Teachers (PreK-4th Grade). (Same as CI 388) This course is designed for early childhood and elementary school teachers, focusing on Preschool through 4th grade mathematics content and methods. Math content covers the developmental progression of concepts and skills in counting and cardinality, numbers and operations in base-ten system, algebraic thinking, fractional reasoning, measurement and data, and geometry. Methods of math teaching are integrated with the delivery of math content. The course showcases standards-based mathematical practices including problem solving, mathematical modeling, communication and justification, use of tools and technology, assessment and intervention, diverse learner support, building

supportive math environments, lesson planning, and making interdisciplinary connections. Prerequisite: C or better in CI/MATH 220 or equivalent.

389-3 Integrated Math Content and Methods for Teachers (4th-8th Grade). (Same as CI 389) This course is designed for elementary school and middle school teachers, focusing on 4th-8th grade mathematics content and methods. Math content covers the developmental sequence of grade-appropriate mathematical concepts and skills in number systems, operations and algebraic thinking, ratios and proportional relationships, expressions and equations, functions and applications, measurement and data analysis, statistics and probability, and geometry. Methods of math teaching are integrated with the delivery of math content. The course showcases standards-based mathematical practices including problem solving, mathematical modeling, communication and justification, use of tools and technology, informative assessment, meeting the needs of diverse learners, building supportive math environments, lesson planning, and making interdisciplinary connections. Prerequisite: CI/MATH 388 with a minimum grade of C. Co-requisites: EDUC 319 and EDUC 302.

390-3 to 6 Topics in Contemporary Mathematics. Content will vary according to the instructor. The seminar will introduce students to new and developing areas of mathematics, such as Chaos, Fractals, Algorithms, Fourier Analysis, Difference Equations, etc. Prerequisite: intended for students who have completed Mathematics 150, 221, 250 and either 251 or 305. Other prerequisites may apply. May be repeated as topics vary.

395-1 to 6 Readings in Mathematics. Supervised reading in selected subjects. Prerequisite: 3.00 grade point average in mathematics. Special approval needed from the chair.

400-4 Interest Theory and Financial Derivatives. This course examines financial mathematics and actuarial models for investments including interest, annuities, stocks, bonds, and mutual funds. There is an introduction to financial derivatives, options, and futures. Preparation for Exam FM/2. Prerequisite: MATH 250 (Calculus II) with C or better.

401-3 Life Contingencies I. This course examines actuarial models for life insurance. Life contingency models include life insurance liability calculations, annuities, and credit risk. Basic properties of survival models and Poisson processes are covered. This course and MATH 402 prepare students for Exam MLC/3L. Prerequisite: MATH 483 with C or better.

402-3 Life Contingencies II. This is a second course in actuarial models for life insurance including multiple contingencies, multiple survivals and claim frequency models. Basic properties of Markov Chains are covered. This course and MATH 401 prepare students for Exam MLC/3L. Prerequisites: MATH 221 and MATH 401 with C or better.

403-3 Loss Models I. This course examines loss models including severity models, ruin models, and estimating and fitting the models. This course and MATH 404 prepare students for Exam C/4. Prerequisite: MATH 483 with C or better.

404-3 Loss Models II. This is a second course in loss models including estimation and fitting of severity and ruin models, and credibility theory. This course and MATH 403 prepare students for Exam C/4. Prerequisite: MATH 403 with C or better.

405-3 Intermediate Differential Equations. This course features the study of several sets of differential equations with

the aid of computers. The equations are actual applications in biology, chemistry, economics, engineering, finance, medicine and physics. Where possible, problems will be chosen to match student's interests. Students from these areas are particularly welcome. Basic theory of differential equations is cited as needed. Prerequisite: MATH 305 with C or better.

406-3 Linear Analysis. Introduction to function spaces and operators used in quantum mechanics, partial differential equations, etc. Topics include: discrete and continuous models for the vibrating string, separation of variables, eigenfunction analysis, inner product spaces; operators on inner product spaces; the spectral theorem for Hermitian operators on finite dimensional spaces, the Courant-Fisher characterization. Prerequisite: MATH 221 and MATH 305 with C or better.

407-3 Partial Differential Equations. Solution methods for linear partial differential equations arising in engineering and science. Topics include: the heat equation, the wave equation, Laplace's equation, separation of variables, boundary and initial value problems, uniqueness via the energy methods, the maximum principle and characteristics. Solutions to the vibrating string and dissipation of heat in a bar will be discussed. Prerequisite: MATH 251 and MATH 305 with C or better.

409-3 Fourier Analysis. Introduction to the theory, techniques and applications of Fourier analysis. Topics include: Fourier synthesis and analysis equations for periodic and aperiodic functions; convolution; the calculus of Fourier transforms, Fourier series of DFT's; operators and Fourier transforms; FFT and related algorithms; generalized functions such as Dirac's delta and others; selected applications. Prerequisite: MATH 221 and MATH 305 with C or better.

411-1 to 6 (1 to 3, 1 to 3) Mathematical Topics for Teachers. Variety of short courses in mathematical ideas useful in curriculum enrichment in elementary and secondary mathematics. May be repeated as topics vary. Does not count toward a mathematics major.

412-3 Problem Solving Approaches to Basic Mathematical Skills. Content of basic skills at all levels of education and the development of these skills from elementary school through college; emphasis on problem solving and problem solving techniques; determination of student skills and proficiency level. Credit may not be applied toward degree requirements in mathematics. Prerequisite: MATH 321 or CI 321.

417-3 Applied Matrix Theory. Selected applications of matrices to physics, chemistry and economics. This material is also useful for engineering and computer science. Topics include matrix representation of symmetry groups, non-negative matrices and the subsidy problem, location of eigenvalues. Prerequisite: MATH 221 with C or better.

418-3 Computer Algebra Systems. This course presents modern computer algebra systems (CAS) as a research tool in mathematics. The use of a CAS in the preparation of reports, theses and dissertations will also be covered. Topics will include: solving differential equations with a CAS; plotting techniques with a CAS; symbolic packages for such areas as abstract algebra, number theory; and combinatorics; programming with a CAS; exporting results to TeX or word processing software; The AMS-LaTeX package. Restricted to graduate standing. Special approval needed from the instructor.

419-3 Introduction to Abstract Algebra II. A detailed study

of polynomial equations in one variable. Solvable groups and the Galois theory of field extensions are developed and applied to extensions of the quadratic formula, proving the impossibility of trisecting an angle with only a straight-edge and compass, and to the basic facts about finite fields as needed in coding theory and computer science. Prerequisite: MATH 319 with C or better.

421-3 Linear Algebra. The extension of basic linear algebra to arbitrary scalars. The theory and computation of Jordan forms of matrices (as needed e.g., for certain diffusion equations). Inner products, quadratic forms and Sylvester's Law of Inertia. Prerequisite: MATH 221 with C or better.

425-3 Introduction to Number Theory. Properties of integers, primes, divisibility, congruences, quadratic forms, diophantine equations, and other topics in number theory. Prerequisite: MATH 319 with C or better.

430-3 Introduction to Topology. Study of the real line and the plane, metric spaces, topological spaces, compactness, connectedness, continuity, products, quotients and fixed point theorems. This course will be particularly useful to students who intend to study analysis or applied mathematics. Prerequisite: MATH 352 with C or better.

435-3 Elementary Differential Geometry. Introduction to modern differential geometry through the study of curves in R^3 . Local curve theory with emphasis on the Serret-Frenet formulas; global curve theory including Fenchel's theorem; local surface theory motivated by curve theory; global surface theory including the Gauss-Bonnet theorem. Prerequisite: MATH 221 and MATH 251 with C or better.

447-3 Introduction to Graph Theory. (Same as CS 447) Graph theory is an area of mathematics which is fundamental to future problems such as computer security, parallel processing, the structure of the World Wide Web, traffic flow and scheduling problems. It also plays an increasingly important role within computer science. Topics include: trees, coverings, planarity, colorability, digraphs, depth-first and breadth-first searches. Prerequisite: MATH 349 with C or better.

449-3 Introduction to Combinatorics. (Same as CS 449) This course will introduce the student to various basic topics in combinatorics that are widely used throughout applicable mathematics. Possible topics include: elementary counting techniques, pigeonhole principle, multinomial principle, inclusion and exclusion, recurrence relations, generating functions, partitions, designs, graphs, finite geometry, codes and cryptography. Prerequisite: MATH 349 with C or better.

450-3 Methods of Advanced Calculus. Multivariable calculus fundamental to continuum mechanics, differential geometry, electromagnetism, relativity, thermodynamics, etc. Includes: parametric curves and surfaces, inverse and implicit function theorems, contraction mapping and fixed point theorems, differentials, convergence of multivariate integrals, coordinate systems in space, Jacobians, surfaces, volumes and Green's, Gauss', and Stokes' theorems. Prerequisite: MATH 251 with C or better.

452-3 Introduction to Analysis. A rigorous development of one-variable calculus providing the tools necessary for understanding all other advanced courses in analysis. Topics include: sets, axioms for the real numbers, continuity, limits, differentiation, the Riemann integral, infinite sequences and

series of functions. Additional topics may include areas such as Riemann-Stieltjes integration or the analysis of multivariable functions. Prerequisite: MATH 352 with C or better.

455-3 Complex Analysis with Applications. Analysis of differentiable functions of a single complex variable. Introduces mathematical techniques used to analyze problems in the sciences and engineering that are inherently two dimensional. Topics include: the complex plane, analytic functions, the Cauchy-Riemann equations, line integrals, the Cauchy integral formula, Taylor and Laurent series, the residue theorem, conformal mappings, applications. Prerequisite: MATH 251 with C or better.

460-3 Transformation Geometry. Geometry viewed as the study of properties invariant under the action of a group. Topics include collineations, isometries, Frieze groups, Leonardo's Theorem, the classification of isometries of Euclidean and hyperbolic geometries. Recommended elective for secondary education majors in mathematics. Prerequisite: MATH 319 with C or better.

471-3 Optimization Techniques. (Same as CS 471) Introduction to algorithms for finding extreme values of nonlinear multivariable functions with or without constraints. Topics include: convex sets and functions; the arithmetic-geometric mean inequality; Taylor's theorem for multivariable functions; positive definite, negative definite, and indefinite matrices; iterative methods for unconstrained optimization. Prerequisite: MATH 221 and MATH 250 with C or better.

472-3 Linear Programming. (Same as CS 472) Introduction to finding extreme values of linear functionals subject to linear constraints. Topics include: recognition, formulation, and solution of real problems via the simplex algorithm; development of the simplex algorithm; artificial variables; the dual problem and duality theorem; complementary slackness; sensitivity analysis; and selected applications of linear programming. Prerequisite: MATH 221 with C or better.

473-3 Reliability and Survival Models. Introduction to statistical analysis of data on lifetime, including hazard functions and failure distributions; estimation and hypothesis testing in life testing experiments with complete as well as censored data. Prerequisite: MATH 480 or MATH 483 with C or better.

474-3 Time Series. An introduction to time series: AR, MA and ARIMA models; estimation, time series models. Prerequisite: MATH 480 or MATH 483 with C or better.

475-3 Numerical Analysis I. (Same as CS 475) Introduction to theory & techniques for computation with digital computers. Topics include: solution of nonlinear equations; interpolation & approximation; solution of systems of linear equations; numerical integration. Students will use MATLAB to study the numerical performance of the algorithms introduced in the course. Prerequisites: MATH 221 and MATH 250 with C or better.

476-3 Numerical Analysis II. (Same as CS 476) Continuation of MATH 475. Topics include: solution of ordinary differential equations; computation of eigenvalues and eigenvectors; and solution of partial differential equations. Students will use MATLAB to study the numerical performance of the algorithms introduced in the course. Prerequisites: MATH 305 and MATH 475 with a C or better.

480-3 Probability, Stochastic Processes and Applications I. Introduction to the central topics of modern probability in-

cluding elementary stochastic processes; random variables and their properties; sum of independent random variables and the Central Limit Theorem; random walks; discrete time finite state Markov chains; applications to random number generators and image and signal processing. Also generating functions, conditional probability, expectation, moments. Prerequisite: MATH 251 with C or better.

481-3 Probability, Stochastic Processes and Applications II. Continuation of MATH 480. Thorough introduction to Markov processes and Martingales, including the laws of large numbers, classification of states, recurrence, convergence to the stationary distribution in Markov chains, birth processes, Poisson processes, stopping times, and the Martingale convergence theorem. Important and current applications will be included. Prerequisite: MATH 480 with C or better.

483-4 Mathematical Statistics in Engineering and the Sciences. Develops the basic statistical techniques used in applied fields like engineering, and the physical and natural sciences. Principal topics include probability; random variables; expectations; moment generating functions; transformations of random variables; point and interval estimation; tests of hypotheses. Applications include one-way classification data and chi-square tests for cross classified data. Prerequisite: MATH 250 with C or better.

484-3 Applied Regression Analysis and Experimental Design. Introduction to linear models and experimental design widely used in applied statistical work. Topics include linear models; analysis of variance; analysis of residuals; regression diagnostics; randomized blocks; Latin squares; factorial designs. Applications include response surface methodology and model building. Computations will require the use of a statistical package such as SAS. Prerequisite: MATH 221 and MATH 483 with C or better.

485-3 Applied Statistical Methods. Introduction to sampling methods and categorical data analysis widely used in applied areas such as a social and biomedical sciences and business. Sampling methods topics include: simple random and stratified sampling; ratio and regression estimators. Categorical data analysis topics include: contingency tables; loglinear models; logistic regression; model selection; use of a computer package. Prerequisite: MATH 483 with C or better.

490-3 Topics in Mathematics. Selected topics in mathematics chosen from such areas as: a) Financial Mathematics, Mathematical Biology or Actuarial Mathematics; b) Probability, Statistics or Stochastic Processes; c) Mathematical topics not including Statistics, such as Operations Research, Cryptography and High Dimensional computing in Numerical Analysis, etc. May be repeated up to 3 times as topics vary. Special approval needed from the instructor.

495-1 to 6 Special Topics in Mathematics. Individual study or small group discussions in special areas of interest under the direction of a member of the faculty. Special approval needed from the chair and instructor.

Mathematics Faculty

Ban, Dubravka, Professor, Dr. Sci., University of Zagreb, 1998.

Beckemeyer, Imogene C., Assistant Professor, *Emerita*, M.A., Southern Illinois University, 1952.

Bhattacharya, Bhaskar, Professor, Ph.D., University of Iowa, 1993.

Budzban, Gregory, Professor and *Chair*, Ph.D., University of South Florida, 1991.

Burton, T. A., Professor, *Emeritus*, Ph.D., Washington State University, 1964.

Calvert, Wesley, Assistant Professor, Ph.D., University of Notre Dame, 2005.

Carraminana, Rodrigo, Associate Professor, Ph.D., University of Iowa,

Clark, Lane, Professor, *Emeritus*, Ph.D., University of New Mexico, 1980.

Crenshaw, James, Associate Professor, *Emeritus*, Ph.D., University of Illinois, 1967.

Danhof, Kenneth, Professor, *Emeritus*, Ph.D., Purdue University, 1969.

Dharmadhikari, Sudhakar, Professor, *Emeritus*, Ph.D., University of California at Berkeley, 1962.

Earnest, Andrew, Professor, *Emeritus*, Ph.D., Ohio State University, 1975.

Elston, George, Assistant Professor, *Emeritus*, M.S., University of Wisconsin, 1949.

Feinsilver, Philip, Professor, *Emeritus*, Ph.D., New York University (Courant), 1975.

Fitzgerald, Robert W., Professor, *Emeritus*, Ph.D., University of California at Los Angeles, 1980.

Foland, Neal E., Professor, *Emeritus*, Ph.D., University of Missouri, 1961.

Grimmer, Ronald C., Professor, *Emeritus*, Ph.D., University of Iowa, 1967.

Hall, Dilla, Associate Professor, *Emeritus*, Ph.D., St. Louis University, 1955.

Hooker, John W., Professor, *Emeritus*, Ph.D., University of Oklahoma, 1967.

Hughes, Harry R., Associate Professor, Ph.D., Northwestern University, 1988.

Hunsaker, Worthen N., Professor, *Emeritus*, Ph.D., Washington State University, 1966.

Jeyaratnam, Sakthivel, Professor, *Emeritus*, Ph.D., Colorado State University, 1978.

Kammler, David, Professor, Ph.D., University of Michigan, 1971.

Kirk, Ronald B., Professor, *Emeritus*, Ph.D., California Institute of Technology, 1968.

Koch, Charles, Assistant Professor, *Emeritus*, Ph.D., University of Illinois, 1961.

Kocik, Jerzy, Associate Professor, Ph.D., Southern Illinois University Carbondale, 1989.

Langenhop, Carl E., Professor, *Emeritus*, Ph.D., Iowa State University, 1948.

Mark, Abraham M., Professor, *Emeritus*, Ph.D., Cornell University, 1947.

McSorley, John, Professor, Ph.D., Oxford University, 1988.

Mohammed, Salah-Eldin A., Professor, *Emeritus*, Ph.D., University of Warwick (England), 1976.

Moore, Robert A., Associate Professor, *Emeritus*, Ph.D., Indiana University, 1961.

Neuman, Edward G., Professor, *Emeritus*, Ph.D., University of Wroclaw (Poland), 1972.

Olive, David, Professor, Ph.D., University of Minnesota, 1998.
Paine, Thomas B., Assistant Professor, *Emeritus*, Ph.D., University of Oregon at Eugene, 1966.

Panchapakesan, S., Professor, *Emeritus*, Ph.D., Purdue University, 1969.

Parker, George D., Associate Professor, *Emeritus*, Ph.D., University of California at San Diego, 1971.

Patula, William T., Professor, *Emeritus*, Ph.D., Carnegie-Mellon University, 1971.

Pedersen, Franklin D., Associate Professor, *Emeritus*, Ph.D., Tulane University, 1967.

Pericak-Spector, Kathleen, Professor, Ph.D., Carnegie-Mellon University, 1980.

Redmond, Donald, Associate Professor, Ph.D., University of Illinois, 1976.

Samadi, Yasar, Assistant Professor, Ph.D., University of Georgia, 2014.

Schurz, Henri, Professor, Ph.D., Humboldt University, Berlin, 1997.

Spector, Scott J., Professor, *Emeritus*, Ph.D., Carnegie-Mellon University, 1978.

Sullivan, Michael, Professor, Ph.D., University of Texas at Austin, 1992.

Wallis, Walter, Professor, *Emeritus*, Ph.D., University of Sydney, 1968.

Wright, Mary H., Professor, Ph.D., McGill University (Montreal), 1977.

Xiao, Mingqing, Professor, Ph.D., University of Illinois, 1997.

Xu, Dashun, Associate Professor, Ph.D., Memorial University of Newfoundland, 2004.

Xu, Jianhong, Associate Professor, Ph.D., University of Connecticut 2003.

Yucas, Joseph, Professor, Ph.D., Pennsylvania State University, 1978.

Zeman, Marvin, Professor, *Emeritus*, Ph.D., New York University (Courant Institute), 1974.

Mechanical Engineering and Energy Processes (Department, Major [Mechanical Engineering], Courses, Faculty)

The mission of the Department of Mechanical Engineering and Energy Processes is to provide high quality engineering education to students and equip them with lifelong learning skills, which allow them to adapt to a changing work environment throughout their careers. Also, the Department of Mechanical Engineering and Energy Processes supports faculty growth and development through research and creative activities because quality teaching and service to humanity and society cannot be achieved without such activities. Finally, the Department of Mechanical Engineering and Energy Processes supports the ideal of service to department, college, university, professional societies and community as part of the mission. The undergraduate program in mechanical engineering is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>. The department also offers graduate programs leading to the Master of Science and Doctor of Philosophy degrees.

Bachelor of Science Degree in Mechanical Engineering

The fundamental goal of the undergraduate program in Mechanical Engineering is to offer a high-quality education for our students, designed to achieve the following Program Educational Objectives (PEOs), which describe what graduates are expected to attain within a few years of graduation:

1. Practice mechanical engineering in a global and societal context.
2. Have skills needed for effective written and oral communication, collaboration, and innovation.
3. Pursue advanced education or lifelong learning that support careers in a broad range of fields.
4. Act in a professional and ethical manner, in their careers and communities.

Also, the undergraduate program is designed to achieve the following Student Outcomes (SOs), which describe what students are expected to know and be able to do by the time of graduation:

1. The ability to apply knowledge of mathematics, science and engineering to problem solving
2. The ability to design and conduct experiments, as well as to analyze and interpret data
3. The ability to design a system, component, or process to meet desired needs within realistic constraints
4. The ability to function on multi-disciplinary teams
5. The ability to identify, formulate and solve engineering problems
6. An understanding of professional and ethical responsibility
7. The ability to communicate effectively
8. The broad education necessary to understand the impact of engineering solutions in a global economic, environmental, and societal context
9. A recognition of the need for and an ability to engage in lifelong learning
10. Knowledge of contemporary issues
11. The ability to use the techniques, skills and modern engineering tools necessary for engineering practice

Mechanical engineering is one of the broadest fields of engineering. Mechanical engineers learn measurement and instrumentation, computer-aided design, computer simulation, computer control, combustion and engine analysis. They learn to design thermal systems for mechanical and electrical equipment including heating, ventilating, air conditioning and refrigeration. Students learn how to design and produce new materials for advanced engineering applications. Courses are also offered in subjects related to the chemical processes and environmental control industries. Graduates are highly sought after in a variety of industries such as automotive, aerospace and manufacturing.

Bachelor of Science Degree in Mechanical Engineering, College of Engineering

<i>University Core Curriculum Requirements</i>	41 ^A
Foundations	15
ENGL 101, 102, CMST 101, UCOL 101, and MATH 150	
Disciplinary Studies	23
Fine Arts	3
Human Health (BIOL 202 or approved substitute)...	2
Humanities	6 ^{A,B}
ECON 240	3 ^A
Social Science	3
Science (substitute Physics and Chemistry)	6 ^A
Integrative Studies	3
Multicultural	3
<i>Requirements for Major in Mechanical Engineering</i> ...	(9) + 85
Basic Science	(6) + 9
CHEM 200, 201, 210	(3) + 4
PHYS 205A,B, 255A,B	(3) + 5
Mathematics Analysis	(3) + 14
MATH 150, 250, 251, 305	(3) + 11
ENGR 351	3
Required Engineering Courses	17
ENGR 222B or ECE 296	2
ENGR 250, 261, 335, 350A, 370A	15
Required ME Courses	36
ME 102, 300, 302, 309, 312, 400, 401, 407, 411, 436, 472, 475, 495A,B.....	36
Elective Engineering Courses	9
<i>Total</i>	126

^ACourses required for the major will apply toward nine hours of University Core Curriculum, a total of 41 in that area.

^BEngineering requirements for University Core Curriculum are more restrictive than those of the University as a whole.

Mechanical Engineering Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
BIOL 202 ¹	-	2
CHEM 200, 201	4	-
CHEM 210	-	3
ENGL 101, 102	3	3
ME 102	2	-
MATH 150, 250	4	4
UCOL 101/ENGR 101, Humanities	3	3
<i>Total</i>	16	15

SECOND YEAR	FALL	SPRING
PHYS 205A, 255A, PHYS 205B, 255B ..	4	4
MATH 251, 305	3	3
CMST 101, ECON 240	3	3
Core Social Science ¹ , ME 300	3	3
ECE 296/ENGR 222B, ENGR 350A	2	3
<i>Total</i>	15	16

THIRD YEAR	FALL	SPRING
ENGR 250, 261.....	3	3
Core Fine Arts ¹	3	-

ENGR 370A, Core Humanities ¹	3	3
ME 312, 302	3	3
ENGR 335, Core Multicultural	3	3
ME 309 (FA), ME 400	2	3
<i>Total</i>	17	15

FOURTH YEAR	FALL	SPRING
ME Elective, ENGR 351	3	3
ME 401, 411 (SP)	1	2
ME 436, ME 407 (SP)	3	2
ME 472 (FA), ME Elective.....	3	3
ME 475 (FA/SU), ME Elective.....	3	3
ME 495A, 495B	3	3
<i>Total</i>	16	16

¹See University Core Curriculum.

Courses (ME)

Safety glasses, an electronic calculator, and textbooks are required of all mechanical engineering students.

102-2 Computer-Aided Engineering Drawing. Manual sketching and computer aided engineering drawing techniques. Lettering; orthographic projections, isometric projection, oblique projections, auxiliary views, dimensioning, sectioning, working drawing.

300-3 Engineering Thermodynamics I. Study of the basic principles of thermodynamics. Engineering analysis of physical systems based on the first and second laws. Properties of pure substance (ideal gas behavior, non-ideal gas behavior, and equations of states.) Mixtures of ideal gases. Introduction to cycle analysis. Prerequisite: MATH 250, PHYS 205A.

302-3 Engineering Heat Transfer. Fundamentals of heat transfer by conduction, convection and radiation. Applications of theory to engineering systems. Prerequisite: ME 300, ENGR 370A and MATH 305.

309-2 Mechanical Analysis and Design. Kinematics and kinetics of interconnected bodies. Principles of kinematics and force analyses of planar machinery. Analytical and numerical techniques for finding displacement, velocity and acceleration. Design of linkage, camfollower mechanisms and gear trains. Prerequisite: ENGR 261 and 222B.

312-3 Materials Science Fundamentals. Sub-Microscopic Structure of solids, including electronic states, atomic and molecular, arrangement, structural imperfections and atomic diffusion, and their relationship to macro-mechanical properties. Prerequisites: PHYS 205A, MATH 250, CHEM 200, 201. Lab Supply fee: \$8.

392-1 to 6 Mechanical Engineering Cooperative Education. Supervised work experience in industry, government or professional organization. Students work with on-site supervisor and faculty advisor. Reports are required from the student and the employer. Hours do not count toward degree requirements. Mandatory Pass/Fail. Restricted to sophomore standing.

393-1 to 12 Internship in Mechanical Engineering. Credit for documented work experience as an intern in an engineering occupation or an engineering-related occupation. Work assignments must have been professional service in the mechanical engineering field. Hours do not count toward degree require-

ments. Mandatory Pass/Fail. Prerequisite: satisfactory completion of twelve hours of Engineering and/or Mechanical Engineering courses.

400-3 Engineering Thermodynamics II. Combined first and second law analysis; Exergy analysis; Analysis of power and refrigeration cycles. Detailed treatment of gas and vapor cycles including gas and steam cycles; Thermodynamics of combustion and reaction of mixtures; Introduction to thermodynamic property relations, chemical and phase equilibrium. Prerequisite: ME 300.

401-1 Thermal Measurements Laboratory. Study of basic measurements used in the thermal sciences. Calibration techniques for temperature and pressure sensors. Thermal measurements under transient and steady-state conditions. Applications include conduction, convection and radiation experiments. Uncertainty analysis. The handling and reduction of data. Prerequisite: ME 302.

405-3 Internal Combustion Engines and Gas Turbines. Operation and performance characteristics of Otto, Diesel, Wankel engines and gas turbines. Methods of engine testing, types of fuels and their characteristics, fuel metering systems, engine combustion analysis as related to engine performance, fuel characteristics and air pollution, exhaust gas analysis, and air pollution control. Prerequisite: ME 300.

406-3 Thermal Systems Design. Applications of the principles of engineering analysis to the design of thermal systems. Coordination of such systems as heat exchangers, air conditioners, cogeneration cooling towers, and furnaces. Emphasis is placed on application of basic principles of heat transfer and fluid mechanics. Prerequisite: ME 302.

407-2 Mechanical Engineering Measurements and Controls. Laboratory to familiarize students with the use of instruments to measure time, distance, velocity, acceleration, strain, fluid flow and turbulence. Instruments include micrometers, laser distance meters, stroboscopes, oscilloscopes, incremental rotary encoder, LVDT, load cells accelerometers, analog/digital converters, pressure transducers, and related equipment. Application of control principles to mechanical engineering systems. Speed and position control using computer-based instrumentation. Pneumatic control temperature and flow sensing and control. Automatic control of servo systems. Process control and Programmable Logic Controller (PLC) applications. Not for graduate credit. Prerequisite: ME 436 or consent of instructor.

408-3 Energy Conversion Systems. Principles of advanced energy conversion systems; nuclear power plants, combined cycles, magnetohydrodynamics, cogeneration (electricity and process steam), and heat pumps. Constraints on design and use of energy conversion systems; energy resources, environmental effects, and economics. Prerequisite: ME 400.

410-3 Applied Chemical Thermodynamics and Kinetics. Designed for students interested in chemical and environmental processes and materials science. Topics covered include application of the Second and Third Laws of Thermodynamics, solution theory, phase equilibria, sources and uses of thermodynamic data, classical reaction rate theory, kinetic mechanisms and the determination of rate-determining steps in chemical reactions. Prerequisite: CHEM 200, 201, ME 300 or consent of instructor.

411-2 Manufacturing Methods for Engineering Materi-

als. Overview of manufacturing processes with emphasis on the fabrication of materials from the processing and equipment viewpoint. This course presents a broad study of the many manufacturing processes utilized in the production of a wide variety of products and components. Insight into the multitude of processing factors which influence the practical design of manufactured parts to achieve the advantages of maximum economy, accuracy and automation in everyday production. Not for graduate credit. Prerequisite: ME 312 and ENGR 350A.

415-3 Engineering Acoustics. Principles of engineering acoustics and their applications to passive and active noise control techniques. Laboratory experience demonstrates techniques for control and reduction of noise. Prerequisite: ME 436. Special approval needed from the instructor.

416-3 Air Pollution Control. An overview of problems in air pollution likely to influence the Mechanical Engineer. Engineering control theory, procedure and equipment related to control of particulate, gaseous, and toxic air emissions. Restricted to senior standing and College of Engineering or consent of instructor.

421-3 Pneumatic Hydraulic Engineering. Design principles of fluid power engineering. The behavior of fluids in a system. Analysis and design of hydraulic and pneumatics machinery and systems using fluid as a medium for transmission of power and control of motion. Analysis of steady state and dynamic behavior. Critical operations and analysis.

422-3 Applied Fluid Mechanics for Mechanical Engineers. Applications of fluid mechanics in internal and external flows. The mathematical basis for inviscid and viscous flows calculations is developed with application to pipe and duct flows; external flow about bodies; drag determination; turbomachinery; and reaction propulsion systems. Semester design project of a fluid mechanical system. Prerequisite: ME 300, ENGR 370A, and MATH 305.

423-3 Compressible Flows. Foundation of high speed fluid mechanics and thermodynamics. One-dimensional flow, isentropic flow, shock waves and nozzle and diffuser flows. Flow in ducts with friction and heat transfer. Prandtl-Meyer flow. Compressibility effects in reaction propulsion systems. Semester design project. Prerequisite: ME 300, ENGR 370A.

435-3 Design of Mass Transfer Processes. Design principles of mass transfer processes. The rate mechanism of molecular, convective and interphase mass diffusion. The design of selected industrial mass transport process operations such as absorption, humidification, water-cooling, drying and distillation. Prerequisite: ME 302.

436-3 Mechanical Engineering Controls. Analysis and design of controls for mechanical engineering systems: mechanical, electrical, thermal, fluid and combinations. Prerequisite: ENGR 261, ME 300, ENGR 335, 351.

440-3 Heating, Ventilating, and Air Conditioning Systems Design. Principles of human thermal comfort. Heating and cooling load analysis. HVAC system design. Air conditioning processes. Prerequisite: ME 302.

446-3 Energy Management. Fundamentals and various levels of analysis for energy management of commercial buildings and industrial processes and buildings. Use of energy management systems and economic evaluations are required in course projects. Prerequisite: ME 302.

449-3 Mechanics of Advanced Materials. Mechanical behavior of composite materials, cellular materials, functionally graded materials. Constitutive equations for the linear and nonlinear ranges, failure theories, fracture mechanics. Application to the design of composite and sandwich structures, pressure vessels, shafts, armor under static loading, impact and blast loading. Prerequisite: ENGR 261, ENGR 350A,B.

451-3 Advanced Dynamics. Three-dimensional kinematics and dynamics of particles and rigid bodies; Coordinates and reference frames; Rotations of rigid bodies; Euler angles; Newtonian mechanics; Work and energy; Generalized coordinates and degree of freedom; Analytical mechanics with a focus on Lagrange's equations; Hamilton's principle for continuous elastic systems. Prerequisites: MATH 305 and ME 309 with a grade of C or better or Graduate Standing.

463-3 Introduction to Ceramics. Structure and physical properties, mechanical properties, processing and design of ceramics. Prerequisite: ME 312 or equivalent.

465-3 Introduction to Nanotechnology. Survey of the rapidly developing fields of nanometer science and engineering. Impact on society; principles of self-assembly; production and properties of nano-materials; cell mechanism as a model for assemblers; nano-tools; and nano-systems are explored. Prerequisite: CHEM 210.

468-3 Friction Science and Applications. Study of systems and materials used for friction applications with a focus on aerospace and ground transportation vehicles. Course covers theories and experimental methods regarding friction and wear, contact mechanics, friction materials, vibration and noise, thermal transport and thermo-elastic phenomena. The course approach uses a materials emphasis. Lectures are complemented by exposure to laboratory methods and equipment. Design of a friction component, system or testing device. Prerequisite: ME 312. Restricted to senior standing or consent of instructor.

470-3 Mechanical System Vibrations. Linear vibration analysis of mechanical systems. Design of mechanical systems to include effects of vibration. Prerequisite: ENGR 261, 351, MATH 305.

472-3 Materials Selection for Design. Interaction of material design process with material selection criteria. Comparison of materials properties, processes and fabrication. Project work includes design models, materials selection rationale, oral presentation of projects, construction of mock-up models, and theoretical design problems in the area of the student's specialization. Prerequisite: ENGR 222B, ME 312.

475-3 Machine Design I. Design of machines using bearings, belts, clutches, chains and brakes. Develops application of the theory of fatigue, power transmission and lubrication to the analysis and design of machine elements. Prerequisite: ENGR 351 and 350A.

477-3 Fundamentals of Computer-Aided Design and Manufacturing. Introduction to the concepts of computer-aided design and manufacturing (CAD/CAM). Subjects include computer graphics, geometric modeling, engineering analysis with FEM, design optimization, computer numerical controls, project planning, and computer integrated manufacturing. (CIM). Students are required to use computer packages for projects. Prerequisite: ME 475 or consent of instructor.

478-3 Finite Element Analysis in CAD. Course to cover a

multitude of topics in CAD/CAE with emphasis on finite element modeling and analysis. Overview of CAD/CAM/CAE; FEA software; FEA problems including trusses, beams, frames, thermal analysis, and fluid mechanics; design optimization; rapid prototyping. Students are required to use FEA software for homework assignments and a design project. Prerequisite: ME 302 and ME 475 or consent of instructor.

480-3 Computational Fluid Dynamics. Application of computational fluid dynamics techniques to the solution of problems in engineering heat transfer and fluid flow. Discretization techniques; stability analysis. Introduction to grid generation. Prerequisite: ENGR 351, 370A, ME 302 or consent of instructor.

492-1 to 5 Special Problems in Engineering. Engineering topics and problems selected by either the instructor or the student with the approval of the instructor. Five hours maximum course credit. Not for graduate credit. Restricted to senior standing. Special approval needed from the instructor.

493-3 Materials in Energy Applications. Materials are central to every energy technology. The course will provide information on high performance materials for alternative energy technologies and developing a fundamental understanding of their structure-property-performance relationships. It will include materials for fuel cells, lithium ion batteries, supercapacitors, photovoltaics, solar energy conversion, thermoelectrics, and hydrogen production and storage, catalysts for fuel conversion. Prerequisite: ME 312.

495A-3 Mechanical Engineering Design. Project development skills, feasibility and cost-benefit analysis, ethical issues, professionalism, preliminary design, identification of tasks, assignment of tasks to project team members, coordination of interdisciplinary team effort, development of final proposal, oral presentation of final proposal. Not for graduate credit. Prerequisite or concurrent enrollment in: ENGR 351; ENGR 361; ME 400; two ME design electives. Restricted to senior standing in ME (second to last semester).

495B-3 Mechanical Engineering Design. Development of the final design, hardware implementation of the final design (if the project warrants), documentation of all stages of design, project coordination, documentation of the testing and evaluating of the design, cost estimating, scheduling, and written, oral, and poster presentation of the final design. Not for graduate credit. Prerequisite: ME 495A (last semester).

Mechanical Engineering and Energy Processes Faculty

Abrate, Serge, Professor, Ph.D., Purdue University, 1983.

Agrawal, Om P., Professor, Ph.D., University of Illinois at Chicago, 1984.

Chai, Tan, Assistant Professor, Ph.D., Ohio State University, 2013.

Chen, Juh W., Professor, *Emeritus*, Ph.D., University of Illinois, 1959.

Chu, Tsuchin, Professor, Ph.D., University of South Carolina, 1982.

Cooley, Christopher G., Assistant Professor, The Ohio State University, 2012.

Don, Jarlen, Professor, Ph.D., Ohio State University, 1982.

Esmaeeli, Asghar, Associate Professor, Ph.D., The University of Michigan, 1995.

Farhang, Kambiz, Professor, Ph.D., Purdue University, 1989.

Filip, Peter, Professor, Ph.D., Technical University, Ostrava, 1989.

Hippo, Edwin J., Professor, *Emeritus*, Ph.D., Pennsylvania State University, 1977.

Kent, Albert C., Professor, *Emeritus*, Ph.D., Kansas State University, 1968.

Koc, Rasit, Professor and *Chair*, Ph.D., University of Missouri-Rolla, 1989.

Mathias, James A., Associate Professor, Ph.D., Ohio State University, 2001.

Mondal, Kanchan, Associate Professor, Ph.D., Southern Illinois University, 2001.

Muchmore, Charles B., Professor, *Emeritus*, Ph.D., Southern Illinois University, 1970.

Nsofor, Emmanuel C., Associate Professor, Ph.D., Mississippi State University, 1993.

O'Brien, William S., Associate Professor, *Emeritus*, Ph.D., West Virginia University, 1972.

Orthwein, William, Professor, *Emeritus*, Ph.D., University of Michigan, 1959.

Rajan, Suri, Professor, *Emeritus*, Ph.D., University of Illinois, 1970.

Suni, Ivar Ian, Professor, Ph.D., Harvard, 1992.

Swisher, James H., Professor, *Emeritus*, Ph.D., Carnegie-Mellon University, 1963.

Tempelmeyer, Kenneth E., Professor, *Emeritus*, Ph.D., University of Tennessee, 1969.

Weston, Alan J., Associate Professor, Ph.D., Southern Illinois University, 1991.

Wiltowski, Tomasz, Professor, Ph.D., Institute of Catalysis and Surface Chemistry, 1982.

Wittmer, Dale E., Professor, *Emeritus*, Ph.D., University of Illinois, 1980.

Wright, Maurice, Professor, *Emeritus*, Ph.D., University of Wales, 1962.

MEDPREP

(Medical/Dental Education Preparatory Program)

MEDPREP is a post baccalaureate program within the Southern Illinois University School of Medicine. Courses are restricted to MEDPREP students only. Admission to MEDPREP is by direct application to the program. Contact the MEDPREP admissions coordinator for information.

Courses (MEDP)

400A-1 MEDPREP Seminar-Orientation. Seminar on social, professional, and scientific issues of interest to students planning a career in medicine or dentistry. Required of first-year MEDPREP participants. Restricted to MEDPREP students. Must be taken in A,B,C sequence. Mandatory Pass/Fail.

400B-1 MEDPREP Seminar-Medical/Dental Seminar I. Seminar on social, professional, and scientific issues of interest to students planning a career in medicine or dentistry. Required of first-year MEDPREP participants. Restricted to

MEDPREP students. Must be taken in A,B,C sequence. Mandatory Pass/Fail.

400C-1 MEDPREP Seminar-Medical/Dental Seminar II. Seminar on social, professional, and scientific issues of interest to students planning a career in medicine or dentistry. Required of first-year MEDPREP participants. Restricted to MEDPREP students. Must be taken in A,B,C sequence. Mandatory Pass/Fail.

401A-1 to 3 per topic MEDPREP Skills-Academic Enrichment. Focus on skills critical for academic success in preprofessional and professional training. Required of all students. Restricted to MEDPREP students.

401B-1 to 3 per topic MEDPREP Skills-Prematriculation (P/F only). Focus on skills critical for academic success in preprofessional and professional training. Restricted to MEDPREP students.

401C-1 to 3 per topic MEDPREP Skills-Quantitative Skills (P/F only). Focus on skills critical for academic success in preprofessional and professional training. Restricted to MEDPREP students.

401D-1 to 3 per topic MEDPREP Skills-Problem Solving (P/F only). Focus on skills critical for academic success in preprofessional and professional training. Restricted to MEDPREP students.

401E-1 MEDPREP Skills-Convocation (S/U only). Focus on skills critical for academic success in preprofessional and professional training. Required of all students. Restricted to MEDPREP students.

401F-1 to 3 per topic MEDPREP Skills-Critical Reading Skills. Focus on skills critical for academic success in preprofessional and professional training. Restricted to MEDPREP students.

401G-1 to 3 per topic MEDPREP Skills-Critical Reading Skills. Focus on skills critical for academic success in preprofessional and professional training. Restricted to MEDPREP students.

401H-1 to 3 per topic MEDPREP Skills-Critical Reading Skills. Focus on skills critical for academic success in preprofessional and professional training. Restricted to MEDPREP students.

401I-1 MEDPREP Skills-Career Development Skills (P/F only). Focus on skills critical for academic success in preprofessional and professional training. Required of all students. Restricted to MEDPREP students.

402A-1 to 3 per topic MEDPREP Behavioral and Social Sciences Applications. Content may be supplemental (to concurrent behavioral and social science courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students.

402B-1 to 2 per topic MEDPREP Special Problems-Research Seminar. Seminars, workshops, lectures, and field experiences related to preparing the student for medical/dental school and careers in medicine or dentistry. Restricted to MEDPREP students.

402C-1 to 2 per term; up to 12 total MEDPREP Special Problems-Clinical Experience, mandatory P/F. Seminars, workshops, lectures, and field experiences related to preparing the student for school and careers in medicine/dentistry. Restricted to MEDPREP students.

402D-3 MEDPREP Special Problems-Problem-Based Learning (P/F only). Seminars, workshops, lectures, and field experiences related to preparing the student for medical/dental school and careers in medicine or dentistry. Restricted to MEDPREP students.

402E-1 to 2 per topic MEDPREP Special Problems-Independent Readings. Seminars, workshops, lectures, and field experiences related to preparing the student for medical/dental school and careers in medicine or dentistry. Restricted to MEDPREP students.

402F-1 to 2 per topic MEDPREP Special Problems-Independent Research. Seminars, workshops, lectures, and field experiences related to preparing the student for medical/dental school and careers in medicine or dentistry. Restricted to MEDPREP students.

403A-1 to 3 MEDPREP Biology Applications-Medical Genetics. Content may be supplemental (to concurrent biological science courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students.

403B-1 to 3 MEDPREP Medical Pharmacology. Content may be supplemental (to concurrent biological science courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students.

403C-1 to 3 MEDPREP Biology Applications-Cardiovascular Physiology. Content may be supplemental (to concurrent biological science courses), additional (permitting acceleration) or preparational for the MCAT/DAT. Restricted to MEDPREP students.

403D-1 to 3 MEDPREP Biology Applications-Embryology. Content may be supplemental (to concurrent biological science courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students.

403E-1 to 3 MEDPREP Biology Applications-Medical Immunology. Content may be supplemental (to concurrent biological science courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students.

403F-1 to 3 MEDPREP Biology Applications-Hormonal Regulation. Content may be supplemental (to concurrent biological science courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students.

403G-1 to 6 MEDPREP Biology Applications-Biology Applications. Content may be supplemental (to concurrent biological science courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students.

403H-1 to 6 MEDPREP Biology Applications-Neural Science. Content may be supplemental (to concurrent biological science courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students.

403I-1 to 3 MEDPREP Biology Applications-Biology Problem Solving. Content may be supplemental (to concurrent biological science courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students.

404A-1 to 3 per topic MEDPREP Chemistry Applications-Inorganic Chemistry Applications. Content may be supplemental (to concurrent preprofessional chemistry courses),

additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students.

404B-1 to 3 per topic MEDPREP Chemistry Applications-Inorganic Chemistry (For Dental Students). Content may be supplemental (to concurrent preprofessional chemistry courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students.

404C-1 to 3 per topic MEDPREP Chemistry Applications-Organic Chemistry Applications. Content may be supplemental (to concurrent preprofessional chemistry courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students.

404D-1 to 3 per topic MEDPREP Chemistry Applications-Organic Chemistry for Dental Students. Content may be supplemental (to concurrent preprofessional chemistry courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students.

404E-1 to 3 per topic MEDPREP Chemistry Applications-Biochemistry. Content may be supplemental (to concurrent biological science courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students enrolled in Master's level program.

404F-1 to 3 per topic MEDPREP Chemistry Applications-Chemistry Problem Solving. Content may be supplemental (to concurrent preprofessional chemistry courses), additional (permitting acceleration), or preparational for the MCAT/DAT. Restricted to MEDPREP students.

405A-1 to 6 per topic MEDPREP Physics Applications. Content may be supplemental (to concurrent preprofessional physics courses), additional (permitting acceleration), or preparational for the MCAT. Restricted to MEDPREP students.

405B-1 to 3 per topic MEDPREP Physics Applications-Physics Problem Solving. Content may be supplemental (to concurrent preprofessional physics courses), additional (permitting acceleration), or preparational for the MCAT. Restricted to MEDPREP students.

MEDPREP Faculty

Bardo, Harold R., *Director*, Counselor Education/Educational Psychology, Ph.D., Southern Illinois University, 1972.

Chaklos, Mary S., *Instructor*, *Emerita*, Chemistry and Biochemistry, Ph.D., Southern Illinois University, 1979.

Gary, Mallory, *Instructor*, Health Education, Ph.D., Southern Illinois University Carbondale, 2012.

Henry, Paul, *Associate Professor*, *Emeritus*, Counselor Education/Educational Psychology, Ph.D., Southern Illinois University, 1982.

Herrold, Linda K., *Instructor*, *Assistant Dean*, Student Affairs, School of Medicine, Mathematics, M.S., Southern Illinois University, 1990.

Jackson, Evelyn W., *Associate Professor*, *Emerita*, Education/Reading, Ph.D., Southern Illinois University, 1975.

Jones, Kathleen A., *Instructor*, Biological Sciences, M.S., Southern Illinois University, 1990.

Metz, Anneke, *Assistant Professor*, Biochemistry, Ph.D., University of Texas Austin, 1998.

Paul, Gina, *Associate Professor*, Education/Reading, Ph.D., Southern Illinois University, 2001.

Szary, Barbara, Instructor, Immunology, Ph.D., Institute of Immunology and Experimental Therapy, Poland, 1977.

Weilbaeher, Rodney, Research Assistant Professor, Molecular and Cellular Physiology, Ph.D., University of California Berkeley, 1997.

Microbiology (Department, Major, Courses, Faculty)

Microbiology is the study of microorganisms, a large and diverse group of organisms that exist as single cells or cell clusters. The science of microbiology includes the study of microbial growth, biochemistry, genetics and ecology and the relationship of microorganisms to other organisms including humans. As a basic biological science, microbiology provides some of the most accessible research tools for probing the nature of life processes. Our sophisticated understanding of the chemical and physical principles governing life has developed from studies of microorganisms. As an applied biological science, microbiology deals with many important practical problems in medicine, agriculture, biodegradation and food industries, and is at the heart of biotechnology industries. Students pursuing a major in microbiology will have an opportunity to take coursework related to these important areas. Chemistry is also an integral part of modern microbiology. Therefore, general and organic chemistry are required for the microbiology major. A minor in chemistry can be achieved by completing both the chemistry requirements and MICR 425 with grade of C or better. All 300 and 400 level courses must be taken at SIU Carbondale. In addition, opportunities for undergraduate research in microbial biochemistry, genetics and diversity, as well as in immunology and molecular biology are available for outstanding undergraduate students. The microbiology major, chemistry minor and undergraduate research options are strong assets for students who seek careers in health care professions or industrial microbiology, or who seek graduate training in microbiology or related disciplines.

The following program of study prepares students for research or teaching positions after the bachelor's degree or for advanced study in graduate programs in microbiology, molecular biology or cell biology. A grade of C or better must be earned in Microbiology 301 and 302 to fulfill degree requirements. Transfer courses used for Microbiology 301 and 302 equivalencies must have a C grade or better. An overall grade point average of 2.00 or better for all microbiology courses is required to satisfy degree requirements. A student cannot repeat a course or its equivalent in which a grade of B or better was earned without the consent of the department.

Bachelor of Science Degree in Microbiology, College of Science

University Core Curriculum Requirements 41

College of Science Academic Requirements 6

Supportive skills coursework consisting of a minimum of six semester hours selected from: Computer Science 200B or 201; English 291, 491; Mathematics 282 or Plant Biology 360; any two-semester sequence of one of the following foreign languages: 200-level French, German, Japanese, or Spanish.

<i>Requirements for Major in Microbiology</i>	66
Biology 200A ¹ , 200B	(3) ¹ + 5
Microbiology 301, 302, 403, 460, 480, 481 and 495	22 ²
Microbiology electives	12
Senior level work consisting of lecture courses selected from: 421, 423, 425, 441, 453, 454, 470, 477	
Chemistry 200 ¹ , 201, 202, 210, 211, 212, 340, 341 and 442....	
.....(3) ¹ + 15	
Mathematics 141 or 150	4 ²
Physics 203A,B and 253A,B	8 ²
<i>Electives</i>	7
<i>Total</i>	120

¹These courses satisfy the University Core Curriculum requirements for science (required Core hours listed in parentheses).

²These courses satisfy the College of Science requirements for biological sciences, physical sciences, and mathematics.

Microbiology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
BIOL 200A,B	4	4
CHEM 200, 201, 202	5	-
CHEM 210, 211, 212	-	5
UCOL 101, ENGL 101	3	3
MATH 108, 109	3	3
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
CHEM 340, 341, Humanities	5	3
MATH 141, CS 201	4	3
MICR 301, 302	4	3
CMST 101, CHEM 442	3	3
ENGL 102	-	3
<i>Total</i>	16	15
THIRD YEAR	FALL	SPRING
Human Health, Fine Arts	2	3
Humanities, MATH 282	3	3
MICR 460, 403	3	3
PHYS 203A, 253A	4	-
PHYS 203B, 253B	-	4
Social Science	3	3
<i>Total</i>	15	16
FOURTH YEAR	FALL	SPRING
MICR 421,423,425,454 (select 2).....	6	-
MICR 441,453,470, 477 (select 2)	-	6
MICR 495	-	1
MICR 480, 481	4	4
Multicultural	3	-
Electives	1	3
<i>Total</i>	14	14

Minor

A minor in microbiology consists of 16 semester hours, to include 301, 302, and other courses determined by the student in consultation with the microbiology advisor.

Certificate Program in Histotechnology

See Histotechnology in this chapter.

Courses (MICR)

101-3 Microbes and Society. A discussion of the personal and social implications of the interactions between humans and microorganisms. Topics include: microbial structure, genetics and metabolism; the general role of microorganisms in industry, the environment, agriculture, food production, and disease; the use of microorganisms in biotechnology and biodegradation, and in the manufacture of useful products; methods of transmission and control of infectious agents. Three hours lecture.

201-4 Elementary Microbiology. (Advanced University Core Curriculum course) Basic concepts of microbiology, classification, metabolic activity and the effect of physical and chemical agents on microbial populations. Host-parasite interactions. Infectious agents, methods of transmission and control. Three hours lecture and three hours laboratory per week. Spring semester. Satisfies the University Core Curriculum Science Group II requirement in lieu of PLB 115 or ZOOL 115. Lab fee: \$30.

301-4 Principles of Microbiology. Structure, metabolism, growth, genetics, molecular biology, and applied aspects of microorganisms with emphasis on pure culture methods of study of bacteria and viruses. Three hours lecture, three hours laboratory. Fall semester. Prerequisite: One year of college chemistry and BIOL 200A or ZOOL 118 or equivalent. Lab fee: \$30.

302-3 Molecular Biology. Molecular structure, dynamics, and genetics of living cells and viruses with particular attention to the transfer of biological information. Spring semester. Prerequisite: CHEM 200, 201, 210 and 211, and BIOL 200A.

403-3 Medical Microbiology Lecture. (Same as MBMB 403) A survey of the more common bacterial, mycotic and viral infections of humans with particular emphasis on the distinctive properties, pathogenic mechanisms, epidemiology, immunology, diagnosis and control of disease-causing microorganisms. Three hours lecture. Spring semester. Prerequisite: MICR 301, or consent of instructor.

405-3 Clinical Microbiology. (Same as MBMB 405) This course will be offered in Springfield only. A comprehensive course for health science professionals covering the biology, virulence mechanisms, and identification of infectious agents important in human disease and host-defense mechanisms. Clinical applications emphasized. Three hours lecture. Prerequisite: MICR 301, or consent of instructor.

421-3 Biotechnology. (Same as MBMB 421) Topics covered will include the genetic basis of the revolution in biotechnology, medical applications including genetic screening and therapeutic agents, industrial biotechnology and fermentation, and agricultural applications. Three hours lecture. Fall semester. Prerequisite: MICR 302, or consent of instructor.

423-3 Geomicrobiology. (Same as MBMB 423 and GEOL 423) The course will focus on the role that microorganisms play in fundamental geological processes. Topics will include an outline of the present understanding of microbial involvement of weathering of rocks, formation and transformation of soils and sediments, and genesis and degradation of minerals. Elemental cycles will also be covered with emphasis on the interrelationships between the various geochemical cycles and the microbial

trophic groups involved. Prerequisite: MICR 301 and CHEM 210 and 211. Recommended: GEOL 220, 221 or 222.

425-3 Biochemistry and Physiology of Microorganisms Lecture. (Same as MBMB 425) Chemical composition, cellular structure, and metabolism of microorganisms. Fall semester. Prerequisite: CHEM 340 or CHEM 339.

441-3 Viruses and Disease. (Same as MBMB 441) An intensive, lecture-based course in virology which will emphasize principles of molecular virology, the ubiquity of viruses in nature, evolutionary relationships between viruses, co-evolution between virus and host, and the pathogenic consequences of some viral infections (e.g., AIDS, hepatitis, cancer, etc.). Prerequisites: MICR 460 or MBMB 460 or consent of instructor.

453-3 Immunology Lecture. (Same as MBMB 453) Principles of molecular and cellular immunology. Particular emphasis is given to molecular mechanisms involved in activation and maintenance of the immune response at the basic science level. The role of the immune system in medical diagnostic procedures and in human health is also discussed. Spring semester. Prerequisite: MICR 403, or consent of instructor.

454-4 Soil Microbiology. (Same as CSEM 454, PSAS 454) A study of microbial numbers, characteristics, and biochemical activities of soil microorganisms with emphasis on transformation of organic matter, minerals, and nitrogen in soil. Prerequisite: MICR 301 or CSEM 240. Lab fee: \$15.

455-2 Medical Immunology. (Same as MBMB 455) This course will be offered in Springfield only. A survey of the components of the immune system and how they interact with each other to produce responses that are important in the control or mediation of human disease. Two hours lecture. Prerequisite: MICR 301 or consent of instructor.

460-3 Bacterial and Viral Genetics. (Same as MBMB 460) The genetic mechanisms and regulatory events that control gene transfer, lambda phage infection, recombination, and metabolic pathways including a brief introduction to bioinformatics, genome analysis and global regulatory functions. Three hours lecture. Fall semester. Prerequisite: MICR 301 and 302, or consent of instructor.

470-3 Prokaryotic Diversity Lecture. (Same as MBMB 470) A consideration of the major groups of prokaryotes with special emphasis on their comparative physiology and ecology. Three hours lecture. Spring semester. Prerequisite: MICR 301 or consent of instructor.

477-3 Microbial Ecology. (Same as MBMB 477) Concepts of ecology applied to microorganisms; methods in microbial ecology; interactions of microbes with their living and non-living environment; microbial habitats and functions. Roles and regulation of microbes in natural and man-made environments, from cellular to community level. Prerequisite: MICR 301 or instructor's consent (based on proven background in both microbiology and ecology).

480-4 Molecular Biology of Microorganisms Laboratory. (Same as MBMB 480) Genetic and biochemical analyses of microorganisms using a variety of techniques in molecular biology, molecular genetics and biotechnology. Six hours laboratory per week plus two hours of supervised unstructured laboratory work in most weeks. Fall semester. Prerequisite: MICR 301 and 302 with a C grade or better and two (or concurrent enrollment in two) of the following: MICR 421, 423, 425 or 460. Lab fee: \$60.

481-4 Diagnostic and Applied Microbiology Laboratory. (Same as MBMB 481) Enrichment and isolation of prokaryotes from natural samples, diagnostic methods for the identification of pathogenic bacteria, and the nature of the immune response. Six hours laboratory per week plus two hours supervised unstructured laboratory work in most weeks. Spring semester. Prerequisite: MICR 301 and 302 with a C grade or better and two (or concurrent enrollment in two) of the following: MICR 403, 453 or 470. Lab fee: \$60.

490-1 to 3 Undergraduate Research Participation. Investigation of a problem either individually or as part of a research group under the direction of a member of the faculty. Not for graduate credit. Prerequisite: MICR 301 or equivalent and a 3.0 or better grade point average in Microbiology. Special approval needed from the instructor.

495-1 Senior Seminar. Readings, discussions, and presentations of current research topics on microbiology. Restricted to senior standing in Microbiology or Biological Sciences. Graded P/F only.

Microbiology Faculty

Achenbach, Laurie A., Professor and *Dean*, Ph.D., University of Illinois, 1988.

Bender, Kelly S., Associate Professor, Ph.D., Southern Illinois University Carbondale, 2003.

Clark, David P., Professor, *Emeritus*, Ph.D., University of Bristol England, 1976.

Fisher, Derek J., Assistant Professor, Ph.D., University of Pittsburgh, 2006.

Fix, Douglas F., Associate Professor and *Chair*, Ph.D., Indiana University, 1983.

Haddock, John D., Associate Professor, *Emeritus*, Ph.D., Virginia Polytechnic Institute and State University, 1990.

Konjufca, Vjollca, Assistant Professor, Ph.D., University of Arkansas Fayetteville, 2002.

Madigan, Michael T., Professor and Distinguished Scholar, *Emeritus*, Ph.D., University of Wisconsin, 1976.

Martinko, John M., Associate Professor and Distinguished Teacher, *Emeritus*, Ph.D., State University of New York at Buffalo, 1978.

Rader, Bethany, Assistant Professor, Ph.D., University of Oregon, 2006.

Mining and Mineral Resources Engineering

(Department, Major [Mining Engineering], Courses, Faculty)

Mining engineers engage in planning, design, development and management of surface and underground mining operations for extraction of the earth's mineral deposits. The Mining Engineering Program prepares graduates to meet the challenges of the mining industry with emphasis on the coal and aggregate industries. The Geological Engineering specialization permits students to gain a broader background in mine geology and exploration.

The missions of the Department are: to provide quality engineers to meet current trained manpower needs for exploration

and extraction of regional minerals resources in an environmentally acceptable manner; advance the mining engineering discipline by engaging in basic and applied research, with emphasis on solving regional problems; and to transfer and apply new technical knowledge to enhance the competitive position of the state and national minerals industry.

Program Educational Objectives

Our undergraduate degree in mining engineering prepares our students for careers in or related to the mining industry. Within three to five years of graduation, our students will:

1. Have a career in mining engineering or a related field taking into consideration global, sustainable and societal issues.
2. Be effective in communication, teamwork and creative thinking.
3. Pursue advanced education and/or lifelong learning to support career development in a broad range of mining related fields.
4. Engage in a safe, professional and ethical manner.

Student Outcomes

Student outcomes describe what students are expected to know and be able to do by the time of graduation. These relate to the skills, knowledge, and behaviors that students acquire as they progress through the program. In order to meet our program educational objectives, we will prepare our students to know the following:

1. The ability to apply knowledge of mathematics, science, and engineering.
2. The ability to design and conduct experiments, as well as to analyze and interpret data.
3. The ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
4. The ability to function on multi-disciplinary teams.
5. The ability to identify, formulate and solve engineering problems.
6. An understanding of professional and ethical responsibility.
7. The ability to communicate effectively.
8. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
9. A recognition of the need for and an ability to engage in lifelong learning.
10. Knowledge of contemporary issues.
11. The ability to use the techniques, skills and modern engineering tools necessary for engineering practice.

Coursework in the program includes such areas as surface and underground mining systems, mine ventilation, ground control and rock mechanics, mineral and coal processing, material handling systems, engineering economics, mine environment, health and safety engineering, probability and statistics applications, and computer-aided mine design. Facilities include

modern, well-equipped rock mechanics, mine ventilation, mineral processing, material handling, mine environment, and computer laboratories.

After completing the program, the graduate may work in an engineering or management position for mining industries, environmental companies, construction industries, oil companies, equipment manufacturers, research organizations, or government agencies. The coursework also provides strong preparation for further study at the graduate level. The undergraduate program in mining engineering is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>.

Bachelor of Science Degree in Mining Engineering, College of Engineering

MINING ENGINEERING MAJOR

<i>University Core Curriculum Requirements</i>	41 ³
Foundation Skills	15
English 101, 102	6
Mathematics 150	3
Communication Studies 101	3
University College 101E	3 ⁴
Disciplinary Studies	23
Fine Arts	3 ²
Human Health (BIOL 202 or approved substitute)	2 ²
Humanities	6 ²
Science (substitute Physics and Chemistry)	6 ¹
Social Science	6 ²
Integrative Studies	3
Multicultural	3 ²
<i>Requirements for Major in Mining Engineering</i>	(9) + 87
Basic Science	(6) + 9
CHEM 200, 201	(3) + 1
GEOL 220 or 222, 302	7
PHYS 205A,B	(3) + 1
Mathematics	(3) + 14
MATH 150, 250, 251, 305	(3) + 11
MNGE 417 200, 201	3
Science/Math Elective	3 ⁵
Required Engineering Courses.....	17
ENGR 260, 261, 335, 350A, 370A	15
ME 102.....	2
Required MNGE Courses.....	38
MNGE 270, 310, 315, 317, 320, 420, 425, 430, 431, 440, 455, 460, 475.....	38
Approved Electives.....	6 ⁵
Total	128

¹Courses required for the major will apply towards University Core Curriculum.

²Engineering requirements for Core Curriculum are more restrictive than those of the University as a whole.

³Students transferring are required to: (a) have an associate degree in a baccalaureate-oriented program or (b) meet the Core Curriculum requirements for engineering students. See departmental advisor for an approved course.

⁴Students with catalog year prior to Summer 2012 are required to complete an interdisciplinary or equivalent course.

⁵Three hours of a science/math elective and six hours of major electives are required. See departmental advisor for approved courses.

Mining Engineering Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101E	3	-
ENGL 101, 102	3	3
PHYS 205A, 255A	-	4
GEOL 220/222, MNGE 315	3	3
MNGE 270, 310.....	3	3
MATH 150, 250	4	4
<i>Total</i>	16	17
SECOND YEAR	FALL	SPRING
Core Social Science, Core Humanities ..	3	3
CMST 101, ENGR 350A	3	3
MATH 251, 305	3	3
MNGE 320, Core Social Science	1	3
ME 102, MNGE 317	2	1
ENGR 250, 261	3	3
<i>Total</i>	15	16
THIRD YEAR	FALL	SPRING
Core Humanities, Core Human Health	3	2
CHEM 200, 201	4	-
ENGR 370A, MNGE 417	3	3
MNGE 425, 420	4	4
Basic Science/Math Elective	-	3
ENGR 335, GEOL 302	3	4
<i>Total</i>	17	16
FOURTH YEAR	FALL	SPRING
MNGE 430, Core Multicultural	3	3
MNGE 431, Approved Elective in Major	4	3
MNGE 440, 460	3	3
MNGE 455, 475	3	3
Core Fine Arts, Approved Elective in Major	3	3
<i>Total</i>	16	15

Bachelor of Science Degree in Mining Engineering, College of Engineering	
MINING ENGINEERING MAJOR – GEOLOGICAL ENGINEERING SPECIALIZATION	
<i>University Core Curriculum Requirements</i>	41 ³
Foundation Skills	15
English 101, 102	6
Mathematics (substitute Mathematics in major)	3
Communication Studies 101	3
University College 101E	3 ⁴
Disciplinary Studies	23
Fine Arts	3
Human Health (Biology 202 or an approved substitute)	2 ²
Humanities	6 ²
Science (substitute Physics and Chemistry)	6 ¹
Social Science	6 ²
Integrative Studies	3

Multicultural	3
<i>Requirements for Major in Mining Engineering</i>	(9) + 88 ¹
Basic Sciences	(6) + 20
Physics 205A, 255A	(3) ¹ + 1 ¹
Chemistry 200, 201	(3) ¹ + 1 ¹
Geology 220 or 222, 302, 310, 315	15
Geology Elective-Geology 325 or 419 or 420 or 437 or 470.....	3
Mathematics 150 ¹ , 250, 251, 305	
Mining Engineering 417	(3) + 14
Engineering	54
General: Mechanical Engineering 102, Engineering 361.4	
Engineering Topics	50
Engineering Science:	
Engineering 250, 261, 335, 350A, 370A	15
Mining Coursework:	
Mining Engineering 270, 310, 315, 320,	
420, 425, 431, 440, 455, 475	32
Capstone Design:	
Mining Engineering 460	3
Total	129

¹Courses required for the major will apply towards University Core Curriculum.

²Engineering requirements for Core Curriculum are more restrictive than those of the University as a whole.

³Students transferring are required to: (a) have an associate degree in a baccalaureate-oriented program or (b) meet the Core Curriculum requirements for engineering students. See departmental advisor for an approved course.

⁴Students with catalog year prior to Summer 2012 are required to complete an interdisciplinary or equivalent course. See departmental advisor for an approved course.

⁵Three hours of approved geology electives are required. See Department Advisor for an approved course.

Mining Engineering – Geological Engineering Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
Core Human Health, UCOL 101E	2	3
ENGL 101, PHYS 205A	3	3
ME 102, PHYS 255A	2	1
GEOL 220/222, CMST 101	3	3
MNGE 270, 315	3	3
MATH 150, 250	4	4
<i>Total</i>	17	17
SECOND YEAR	FALL	SPRING
Core Social Science, Core Humanities... 3		3
ENGL 102, ENGR 350A	3	3
MATH 251, 305	3	3
MNGE 320, 310	1	3
ENGR 361	2	-
ENGR 250, GEOL 302	3	4
<i>Total</i>	15	16
THIRD YEAR	FALL	SPRING
CHEM 200, ENGR 370A	3	3

CHEM 201, MNGE 417	1	3
MNGE 431, 455	4	3
ENGR 261, Core Social Science	3	3
GEOL 310, Core Humanities	4	3
ENGR 335.....	3	-
<i>Total</i>	18	15
FOURTH YEAR	FALL	SPRING
MNGE 420, Core Multicultural	4	3
MNGE 425, Core Fine Arts	4	3
MNGE 440, 460	4	3
Geology Elective, GEOL 315	3	4
MNGE 475.....	-	3
<i>Total</i>	15	16

Courses (MNGE)

Safety glasses, an electronic calculator, and textbooks are required of all mining engineering students.

270-3 Introduction to Mining Engineering. Importance of mining to a country’s economy; stages of mining; prospecting and exploration, development and extraction; unit operations of mining; surface mining systems; underground mining methods; novel mining methods; mineral processing; marketing of minerals.

292-1 to 3 Special Topics in Mining Engineering. Course topics will be identified by instructor. Restricted to mining engineering transfer students.

310-3 Underground Mining. Underground mining access openings; underground mining equipment types and functions; advancing, sinking, and production blast rounds; underground mining methods, planning, and layout considerations. Prerequisite: MNGE 270 or consent of instructor.

315-3 Surface Mining. Surface mining methods, equipment, and sequences; surface mining tools; surface mine blast design basics; truck-shovel fleet design, sizing, and selection. Prerequisite: MNGE 270 or consent off instructor.

317-1 Ore Minerals. Introduction to the rocks and minerals that are commonly mined including such considerations as typical grade and tonnage relations, an overview of how the minerals and rocks are made into economic products, and the value and use of those products. Class includes basic mineral identification. Prerequisites: MNGE 270, GEOL 220 or GEOL 222 and knowledge of element symbols and formulas from chemistry or similar background with consent of instructor.

320-1 Mine Surveying Laboratory. Introduction to surveying; horizontal and vertical angles; using a level; land surveying; analysis of survey data for engineering design. Laboratory. Prerequisite: MATH 109 or MATH 111, or consent of instructor.

392-1 to 6 Mining Engineering Cooperative Education. Supervised work experience in industry, government or professional organizations. Students work with on-site supervisor and faculty adviser. Reports are required from the student and the employer. Hours do not count toward degree requirements. Mandatory Pass/Fail. Restricted to sophomore standing.

401-1 Mining Environmental Impacts and Permits. Socio-economic impacts of mining industry. Analyzing the markets for coal and its products. Mining operations and related environmental impacts. Mining permits. Prerequisite: MNGE 270

or consent of instructor.

405-1 Field Trip. Visit several mining operations and prepare a report. Not for graduate credit. Prerequisite: MNGE 270.

417-3 Statistics, Probability, and Modeling. Basic concepts of probability and statistics, analysis of engineering data, fitting data to distribution functions. Modeling of engineering systems and optimization. Project management techniques and system simulation.

420-4 Mineral and Coal Processing. Principles of processing minerals, aggregates and coal, including unit operations of comminution, classification, solid-solid separation, dewatering and tailings disposal. Laboratory investigations of the fundamental principles governing unit operations including size reduction, mineral liberation, classification, mineral recovery, and dewatering. Laboratory. Prerequisite: MNGE 270, CHEM 200, PHYS 205A, MATH 250, ENGR 370A,B or concurrent enrollment, or consent of instructor.

421-3 Mineral Processing Plant Design. Engineering design of unit operations used for minerals, aggregates and coal processing including crushing, grinding, industrial screening, classification, gravity separation, flotation and dewatering. Overall plant performance optimization and flow sheet design. Prerequisite: MNGE 417 or concurrent enrollment and MNGE 420. Special approval needed from the instructor.

425-4 Mine Ventilation Systems Analysis and Design. Thermodynamic principles in mine ventilation. Study of the theories and practice of natural and forced mine ventilation. Fan and mine characteristics. Ventilation network analysis. Mine ventilation design and problem analysis. Laboratory. Prerequisite: MNGE 310 and ENGR 370A,B, or consent of instructor.

430-3 Economics of Mineral Resources. Discounted cash flow and analysis, key financial measures, capital and operating cost estimation, mining investment decision making criteria, mine size optimization, ore valuation, resource/reserve estimation, financial sensitivity, geostatistics, and risk analysis. Co-requisite 310 or 315; or consent of instructor.

431-4 Rock Mechanics: Principles and Design. Analysis of stress and strain, elementary elasticity, stress distribution around openings, engineering properties of rocks, artificial support and reinforcement, slope stability. Laboratory. Prerequisite: ENGR 350A,B. Special approval needed from the instructor for graduate students and non-majors.

435-3 Application of Operations Research to Mining. Mine systems analysis, operations research and statistics in decision making, production engineering, optimization, linear programming, simulation. Prerequisite: MNGE 270, knowledge of linear algebra, or consent of instructor.

440-3 Material Handling Systems. Analysis and design of material handling systems such as belt conveying, hoisting and pumping. Mine power systems design. AC and DC motor applications. Material handling systems economics. Prerequisite: MNGE 310 and 315, or consent of instructor.

450-3 Industrial Minerals. Mining, Processing and Utilization aspects of key industrial minerals with special emphasis on the aggregates industry. Prerequisite: MNGE 270, 420 or consent of instructor.

455-3 Mine Environment, Health and Safety Engineering. Analysis of mine environmental impacts and their mitiga-

tion, safety problems and rules and regulations, hazards and accidents. Sealing and recovery of mines. Design of mine emergency plans, safety methods, and health hazard control plans. Acid mine drainage, minerals waste disposal environmental remediation. Prerequisite: MNGE 310, 315, consent of instructor. Mining industrial experience will be accepted in lieu of prerequisites.

460-3 Senior Design. Projects in planning and design of surface and underground mining systems. Evaluate and design mining subsystems; integrate subsystems and procedures into a preliminary mine design; and optimize operations from exploration to closure. Two lectures and two two-hour laboratories per week. Prerequisite: MNGE 420, 425, 431, 440, or consent of instructor.

475-3 Analysis and Design of Mine Excavations. Rock classification; design of shafts, slopes, tunnels, and underground chambers; support requirements; design of slopes; design of mining systems from ground control point of view; design of impoundments. Prerequisite: MNGE 310, 315, and 431. Special approval needed from the instructor for graduate students and non-majors.

492-1 to 5 Special Problems in Mining Engineering. Topics and problems selected either by the instructor or the student with the approval of the instructor. Five hours maximum course credit. Not for graduate credit. Restricted to senior standing. Special approval needed from the instructor.

Mining Engineering Faculty

Chugh, Yoginder P., Professor, Ph.D., Pennsylvania State University, 1971.

Harpalani, Satya, Professor, Ph.D., University of California, Berkeley, 1985.

Mohanty, Manoj, Professor, Ph.D., Southern Illinois University, 1997.

Paul, Bradley C., Associate Professor, Ph.D., University of Utah-Salt Lake, 1989.

Sinha, Atmesh K., Professor, *Emeritus*, Ph.D., University of Sheffield, 1963.

Spearing, Anthony, Associate Professor, Ph.D., University of Silesia, Poland, 1993.

Mortuary Science and Funeral Service (Major, Courses)

The mission of the Mortuary Science and Funeral Service program is to challenge students to achieve academic and professional excellence; prepare students to acquire entry level positions in the funeral service profession; provide quality instruction and stay current with trends of the profession; cultivate and maintain excellent relations with local, state, and national organizations; enhance University and community relations; and work toward the continued improvement of the Mortuary Science and Funeral Service program as an ongoing process.

This program is the only mortuary science and funeral service program offered in a public university in the state of Illinois. The initial program was developed in response to a request from the Illinois Funeral Directors Association. The Mortuary

Science and Funeral Service program at SIU Carbondale is accredited by the American Board of Funeral Service Education (ABFSE), 3414 Ashland Ave., Suite G, St Joseph, MO 64506, (816) 233-3747. Web:<www.abfse.org> Graduates meet licensing requirements established by the Illinois Department of Financial and Professional Regulation. This program in mortuary science and funeral service is recognized by other state licensing boards.

The program is designed to accept students directly from high school or to accommodate students transferring from other accredited post-secondary institutions. Enrollment in the program is limited due to variety of circumstances, including rules of accreditation, limitations of facilities/internship sites, and faculty-student ratio.

Prospective students attending another college or university prior to transferring to SIU should concentrate on completing courses articulated or approved as substitutes for SIU's University Core Curriculum requirements. Prior to taking courses that appear to equate to the professional sequence, the applicant should consult with an advisor within the Mortuary Science and Funeral Service program.

The Mortuary Science and Funeral Service program has a Linkage Agreement with Southeastern Illinois College, Rend Lake College and Shawnee College. If you have questions about this agreement, contact the community college advisor or SIU School of Allied Health at (618) 453-7287.

In addition to the professional course work, the student will be responsible for the University Core Curriculum as well as a number of courses, which will lead to an understanding of the psychological, sociological and theological implications of life and death. Each student will serve a semester-long internship at an approved off-campus facility. The expenses related to the internship courses are the responsibility of the student. The Internship Coordinator and/or Program Director will assign the internship location. Prior to participation in the internship, students may be required to undergo an "Internship Site Required" criminal background check and drug screening. Faculty members in the professional courses are licensed funeral directors and embalmers with experience in the profession. The program's Advisory Committee is composed of mortuary science and funeral service professionals.

The student is required to complete the Hepatitis B vaccine series before participating in the laboratory classes. The vaccine may be acquired at the SIU Student Health Center, a local health department, or through a private physician. The cost of this vaccine is the responsibility of the student and documentation showing completion of the vaccine series must be presented to the advisor prior to registration. In addition to the Hepatitis B vaccine requirement, a laboratory uniform, personal protective equipment and instruments must be purchased.

In accordance with accreditation standards, each student will be required to take the National Board Examination prior to graduation. The expense for the exam is the responsibility of the student. The annual passage rate of first-time takers on the National Board Examination (NBE) for the most recent three-year period for this institution and all ABFSE accredited funeral service education programs is posted on the ABFSE web site: <http://www.abfse.org>. Since laws governing the profession are enacted at the state level, licensing and qualification

requirements vary among states. Prospective students should contact the licensing body of the state in which they wish to attempt licensure. Career opportunities are excellent and to date all graduates who desire placement within the profession have been offered entry-level employment.

The Mortuary Science and Funeral Service program can be completed at Southern Illinois University Carbondale or in combination with other institutions of higher education.

The specific goals and objectives for the mortuary science and funeral service program may be found at www.sah.siu.edu/undergraduate/mortuary-science-funeral-service/index.php.

Bachelor of Science Degree in Mortuary Science, College of Applied Sciences and Arts

University Core Requirements 41
 ENGL 101 and 102, MATH 101, CMST 101, ZOOL 115/118, CHEM 106, PSYC 102, SOC 108, MUS 103, Humanities Elective PHIL 104, PHSL 201, HIST 202 and SOC 304I or other approved Integrative Studies.
Requirements for Major 74
 MSFS 101, 108, 240, 245, 256, 257, 270, 302, 325A,B, 340, 351, 352, 355, 360, 401, 410, 411, 412, Allied Health 241, Information Systems and Applied Technologies 120 and Finance 270.
Approved Career Electives 5
Total 120

Mortuary Science and Funeral Service Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ZOOL/PLB 115, MATH 101.....	3	3
PSYC 102, ISAT 120.....	3	3
ENGL 101, CHEM 106.....	3	3
UCOL 101, MSFS 108.....	3	3
MSFS 101, Fine Arts.....	3	3
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
ENGL 102, CMST 101.....	3	3
SOC 108, FIN 270.....	3	3
MSFS 256, MSFS 257.....	3	3
MSFS 240, MSFS 245.....	3	4
AH 241, Humanities.....	4	3
<i>Total</i>	16	16
THIRD YEAR	FALL	SPRING
MSFS 302, PHIL 104.....	4	3
MSFS 325A, MSFS 325B.....	4	4
MSFS 355, UCC Health.....	3	2
MSFS 270, MSFS 340.....	2	3
Multicultural, Elective.....	3	5
<i>Total</i>	16	17
FOURTH YEAR	FALL	SPRING
MSFS 360, MSFS 410.....	4	5
MSFS 351, MSFS 411.....	4	5
MSFS 352, MSFS 412.....	3	2

MSFS 401	2	-
<i>Total</i>	13	12

Courses (MSFS)

101-3 Orientation to Funeral Service. Students will trace the history of funeral services from ancient times through contemporary practices with emphasis on the development of funeral practices in the United States. Students study the customs of various cultures throughout the world including customs in the United States. They will demonstrate a knowledge of funeral service organizations and will discuss current topic areas of the profession. Lecture three hours. Restricted to MSFS majors.

108-3 Funeral Service Psychology. Designed to provide the student with an overview of psychology in funeral service as applied to death, grief and mourning. Students will examine interpersonal and public relations as they affect the funeral service practitioner. This course is writing intensive and reflects the College’s Communication-Across-the-Curriculum initiative. Lecture three hours. Prerequisite: PSYC 102 and ENGL 101.

230-4 Mortuary Anatomy. The student will study the structure and function of the human body as a whole including: general organization, structural organization, tissues, skeletal system, nervous system, circulatory system, physiology of circulation, glands, respiratory system, digestive system, genitourinary system, integument and special senses. Lecture three hours. Prerequisite: ZOOL 115/118. Restricted to MSFS majors.

240-3 Mortuary Regulations. The student will have knowledge of the federal, state and local regulations pertaining to the funeral profession. Studies will include the Occupational Safety and Health Administration regulations, Americans with Disabilities Act, Uniform Anatomical Gift Act, the Federal Trade Commission requirements, Rules and Regulations for the Control of Communicable Disease and other such regulations governing funeral service. Lecture three hours. Restricted to MSFS majors.

245-4 Restorative Art. Students will build upon knowledge of the anatomical structures of the cranial and facial areas of the human skull gained through anatomy. Students will develop a knowledge of facial proportions, modeling, expressions, and materials and techniques necessary to rebuild the human face. Laboratory assignments will include bone and tissue restoration, facial modeling, hair restorations, and others. Prerequisite: AH 241. Lab fee: \$150.

256-3 Introductory Microbiology. The student will survey microbiology: morphology, physiology, populations of microbial organisms, microbial destruction, immunology, and pathogenic agents. Lecture three hours. Prerequisite: PLB 115 or ZOOL 115 or 118 and CHEM 106. Restricted to major.

257-3 Pathology. Students will be introduced to the study of the cause, course and effects of diseases upon the human body, with stress on ways in which tissue changes affect the embalming process. Lecture three hours. Prerequisite: MSFS 256 and AH 241.

270-2 Computers in Funeral Service. The student will be given the opportunity to enhance their understanding of the applications of computers to the funeral profession. This course is designed to instill an appreciation for computers as an effective

funeral home management tool. Lecture 2 hours. Restricted to MSFS majors.

270Q-2 Computers in Funeral Service. The student will be given the opportunity to enhance their understanding of the applications of computers to the funeral profession. This course is designed to instill an appreciation for computers as an effective funeral home management tool. Lecture 2 hours. Restricted to MSFS majors. This is an online delivery course.

299-1 to 16 Individual Study. Provides students with an opportunity to explore studies that fit a particular need or interest. Enrollment provides access to the resources of the facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Restricted to MSFS majors.

302-4 Restorative Color and Cosmetics. The student will learn advanced procedure and techniques for restoration and cosmetology. Special attention will be placed upon pigments, visual aspects of color and color schemes, lighting, complexion types and materials, corrective shaping, rouging, waxing and powdering. Lecture three hours. Laboratory two hours. Prerequisite: MSFS 245. Lab fee: \$50.

302Q-4 Restorative Color and Cosmetics. The student will learn advanced procedure and techniques for restoration and cosmetology. Special attention will be placed upon pigments, visual aspects of color and color schemes, lighting, complexion types and materials, corrective shaping, rouging, waxing and powdering. Lecture three hours. Laboratory two hours. Prerequisite: MSFS 245. This is an online delivery course.

325A-4 Embalming Theory and Practice I. The student will be introduced to techniques of embalming through a study of the body, sanitation, embalming agents, instruments and methods of embalming. The student studies the theory, practices and techniques of sanitation as well as restoration and preservation of deceased human remains. Laboratory experiences consist of embalming deceased remains and of other related activities. Lecture three hours. Laboratory two hours. Prerequisite: MSFS 240 and proof of Hepatitis B vaccine or Titre test. Restricted to Mortuary Science and Funeral Service majors. Lab fee: \$50.

325B-4 Embalming Theory and Practice II. The student will study the anatomy of the circulatory system, the autopsied case, the cavity embalming, the contents of the thoracic and abdominal cavities and various embalming treatments. Laboratory experience is a continuation of 325A. Lecture three hours. Laboratory two hours. Must be taken in A, B sequence. Prerequisite: MSFS 240 and proof of Hepatitis B vaccine or Titre test. Restricted to Mortuary Science & Funeral Service majors. Lab fee: \$50.

340-3 Mortuary Law. Deals with the statutory laws and practices pertaining to funeral service. The student will trace the laws that govern the funeral director and the embalmer and their legal responsibilities to the consumer. Knowledge will be gained concerning the legal status of a dead human body, necessities of disposition, methods of disposition, rights and parties undertaking responsibility of disposition, custodial rights of the dead human remains, contract laws, right of disposition, control of the funeral, general rules of priority pertaining to next of kin, mental anguish, photographs, confidentiality, negligent acts by the funeral director and/or embalmer, mutilation laws, injury to invitees, injury to pallbearers, Clergy and staff, physi-

cal impact, collection against an estate, primary obligor, estate liability, cremation, authorization, commingling of remains, personal effects, storage and shipping of remains. Lecture three hours. Restricted to MSFS majors.

350-1 to 32 Mortuary Science and Funeral Service Subjects. In-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, professions, and health service occupations offered through various workshops, special short courses, and seminars. Hours and credit to be individually arranged. Mandatory Pass/Fail. Restricted to MSFS majors.

351-4 Funeral Service Management. The student will learn skills necessary to effectively manage a funeral home. Included are the funeral director's responsibilities from the first call to the completion of the funeral service. Topics include completing pre-need and post-need forms, human resource management, financial management, facilities management, maintenance of records, religious ceremonies, and professional ethics. Lecture four hours. Prerequisite: MSFS 240.

351Q-4 Funeral Service Management. The student will learn skills necessary to effectively manage a funeral home. Included are the funeral director's responsibilities from the first call to the completion of the funeral service. Topics include completing pre-need and post-need forms, human resource management, financial management, facilities management, maintenance of records, religious ceremonies, and professional ethics. Lecture four hours. Prerequisite: MSFS 240. This is an online delivery course.

352-3 Funeral Service Merchandising and Marketing. The student will learn the fundamentals of merchandising, product mix and pricing of funeral service merchandise (i.e., caskets, burial vaults, urns, etc.). Other topics include developing a funeral home marketing plan and applying small business marketing techniques to funeral homes. Lecture three hours. Co-requisite: MSFS 351.

355-3 Embalming Chemistry. The student will study the chemistry of the body, sanitation, toxicology, chemical changes in deceased human remains, disinfection, and embalming fluids. Laboratory experiences in 325A will complement lecture material. Lecture three hours. Co-requisite: MSFS 325A. Prerequisite: CHEM 106 and MSFS 240 or concurrent enrollment in MSFS 240.

360-4 Advanced Embalming Procedures. The student will study the proper procedures of embalming and other necessary preparations of special cases. Studies will include techniques and procedures used for embalming unique cases such as decomposition cases, burn victims, car accident victims and other traumatic faces of death. Students will be required to submit several written research papers and present oral presentations of specific topics throughout the semester. Lecture four hours. Prerequisite: MSFS 325B.

375Q-4 Research Project. This course requires the selection and investigation of a research topic culminating in a paper to satisfy the research requirement for the Bachelor of Science degree in Mortuary Science and Funeral Service.

401-2 Funeral Service Counseling. The student will be taught specific counseling procedures when counseling the bereaved family. Specific attention will be paid to the counseling and communication techniques and skills that will assist indi-

vidual family members with handling grief and the mourning process. In addition, students will explore the concepts of pre-need and after-care services. Prerequisites: MSFS 108 or PSYC 102 or consent of school.

410-5 Funeral Service Internship-Management. Students will be assigned to a University approved funeral home learning in actual practice situations: functional organization, procedures, and policies of the establishment. The course is 14 weeks in length. Not for graduate credit. Prerequisite: all other requirements of the MSFS major must be met including a grade point average of at least 2.0 in major. Co-requisites: MSFS 411 and 412.

411-5 Funeral Service Internship-Embalming. Students will be assigned to a University approved funeral home to be given the opportunity to learn embalming techniques by active participation in the preparation room under the direct supervision of a licensed embalmer. The course is 14 weeks in length. Not for graduate credit. Restriction: all other requirements of the MSFS major must be met including a grade point average of at least 2.0 in major. Co-requisites: MSFS 410 and 412. Special approval needed from the advisor.

412-2 Funeral Service Seminar. Formal discussions are held to evaluate the experiences and progress of the participants in the internship program. The student will participate in mock funeral arrangements and will evaluate themselves on style, knowledge and confidence via video. The second part of the seminar is a review for the National Board Examination. In accordance with accreditation standards, each student will be required to take the National Board Examination prior to graduation. The expense for the exam is the responsibility of the student. Mandatory Pass/Fail. Not for graduate credit. Co-requisites: MSFS 410 and 411.

415-3 On Dying and Death. Students will study the processes of death, grief, and bereavement. Emphasis on the practical aspects of coping with the many problems concerning death. Not for graduate credit.

Museum Studies (Minor)

Museum studies is available as an undergraduate interdisciplinary minor. The purpose of the minor is to introduce students to various aspects of museum work, to acquaint them with the opportunities and problems faced by museums and museum personnel, and to create career opportunities for students who might seek employment in a museum. Emphasis will be placed on actual work situations in such diverse museum functions as exhibition, curation, cataloging, acquisition, education and administration.

Minor

The museum studies minor consists of 18 hours, with 12 hours of required core courses and 6 hours of electives.

Core Courses: 12 hours selected from Anthropology 450A,B; Art and Design 207 and 447; History 497; Political Science 446.

Electives: 6 hours selected from Anthropology 304, 442 or 460; Art and Design 499; Political Science 441; Geology 440; History 490, 493 or 496; or courses listed above which are not used for the core.

Music (School, Major, Courses, Faculty)

The School of Music is an accredited institutional member of the National Association of Schools of Music, 11250 Roger Bacon Drive, Suite 21, Reston, Virginia 20190.

Admission and Advisement. All students who plan to major in Music will first be admitted as Pre-Music students provided they meet the University's admission policy. Incoming freshmen and transfer students are required to audition in person or by recording (if outside of a 250 mile radius of the University) prior to admittance to the desired specialty in music. Following a successful audition, students will be granted the status of music major and be allowed to register for classes in the desired specialty. Criteria used for admission to the School of Music may be above and beyond the University standards for general admission. For more information, please contact the School of Music at 618-536-8742.

Pre-Music Status. All students in the Pre-Music status must successfully complete the Music Major Audition to be classified as a music major. Students in the Pre-Music Status and students who have not successfully passed the music major audition will only be allowed to take the following courses: MUS 040, MUS 101 with a major ensemble (MUS 011, 013, 014, 017, 018, 020, 022, 365G). None of these courses will count towards graduation requirements. Students are allowed a maximum of two semesters of Pre-Music status, and should be aware that this designation may extend their time towards graduation.

Transferring students are required to audition in the student's applied area for admission to the music program and will be placed at the appropriate applied course level. Music credits earned at other accredited institutions will apply toward requirements, but the transferring student remains subject to evaluation by the Undergraduate Program Director for proper placement in the music curriculum.

All pre-music and music majors will be advised by the School of Music advisor for the purpose of completing the courses required.

All Music majors must maintain satisfactory membership in one of the following ensembles: Music 011, 013, 014, 017, 020, or 022 every term in residence. Students are exempt from this requirement during the session of student teaching. Piano performance and piano pedagogy majors may substitute Music 341 during the junior and senior years. Students who are unable to meet the major ensemble entrance requirements for one semester will be placed on probation by the School of Music. Students who are denied entrance into a major ensemble a second time will be reviewed by the undergraduate committee for possible continued probation or suspension from all music degree programs. The assignment to major ensembles must be compatible with the student's applied field. Instrumental Music Education students must enroll in Music 011 for a minimum of two semesters. Students also may elect additional large or small ensembles, not to exceed three in any one session.

Each student with a major or minor in music must designate a principal applied field and complete the credits specified within the selected specialization. Changes in the principal applied field are permissible so long as the student accumulates the required credit total and meets the required level of proficiency.

Credits in one's principal applied field are based on private lessons with a member of the faculty; weekly participation in Studio Hour and Convocations (Tuesday, at 10:00 a.m.); and recorded attendance each semester at seven campus recitals or concerts, approved for that purpose by the School of Music faculty. The student may not be a participant. Students who fail to fulfill either the Studio Hour or attendance at campus recitals or concerts requirement will receive a grade of Incomplete, which can be removed only by making up the deficiency during the ensuing semester. A student who wishes to attempt the performance specialization in applied music must have prior approval of the appropriate faculty jury, and thereafter enrolls for and receives one lesson per week for 3 credits per semester.

A student may elect private instruction in a second field or fields, but this is at the MUS 040 level for one credit per semester since the studio hour and recital attendance requirements pertain only to the principal applied field.

Students not majoring or minoring in music may elect private applied music instruction if they can exhibit sufficient ability and faculty loads will allow. Registration is at the MUS 040 level for one credit per semester, with no studio hour or recital attendance requirement. Those wishing such instruction should arrange for an interview and audition with the appropriate instructor.

Students specializing in music education should apply for admission to the Teacher Education Program as soon as they have accumulated 30 semester hours of credit. After being admitted, they must complete a series of specific requirements in order to qualify for student teaching and for the Illinois teaching license. Additional information is given under Teacher Education Program, and Curriculum and Instruction in this chapter. Students specializing in Music Education must maintain a grade of C or better in all courses required for the music degree.

Upper Division Examination, 240 Level Exit Examination

All music majors wishing to study at the 300 applied level or above must pass an upper division examination in order to be admitted to the 340 level of applied music. It is normally taken before finishing 60 hours of academic study and in the second semester of Music 240. All Bachelor of Arts degree students must pass a 240 level exit exam prior to registering for Music 487 or 488 Senior Project. The exam is normally taken in the second semester of Music 240A-X. The Upper Division and 240 exit examinations consist of an applied music jury performance. The upper division examination consists of an applied music jury performance before the entire music faculty.

Financial Information

Special grants and awards are available to students enrolled in the School of Music who are qualified and in need of financial assistance. Opportunities for employment in the student work program are excellent. In addition, there are scholarships (tuition awards) and loan programs available through the Office of Student Work and Financial Assistance.

Students are responsible for purchasing their own textbooks, solo literature, and incidental supplies for music lessons and classes. Such costs normally range from \$50 to \$100 per semester.

Bachelor of Music Degree, College of Liberal Arts

University Core Curriculum Requirements	41
Including Music 357A as University Core Curriculum substitute	
Requirements for Major in Music	79
Theory: Music 104A,B; 105A,B; 204A,B; 205A,B; 308; 321; 322	22
History-Literature: Music 102; 357A,B	(3) + 5 ¹
Conducting: Music 316	1
Partial Recital: Music 398	1
Beginning Piano: Music 030	4 ²
Specialization	46
Total	120

MUSIC MAJOR — PERFORMANCE SPECIALIZATION, INSTRUMENTAL (STANDARD ORCHESTRAL AND WIND INSTRUMENTS)

Music 140-440, principal field, 8 semesters	21
Major performing ensembles	8
Music 498	2
Music 461	3
Music 407, 421 or any of 470 series	6
Music 365	3
Approved music electives	3
Total	46

Performance Specialization Instrumental Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102	3	3
UCOL 101, MATH (except 107 or 114) ..	3	3
MUS 104 A,B	1	1
MUS 105 A,B	3	3
MUS 102	-	2
MUS 030A,B	1	1
MUS 140 (applied)	3	3
Major Ensemble	1	1
Total	15	17

SECOND YEAR	FALL	SPRING
Science Group 1, 2	3	3
Social Science Group 1, CMST 101	3	3
Health	2	-
MUS 204 A,B	1	1
MUS 205 A,B	3	3
MUS 030 C.D	1	1
MUS 240 (applied)	3	3
MUS 365	-	1
Major Ensemble	1	1
Total	17	16

THIRD YEAR	FALL	SPRING
Humanities Group 1, 2	3	3
MUS 308, 321	2	2
MUS 357A,B	3	3
MUS 316, 398	1	1
MUS 340 (applied)	3	2

Approved Music Elective	3	-
MUS 365	-	1
Major Ensemble	1	1
Total	16	13

FOURTH YEAR	FALL	SPRING
UCC Multicultural, Social Science Gr 2	3	3
MUS 322, 461	2	3
MUS 407, 421, or any 470 series	3	3
MUS 498	-	2
MUS 440 (applied)	3	1
MUS 365	1	-
Major Ensemble	1	1
Total	13	13

MUSIC MAJOR — PERFORMANCE SPECIALIZATION, STUDIO JAZZ

Music 015 ³	8
Major 016	4
Music 112	1
Music 113	1
Music 140-440 ⁴ , primary instruments, 8 semesters	28
Music 231 A,B	2
Music 331 A,B	2
Music 335	2
Music 372	3
Music 430 A,B	4
Music 498 ⁵	1
Total	51

³Studio jazz majors are required to be in Jazz Ensemble every semester of study. In addition, at least 4 semesters of non-jazz related ensembles is required. Majors are also required to be in Jazz Combo for at least 4 semesters.

⁴Majors with saxophone as a primary instrument must also take one semester each of applied clarinet and flute.

⁵Corresponding document required under the supervision of the applied professor.

Studio Jazz Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102	3	3
UCOL 101, MATH (except 107 or 114) ..	3	3
MUS 104 A,B	1	1
MUS 105 A,B	3	3
MUS 102	-	2
MUS 112, 113	1	1
MUS 030A,B	1	1
MUS 140 (applied)	2	2
MUS 015	1	1
Major Ensemble	1	1
Total	16	18

SECOND YEAR	FALL	SPRING
Science Group	3	3
Social Science Group	3	3
MUS 204 A,B	1	1
MUS 205 A,B	3	3
MUS 231 A,B	1	1
MUS 030C,D	1	1

MUS 240 (applied)	4	4
MUS 015	1	1
Major Ensemble	1	1
<i>Total</i>	18	18

THIRD YEAR	FALL	SPRING
Humanities Group	3	3
MUS 308	2	-
MUS 357A,B.....	3	3
MUS 316, 372.....	1	3
MUS 331A,B.....	1	1
MUS 340	4	4
MUS 398	-	1
MUS 015	1	1
MUS 016.....	1	1
<i>Total</i>	16	17

FOURTH YEAR	FALL	SPRING
Integrative Studies, CMST 101.....	3	3
Health.....	2	-
MUS 322, 335.....	3	2
MUS 440	4	4
MUS 498	-	1
MUS 430A,B.....	2	2
MUS 015	1	1
MUS 016	1	1
MUS 321	-	2
<i>Total</i>	16	16

MUSIC MAJOR — PERFORMANCE SPECIALIZATION,
GUITAR

Music 140-440, principal field, 8 semesters	21
Major performing ensembles	11
Music 107A and B	2
Music 498	2
Music 250	2
Music 374, 461	3
Approved music electives	3
<i>Total</i>	46

Performance Specialization Guitar Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
UCOL 101, MATH 101	3	3
MUS 104 A,B.....	1	1
MUS 105 A,B.....	3	3
MUS 102	-	2
MUS 030A,B.....	1	1
MUS 140 (applied)	3	3
Major Ensemble (MUS 365G)	1	1
<i>Total</i>	15	17

SECOND YEAR	FALL	SPRING
Science Group 1, 2.....	3	3
CMST 101.....	3	-
MUS 204 A,B.....	1	1
MUS 205 A,B.....	3	3

MUS 030 C,D.....	1	1
MUS 107 A,B.....	1	1
MUS 250	1	1
MUS 240 (applied)	3	3
Major Ensemble (MUS 365G)	1	1
<i>Total</i>	17	14

THIRD YEAR	FALL	SPRING
Humanities	3	3
Human Health	-	2
MUS 308, 321.....	2	2
MUS 357A,B.....	3	3
MUS 374, 398.....	2	1
MUS 340 (applied)	3	2
MUS 365 A or H.....	1	1
Major Ensemble (MUS 365G)	1	1
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
Social Science	3	3
Multicultural	3	-
MUS 322, 461.....	2	3
MUS 316.....	-	1
MUS 440 (applied)	3	1
Approved Music Electives, MUS 498.....	3	2
MUS 465 A or H.....	-	1
Major Ensemble (MUS 365G)	1	1
<i>Total</i>	15	12

MUSIC MAJOR – PERFORMANCE SPECIALIZATION,
KEYBOARD (PIANO, ORGAN AND HARPSICHORD)

Music 030 not required

Music 140-440, principal field, 8 semesters	21
Major performing ensembles	6
Music 498	2
Music 461	3
Music 407, 421, or any of 470 series	5
Music 341	2
MUS 479A or 479I.....	2
Approved music electives	7
MUS 365F.....	2
<i>Total</i>	50

Performance Specialization Keyboard Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
UCOL 101, MATH (except 107 or 114)..	3	3
MUS 104 A,B.....	1	1
MUS 105 A,B.....	3	3
MUS 102	-	2
MUS 140 (applied)	3	3
Major Ensemble	1	1
<i>Total</i>	14	16

SECOND YEAR	FALL	SPRING
Science Group 1, 2.....	3	3

Integrative Studies, CMST 101.....	3	3
Health	2	-
MUS 204 A,B.....	1	1
MUS 205 A,B.....	3	3
MUS 240 (applied).....	3	3
Major Ensemble	1	1
Approved Music Electives.....	-	2

Total 16 16

THIRD YEAR	FALL	SPRING
Social Science Group 1, 2.....	3	3
MUS 308, 321.....	2	2
MUS 357A,B.....	3	3
MUS 341 or Major Ensemble	1	1
MUS 316, 398.....	1	1
MUS 340 (applied).....	3	2
MUS 479A or 479I	2	-
MUS 365F, Approved Music Elective	1	2

Total 16 14

FOURTH YEAR	FALL	SPRING
Humanities Group 1,2	3	3
MUS 322, 498.....	2	2
MUS 407, 421, or any 470 series.....	2	3
MUS 365F, 461.....	1	3
MUS 341.....	1	1
MUS 440 (applied).....	3	1
Approved Music Electives.....	3	-

Total 15 13

MUSIC MAJOR — PERFORMANCE SPECIALIZATION, VOICE

Music 140-440, principal field, 8 semesters	21
Major performing ensembles	8
Music 498	2
Music 461	3
Approved foreign language, 2 semesters	8
Music 401, 402	2
Music 363A,B	2
<i>Total</i>	46

Performance Specialization Voice Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
UCOL 101, MATH (except 107 or 114)..	3	3
MUS 104 A,B.....	1	1
MUS 105 A,B.....	3	3
MUS 102.....	-	2
MUS 030A,B.....	1	1
MUS 140 (applied).....	3	3
Major Ensemble	1	1

Total 15 17

SECOND YEAR	FALL	SPRING
Science Group 1, 2.....	3	3
Social Science Group 1, CMST 101	3	3
MUS 204 A,B.....	3	3

MUS 205 A,B.....	1	1
MUS 030 C,D.....	1	1
MUS 363.....	1	1
MUS 240 (applied).....	3	3
Major Ensemble	1	1

Total 16 16

THIRD YEAR	FALL	SPRING
Humanities Group 1, 2	3	3
Foreign Language	4	4
MUS 308.....	2	-
MUS 357A,B.....	3	3
MUS 316, 398.....	1	1
MUS 340 (applied).....	3	2
Major Ensemble	1	1

Total 17 14

FOURTH YEAR	FALL	SPRING
Integrative Studies, Social Science Gr 2	3	3
Health	-	2
MUS 322, 321.....	2	2
MUS 461.....	3	-
MUS 401, 402.....	1	1
MUS 498.....	-	2
MUS 440 (applied).....	3	1
Major Ensemble	1	1

Total 13 12

MUSIC MAJOR — PIANO PEDAGOGY SPECIALIZATION

Music 140-440, principal field, 8 semesters	21
Major performing ensembles	8
Music 398-1+1 or 498-2.....	2
Music 110A,B, 210, 211, 310, 311, 410A,B	16
Approved music electives	3
<i>Total</i>	50

Performance Specialization Piano Pedagogy Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
UCOL 101, MUS 102	3	2
MUS 104 A,B.....	1	1
MUS 105 A,B.....	3	3
MUS 110 A,B.....	2	2
MUS 140 (applied).....	3	3
Major Ensemble	1	1

Total 16 15

SECOND YEAR	FALL	SPRING
Health, Integrative Studies.....	2	3
CMST 101, MATH (except 107 or 114)..	3	3
MUS 204A,B.....	1	1
MUS 205A,B.....	3	3
MUS 210 and 211.....	2	2
MUS 240 (applied).....	3	3
Major Ensemble	1	1

Total 15 16

THIRD YEAR	FALL	SPRING
Science Group 1, 2.....	3	3
MUS 308, 321.....	2	2
MUS 357A,B.....	3	3
MUS 310 and 311.....	2	2
MUS 316.....	1	-
MUS 340 (applied).....	3	2
MUS 398.....	-	1
Major Ensemble (or MUS 341).....	1	1
<i>Total</i>	15	14

FOURTH YEAR	FALL	SPRING
Social Science Gr 1, 2.....	3	3
Humanities Gr 1, 2.....	3	3
MUS 322.....	2	-
MUS 410.....	2	2
MUS 440 (applied).....	3	1
MUS 398 (1) or 498 (2), Electives.....	-	5
Major Ensemble.....	1	1
<i>Total</i>	14	15

MUSIC MAJOR — MUSIC THEORY/COMPOSITION SPECIALIZATION

Music 140-340, principal field, 6 semesters.....	12
Major performing ensembles.....	8
Music 280.....	4
Music 380.....	4
Music 480.....	4
Music 421.....	2
Music 470 series.....	6
Approved music electives, 300 level or above.....	5
Music 498.....	2
<i>Total</i>	47

¹University Core Curriculum substitute.

²Exceptions for Music 030 and consequent credit hour adjustment in key board performance, piano pedagogy and instrumental music education specialization.

Music Theory/Composition Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
MATH (except 107 or 114).....	3	-
UCOL 101, Health.....	3	2
MUS 104 A,B.....	1	1
MUS 105 A,B.....	3	3
MUS 102.....	-	2
MUS 140 (applied).....	2	2
MUS 030A,B.....	1	1
Major Ensemble.....	1	1
<i>Total</i>	17	15

SECOND YEAR	FALL	SPRING
Science Group 1, 2.....	3	3
Social Science Group 1, CMST 101.....	3	3
MUS 204A,B.....	1	1
MUS 205A,B.....	3	3
MUS 030C,D.....	1	1

MUS 280.....	2	2
MUS 240 (applied).....	2	2
Major Ensemble.....	1	1
<i>Total</i>	16	16

THIRD YEAR	FALL	SPRING
Humanities Group 1, 2.....	3	3
Approved Music Elective.....	2	1
MUS 308, 321.....	2	2
MUS 357A,B.....	3	3
MUS 380.....	2	2
MUS 340 (applied).....	2	2
Major Ensemble.....	1	1
MUS 316.....	1	-
<i>Total</i>	16	14

FOURTH YEAR	FALL	SPRING
Integrative Studies, Social Science Gr 2.....	3	3
Approved Music Elective.....	1	1
MUS 322, 421.....	2	2
MUS 480.....	2	2
MUS 470 series.....	3	3
MUS 498.....	-	2
Major Ensemble.....	1	1
<i>Total</i>	12	14

Bachelor of Music Degree, College of Liberal Arts

MUSIC MAJOR —MUSIC EDUCATION SPECIALIZATION

<i>University Core Curriculum Requirements</i>	41
Must include UCOL 101J, MATH 101, PSYC 102, MUS 357A/B, EDUC 311, 314.	
<i>Requirements for Major in Music</i>	58
Theory: MUS 104A,B; 105A,B; 204A,B; 205A,B; 308; 321 or 322.....	20
Major performing ensembles.....	8
Music 140-340, principal applied field, 6 semesters.....	12
Music 398 half recital.....	1
Music 304.....	2
Music 305.....	2
Music 306.....	2
Music Education Specialization (Instrumental emphasis).....	11
Music 030.....	2
Music 032, 033, 034, 035.....	5
Music 316, 318.....	3
Music 031.....	1
<i>or</i>	
Music Education Specialization (Choral/General emphasis).....	11
Music 030.....	4
Music 035, 036A.....	2
Music 316, 317.....	3
Music 363A,B.....	2
<i>Professional Education Requirements</i>	24
EDUC 301, 302, 303, 308, 313, 319, 401 (A,B,C)	
<i>Additional Licensure Requirements- CI 360</i>	3
<i>Total</i>	126

**Music Education Specialization
(Choral/General) Suggested Curricular Guide**

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
MATH Group, PSYC 102.....	3	3
UCOL 101J, MUS 102.....	3	3
MUS 104 A,B.....	1	1
MUS 105 A,B.....	3	3
MUS 140.....	1	1
MUS 030 A,B.....	1	1
MUS 036A, MUS 035.....	1	1
Major Ensemble.....	1	1
<i>Total</i>	17	17
SECOND YEAR	FALL	SPRING
Science Group 1, Group 2.....	3	3
CMST 101, Health.....	3	2
MUS 204 A,B.....	1	1
MUS 205 A,B.....	3	3
MUS 240(A-X).....	1	1
MUS 030 C,D.....	1	1
MUS 363 A, EDUC 311.....	1	3
EDUC 314, Major Ensemble.....	3	1
Major Ensemble.....	1	-
<i>Total</i>	17	15
THIRD YEAR	FALL	SPRING
Humanities Group 1, Group 2.....	3	3
MUS 308/321/322, MUS 357B.....	2	3
MUS 357 A, MUS 340 (A-X).....	3	1
OneTechGroup, MUS 316.....	1	1
MUS 340 (A-X), MUS 306.....	1	2
MUS 304.....	2	-
EDUC 313, 319.....	3	3
EDUC 301, 302.....	1	1
Major Ensemble.....	1	1
<i>Total</i>	17	15
FOURTH YEAR	FALL	SPRING
MUS 300, EDUC 401B.....	2	6
MUS 440 (A-Y), EDUC 401B.....	1	6
MUS 398.....	1	-
MUS 317.....	2	-
CI 360.....	3	-
MUS 305.....	2	-
EDUC 308.....	3	-
EDUC 303.....	1	-
Major Ensemble.....	1	-
<i>Total</i>	16	12

All MUS courses must be passed with a C or higher.

**Music Education Specialization (Instrumental)
Suggested Curricular Guide**

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3

MATH 101, PSYC 102.....	3	3
UCOL 101J, MUS 102.....	3	2
MUS 104 A,B.....	1	1
MUS 105 A,B.....	3	3
MUS 140, MUS 104 A/B.....	1	1
MUS 030 A,B.....	1	1
MUS 031, 035.....	1	1
MUS 011, Major Ensemble.....	1	1
<i>Total</i>	17	16

SECOND YEAR	FALL	SPRING
Science Group 1, Group 2.....	3	3
CMST 101, Health.....	3	2
MUS 204 A,B.....	1	1
MUS 205 A,B.....	3	3
MUS 240 (A-X).....	1	1
MUS 033 A,B.....	1	1
MUS 032, EDUC 311.....	1	3
EDUC 314, Major Ensemble.....	3	1
MUS 011.....	1	-
<i>Total</i>	17	15

THIRD YEAR	FALL	SPRING
Humanities.....	3	3
MUS 308/321/322, MUS 357B.....	2	3
MUS 357A, 340 (A-X).....	3	1
MUS 340 (A-X), MUS 316.....	1	1
MUS 034, 306.....	1	2
MUS 304, Major Ensemble.....	2	1
EDUC 313, 319.....	3	3
EDUC 301, 302.....	1	1
Major Ensemble.....	1	-
<i>Total</i>	17	15

FOURTH YEAR	FALL	SPRING
MUS 300, 401B.....	2	6
MUS 340 (A-X), 401B.....	1	6
MUS 398.....	1	-
MUS 318.....	2	-
CI 360.....	3	-
MUS 305.....	2	-
EDUC 308.....	3	-
EDUC 303.....	1	-
Major Ensemble.....	1	-
<i>Total</i>	16	12

All MUS courses must be passed with a C or higher.

Bachelor of Arts Degree, College of Liberal Arts

The Bachelor of Arts in Music degree is a liberal arts degree individually tailored to meet the educational goals of each student pursuing it. The Bachelor of Arts in Music (Liberal Arts specialization), essentially a double major, offers considerable flexibility to students by allowing them to combine their coursework in Music and the University Core Curriculum with another Core Elective area of their choice. The Bachelor of Arts in Music (Liberal Arts specialization) require a core of 18 to 19 hours of music literature and music theory courses.

Of the 50 hours required to complete the Bachelor of Arts in Music (Liberal Arts specialization), the required courses are MUS 357A,B, MUS 488 and 8 hours of approved music electives. In addition, at least one year of foreign language is required. This can be met by one of the following: (a) passing an 8-hour 100-level sequence in one language; (b) by earning 8 hours of 100-level credit in one language by proficiency examination; or (c) completing three years of one language in high school with no grade lower than C. The 30 Elective Core hours necessary to complete the degree program are selected by the student with the approval of the student's faculty sponsor and the undergraduate committee. This planning should be done during the first semester of the student's admittance to the School of Music with undergraduate committee approval secured not later than the end of the second semester. Changes may be made if agreed upon by the student, the undergraduate committee and the student's faculty sponsor. At least 40 hours toward the Liberal Arts degree must be at the 300-400 level. The Bachelor of Arts in Music does not provide the necessary prerequisites for graduate study in a Master of Music degree program.

Of the 55 to 56 hours required to complete the Bachelor of Arts in Music (Business specialization), 18 to 19 hours are in specific music courses, 14 to 15 hours in music electives, and 27 hours are in accounting, economics, finance and marketing courses.

Bachelor of Arts Degree, College of Liberal Arts

<i>University Core Curriculum Requirements</i>	41
Including Music 357A as University Core Curriculum substitute	
<i>Requirements for Major in Music</i>	79
Theory: Music 104A,B; 105A,B	8
Literature and History: Music 102, 357A,B	5 ¹
Major performing ensembles	8
Applied Music 140-240, principal field, 4 semesters	8
Specialization (see below)	50
<i>Total</i>	120

MUSIC MAJOR — LIBERAL ARTS SPECIALIZATION

Music 030A,B	2
Music 488	2
Approved Music Electives	8
Foreign Language	8
Elective Core	30
<i>Total</i>	50

Liberal Arts Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
MATH (except 107 or 114).....	3	-
UCOL 101, Health	3	2
MUS 104 A,B.....	1	1
MUS 105 A,B.....	3	3
MUS 102.....	-	2
MUS 140 (applied)	2	2
MUS 030A,B.....	1	1
Major Ensemble	1	1
<i>Total</i>	17	15

SECOND YEAR	FALL	SPRING
Science Group 1, 2.....	3	3
Foreign Language	4	4
Social Science 1, CMST 101.....	3	3
MUS 240 (applied)	2	2
Approved Core Electives	3	3
Major Ensemble	1	1
<i>Total</i>	16	16

THIRD YEAR	FALL	SPRING
Humanities Group 1, 2	3	3
MUS 357A,B.....	3	3
Approved Music Elective	-	3
Approved Core Electives.....	6	6
Major Ensemble	1	1
<i>Total</i>	13	16

FOURTH YEAR	FALL	SPRING
Integrative Studies	3	-
Social Science 2	-	3
MUS 488.....	2	-
Approved Music Elective	-	5
Approved Core Electives.....	9	3
Major Ensemble	1	1
<i>Total</i>	15	12

MUSIC MAJOR — MUSIC (BUSINESS) SPECIALIZATION

Required Music Courses	
Music 030	2
Music 031	1
Music 323 or three of the following: 032A, 032B, 033A,B, 034, 035, 036A, 036B	3
Music 307	2
Music 174	3
Music 487	3
Approved Music Electives	9
Required Business Courses²	
Accounting 220, 230	6
Management 304	3
Economics 240	(3) ³
Finance 280	3
Marketing 304, 363, 401, 438	12
Approved Business Electives	3
<i>Total</i>	50

¹University Core Curriculum substitute.

²Up to six hours in related areas may be substituted for Required Business Courses with the approval of the undergraduate committee.

³University Core Curriculum substitute (for Economics 113).

Music (Business) Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
UCOL 101.....	3	-
Health, MUS 174	2	3

MUS 104A,B.....	1	1
MUS 105A,B.....	3	3
MUS 102.....	-	2
MUS 030A,B.....	1	1
MUS 140 (applied).....	2	2
Major Ensemble.....	1	1
Total	16	16

SECOND YEAR	FALL	SPRING
Science Group 1, 2.....	3	3
MATH (except 107 or 114), CMST 101 .	3	3
ECON 240.....	3	-
ACCT 220, 230.....	3	3
FIN 280.....	-	3
MUS 031.....	1	-
MUS 240 (applied).....	2	2
Major Ensemble.....	1	1
Total	16	15

THIRD YEAR	FALL	SPRING
Humanities Group 1, 2.....	3	3
MKTG 304, MGMT 304.....	3	3
MUS 357A,B.....	3	3
MUS 307.....	-	2
MUS 323.....	3	-
Approved Music Elective.....	3	-
Major Ensemble.....	1	1
Total	16	12

FOURTH YEAR	FALL	SPRING
Integrative Studies, Soc. Science Gr 2...	3	3
MKTG 363, 438.....	3	3
MKTG 401.....	3	-
MUS 487.....	-	3
Approved Music Elective.....	3	3
Major Ensemble.....	1	1
Approved Business Elective.....	3	-
Total	16	13

Musical Theater:

The School of Music and the Department of Theater co-sponsor a BFA in Musical Theater degree. Please refer to the Theater section of the catalog in this chapter for course description and requirements.

Music Minor

The minor in music includes Music 102, 030A,B, 104A,B, 105A,B, 357A,B; two semesters of performing ensembles, two hours; and two semesters of 040 or 140, four hours for a total of 24 credits. Students must comply with the studio hour and recital requirements listed above. Students wishing to pursue the minor curriculum must make a declaration of intent at the Music Advisement Office before registering for classes.

Courses (MUS)

011-1 to 4 (1.1.1.1) Marching Salukis. Fall semester only. Open to all students with experience in bands. Performs at all home football games, and one or two away. Counts as a major ensemble, one of which must be taken each semester by resident music majors. Not more than four hours count toward undergraduate degree. Prerequisite: Experience in bands. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

012-1 to 8 (1,1,1,1,1,1,1) Pep Band. A select group which performs at all home basketball games. Not more than eight hours count toward undergraduate degree. Prerequisite: audition prior to first registration. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

013-1 to 8 (1,1,1,1,1,1,1) Symphonic Band. Open to all students with experience in bands. Performs standard literature. Two or three concerts per year. Counts as major ensemble, one of which must be taken each semester by resident music majors. Prerequisites: experience in bands and audition prior to first registration. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

014-1 to 8 (1.1.1.1.1.1.1) Concert Wind Ensemble. A select group which performs advanced contemporary literature. Three concerts and tour per year. Counts as major ensemble, one of which must be taken each semester by resident music majors. Not more than eight hours count toward undergraduate degree. Prerequisite: audition prior to first registration. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

015-1 to 8 (1.1.1.1.1.1.1) Jazz Ensemble. For students experienced with popular literature. Concerts and tours when feasible. Counts as major ensemble for jazz majors in junior and senior year, one of which must be taken each semester by resident music majors. Not more than eight hours count toward undergraduate degree. Prerequisite: audition prior to first registration. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

016-1 to 8 (1,1,1,1,1,1,1) Jazz Combos. A select group, performing literature scored for this instrumentation. Two or three concerts per year and tour as feasible. Prerequisite: audition prior to first registration. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

017-1 to 8 (1.1.1.1.1.1.1) Symphony. Open to all experienced string, woodwind, brass, and percussion players. Plays standard and advanced orchestral literature, performs three or four concerts per year. Counts as a major ensemble, one of which must be taken each semester by resident music majors. Prerequisite: audition prior to first registration. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

018-1 to 8 (1.1.1.1.1.1.1) Civic Orchestra. Open to all students who wish to perform major orchestral literature. Prerequisite: audition prior to first registration. Counts as major ensemble for music pre-majors studying at the 040 level. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

020-1 to 8 (1.1.1.1.1.1.1) Choral Union. Open to qualified students who desire to perform major choral-orchestral literature. Two concerts per year. Counts as a major ensemble, one of which must be taken each semester by resident music majors.

Prerequisite: audition prior to first registration. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

021-1 to 8 (1,1,1,1,1,1,1,1) Chamber Choir. Open to all experienced singers. Emphasis on contemporary literature. Three or four concerts per year and tours as feasible. Does not count as a major ensemble. Prerequisite: audition required. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

022-1 to 8 (1.1.1.1.1.1.1.1) Concert Choir. A select group which performs advanced choral literature of all eras. Three or four concerts per year and tours as feasible. Counts as a major ensemble, one of which must be taken each semester by resident music majors. Prerequisite: audition prior to first registration. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

023-1 to 8 (1,1,1,1,1,1,1,1) Vocal Jazz Ensemble. Open to all experienced singers. Emphasis on light, popular literature. Two or three appearances per year. Does not count as a major ensemble. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

030A-1 Piano Class-Level 1. Designed to develop functional command of basic keyboard skills needed in the further study of music and the teaching of music. Take in sequence unless assigned advanced placement by instructor. Restricted to major or minor in music, elementary education, early childhood education, Musical Theater or consent of instructor. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

030B-1 Piano Class-Level 2. Designed to develop functional command of basic keyboard skills needed in the further study of music and the teaching of music. Take in sequence unless assigned advanced placement by instructor. Restricted to major or minor in music, elementary education, or early childhood education. Prerequisite: MUS 030A with C or better or consent of instructor. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

030C-1 Piano Class-Level 3. Designed to develop functional command of basic keyboard skills needed in the further study of music and the teaching of music. Take in sequence unless assigned advanced placement by instructor. Restricted to major or minor in music, elementary education, or early childhood education. Prerequisite: MUS 030B with C or better or consent of instructor. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

030D-1 Piano Class-Level 4. Designed to develop functional command of basic keyboard skills needed in the further study of music and the teaching of music. Take in sequence unless assigned advanced placement by instructor. Restricted to major or minor in music, elementary education, or early childhood education. Prerequisite: MUS 030C with C or better or consent of instructor. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

031-1 Voice Class. Designed to develop functional command of basic vocal skills needed in teaching music. Restricted to music major or minor or consent of instructor. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

032-1 Strings Techniques Class. Designed to develop essential techniques and principles which can be used in teaching young string pupils. Prerequisite: MUS 107A and concurrent enrollment in MUS 140-540T. Restricted to music major or minor. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

033A-1 Woodwind Techniques Class-Clarinet, Saxophone. Designed to develop essential techniques and principles which can be used in teaching young woodwind pupils. Students may begin on one instrument and shift to another at midterm. Restricted to music major or minor or consent of instructor. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

033B-1 Woodwind Techniques Class-Flute, Double Reeds. Designed to develop essential techniques and principles which can be used in teaching young woodwind pupils. Students may begin on one instrument and shift to another at midterm. Restricted to music major or minor or consent of instructor. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

034-1 Brass Techniques Class. Trumpet, French horn, trombone, tuba. Designed to develop essential techniques and principles which can be employed in teaching beginning brass pupils. Students will begin with one instrument and shift to others throughout the semester. Restricted to music major or minor or consent of instructor. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

035-1 Percussion Techniques Class. Designed to develop basic techniques and principles which can be employed in teaching young percussion pupils. Restricted to music major or minor or consent of instructor. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

036A-1 Guitar Class-Level 1. Designed to develop basic techniques and principles which can be employed in teaching music. Restricted to major or minor in music, elementary education, or early childhood education, or consent of instructor. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

036B-1 Guitar Class-Level 2. Designed to develop basic techniques and principles which can be employed in teaching music. Restricted to major or minor in music, elementary education, or early childhood education. Prerequisite: MUS 036A or consent of instructor. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

040A-X -1-3 Applied Music. May be repeated for credit as long as passing grade is maintained. Music majors and minors enroll for 1 or 2 credits on their principal instrument as designated by their degree requirements. All music majors and minors also attend studio class on Tuesdays at 10:00, and perform end of semester jury. Non-music majors and music majors taking a second instrument, enroll for one credit taking a half-hour lesson per week, or two credits for a one-hour lesson per week. No studio class or jury is required for non-music majors or secondary instruments. Applied music (x) not available to students outside the Music Theater degree. Special approval needed from the instructor. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

- | | |
|---------------|-----------------|
| (a) Flute | (m) Viola |
| (b) Oboe | (n) Cello |
| (c) Clarinet | (o) Double Bass |
| (d) Bassoon | (p) Voice |
| (e) Saxophone | (q) Piano |
| (f) Horn | (r) Organ |
| (g) Trumpet | (s) Harpsichord |
| (h) Trombone | (t) Guitar |
| (i) Euphonium | (u) Recorder |

- (j) Tuba (v) Coaching
 (k) Percussion (x) Musical Theater
 (l) Violin

101-3 Music Fundamentals. Rudiments of music for those with little or no musical background. One lecture and one piano laboratory session per week. Provides basic music vocabulary and keyboard competency for Curriculum and Instruction 325, 326. Restricted to PMUS, Music Major or Minor, or consent of instructor.

102-2 Survey of Music Literature. Characteristic forms and styles. Analysis and listening. Examples from the leading composers of each era. Restricted to music major or minor, or consent of instructor.

103-3 Music Understanding. (University Core Curriculum) [IAI Course: F1 900] Through lectures, in-class individual and group activities, readings, and discussions, students will learn to place musical works in their historical and cultural contexts by understanding the development of western art music. Students will also learn the listening skills necessary to perceive various fundamental aspects of any work of music. Course material fee: \$73.

104A-1 Aural Skills. A laboratory course designed to complement MUS 105A. Practice in recognition and singing of basic pitch and rhythm materials, and their realization in standard musical notation. For those planning a major or minor in music, take A and B in sequence or with prior consent of instructor, concurrently. Prerequisite: grade of C or better in MUS 104A for registration in B section.

104B-1 Aural Skills. A laboratory course designed to complement MUS 105B. Practice in recognition and singing of basic pitch and rhythm materials, and their realization in standard musical notation. For those planning a major or minor in music, take A and B in sequence or with prior consent of instructor, concurrently. Prerequisite: grade of C or better in MUS 104A for registration in B section.

105A-3 Basic Harmony. Study of traditional diatonic tonal materials and standard notational practice. Includes keyboard skills. For those with performing experience and planning a major or minor in music. Take A and B in sequence. Prerequisite: concurrent registration in MUS 104 or equivalent aural skill, satisfactory theory placement score or grade of C or better in MUS 101.

105B-3 Basic Harmony. Study of traditional diatonic tonal materials and standard notational practice. Includes keyboard skills. For those with performing experience and planning a major or minor in music. Take A and B in sequence. Prerequisite: concurrent registration in MUS 104B or equivalent aural skill, grade of C or better in MUS 105A prior to enrollment in MUS 105B.

106-3 The History of Rock and Roll. A history and appreciation of the musical and cultural melting pot of 1950's rock & roll and early 1960's pop. Includes overview of the African American roots and female ancestors and influences on blues, boogie-woogie, jazz, swing, country & western, gospel and popular music, and the crossover success of rhythm & blues acts that marked the true birth of rock & roll. Cultural influences, racial background and gender identification are relevant.

107A-1 Applied Harmony for Fretted Instruments. Application of basic harmonic functions to the fretted instruments

including guitar. Concurrent enrollment in MUS 140-540T.

107B-1 Applied Harmony for Fretted Instruments. Continued application of basic harmonic functions to the fretted instruments including guitar. Prerequisite: MUS 107A and concurrent enrollment in MUS 140-540T.

110A-2 Introduction to Piano Pedagogy. Introduction to a broad range of studies that influence the development of effective piano teaching. Seminar discussions, lectures, observation of piano teaching, piano studies, readings, listening projects and written essays deal with the history of piano pedagogy and performance, studies of teaching and learning concepts of music education and educational psychology, piano literature, keyboard musicianship and practical aspects of teaching.

110B-2 Introduction to Piano Pedagogy. Introduction to a broad range of studies that influence the development of effective piano teaching. Seminar discussions, lectures, observation of piano teaching, piano studies, readings, listening projects and written essays deal with the history of piano pedagogy and performance, studies of teaching and learning concepts of music education and educational psychology, piano literature, keyboard musicianship and practical aspects of teaching.

112-1 Jazz Fundamentals. Introduction to the grammar, vocabulary and structures of the jazz language. Topics include basic chord construction, modes of major and minor scales, basic substitution and function, voicing and connecting chords, poly-chord nomenclature, symmetrical altered and synthetic scales, and five part harmony. Prerequisite: MUS 105A with a C or better.

113-1 Functional Jazz Piano. Designed to develop techniques and concepts for the studio jazz performer. Realization of jazz harmonies, comping, shell voicing, two-hand voicings, and stylistic trends will be explored. Prerequisite: MUS 112 with a C or higher.

140A-X 1-3 Applied Music. May be repeated for credit as long as passing grade is maintained. Music majors and minors must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: three or more years of prior study or performing experience, or two semesters of C or better at 040 level or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (x) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

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| (f) Horn | (r) Organ |
| (g) Trumpet | (s) Harpsichord |
| (h) Trombone | (t) Guitar |
| (i) Euphonium | (u) Recorder |
| (j) Tuba | (v) Coaching |
| (k) Percussion | (x) Musical Theater |
| (l) Violin | |

174-3 Commercial Music. Introductory course for students

interested in the commercial aspects of the music industry. Lectures given by outstanding executives and performers in the various segments of the industry such as management, cash flow, contracts, the recording of music and video, and publishing. Designed to clarify the qualifications student must develop to be successful in the commercial music world. Restricted to music major. Field trip fee: \$200.

203-3 Diversity and Popular Music in American Culture. (University Core Curriculum) [IAI Major Course: F1 905D] A study of the development of American popular music, particularly in relation to the different cultural groups which spawned it.

204A-1 Advanced Aural Skills. Continuation of MUS 104. Designed to complement MUS 205A. Prerequisite: MUS 104B with a grade of C or better.

204B-1 Advanced Aural Skills. Continuation of MUS 204A. Designed to complement MUS 205B. Prerequisite: MUS 204A with a grade of C or better.

205A-3 Advanced Harmony. The study of 19th Century Western European tonal materials, including keyboard skills. Prerequisite: MUS 104B and 105B with a grade of C or better and concurrent registration of MUS 204A.

205B-3 Advanced Harmony. The study of 19th Century Western European tonal materials, including keyboard skills. Prerequisite: MUS 204A and 205A with a grade of C or better and concurrent registration of MUS 204B.

210-2 Analytic Techniques for the Pianist. Studies the process by which piano teachers analyze piano music and performance. Extensive projects in piano music analysis, sight-reading, interpreting and memorizing piano compositions, lecture/discussions, reading and listening assignments and observation of studio and piano class teaching provide increasing readiness for piano teaching as it relies on analytic and problem-solving techniques.

211-2 Piano Literature Seminar. A survey course that acquaints students with piano music for teaching at all levels of advancement from baroque, classical, romantic and contemporary music style periods. Piano literature, sight-reading, recorded music listening assignments, score study, writing assignments and lecture/performance presentations in class include studies of piano methods, piano music editions, collections and publishers highlighting the keyboard literature of sixteen major composers.

230-2 Marching Band Techniques. Course designed to develop skills, obtain knowledge and study the application of methods, techniques and systems related to the administration of a high school/college marching band program. The course will present a logical and systematic approach for music educators to develop traditional and contemporary marching and music styles and fundamentals. A specific system of conceiving, writing and teaching marching band shows will be presented.

231A-1 Beginning Jazz Improvisation. Traditional jazz song forms, basic chord progressions, style and rhythm as it relates to improvised jazz performance. Prerequisite: permit required.

231B-1 Beginning Jazz Improvisation. Traditional jazz song forms, basic chord progressions, style and rhythm as it relates to improvised jazz performance. Prerequisite: MUS 231A with C or higher.

240A-X 1-3 Applied Music. May be repeated for credit as long

as passing grade is maintained. Music majors and minors must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: MUS 140 with C or better or consent of instructor. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (x) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

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| (e) Saxophone | (q) Piano |
| (f) Horn | (r) Organ |
| (g) Trumpet | (s) Harpsichord |
| (h) Trombone | (t) Guitar |
| (i) Euphonium | (u) Recorder |
| (j) Tuba | (v) Coaching |
| (k) Percussion | (x) Musical Theater |
| (l) Violin | |

250A-1 History and Literature of the Guitar and Related Fretted Instruments. A survey of the history and literature of the guitar and related fretted instruments from the Renaissance to the present with emphasis on interpretation.

250B-1 History and Literature of the Guitar and Related Fretted Instruments. Continuation of MUS 250A, surveying the history and literature of the guitar and related fretted instruments from the Renaissance to the present with emphasis on interpretation. Prerequisite: MUS 250A.

257-1 to 12 Intern-Work Experience. Practical experience in music retailing, wholesaling, and publishing under the supervision of professional firms. Open only to candidates for the Bachelor of Arts degree with emphasis in music (business). Restricted to music (business) specialization. Special approval needed from the instructor.

280-2 to 4 (2,2) Beginning Composition. Application of contemporary compositional techniques. Prerequisite: MUS 105B or consent of instructor. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

300-2 Evaluation of Teaching and Learning in Music. Systematic assessment in music education. Topics include constructing and using teacher-made formal assessments (tests in several formats, rating scales, rubrics), interpreting test results, evaluating tests and test items, interpretation and use of standardized tests in music (aptitude, achievement, others), procedures for determining and reporting grades, procedures for measuring instructional effectiveness, record-keeping, and the use of questioning for informal and formative assessment.

303I-3 Women, Blues and Literature. (Same as AFR 303I) (University Core Curriculum) Explores traditional aesthetic processes of the blues as a mode of self expression. Examines the images/voices projected by vaudeville blues women (1920s/30s), along with various manifestations/extensions - instrumental and vocal, musical and literary - from fiction and poetry to jazz, R&B, and rap. In-depth analysis of blues music and literature.

304-2 General Music in the Schools, K-12. Administration

of the K-12 general music program, including non-performance classes. Topics: teaching methods for children, including the child's voice, Orff & Kodaly methodologies, methods for general music classrooms in upper grades, technology, music for special learners, multicultural music; classroom planning, organization, and management techniques, discipline models, and child abuse identification and reporting. Requires 26 hours of field experience in schools and other settings. Restricted to admission to Teacher Education Program. Co-requisite: EDUC 313.

305-2 Instrumental Music in the Schools, 4-12. Administration of the school instrumental music program in grades 4-12. Topics include: philosophy of music education, the beginning and secondary instrumental programs, motivation, musicianship essentials, "good" music, comprehensive musicianship, building a curriculum, rehearsal and teaching strategies, structure and management of school instrumental programs, marching band administration and techniques, and classroom discipline theories. Students are required to observe instrumental music educators in various settings (26 hours). Prerequisite: MUS 304 with a grade of C or better. Restricted to admission to Teacher Education Program.

306-2 Vocal/Choral Music in the Schools, 6-12. Administration of the school vocal/choral music program in grades 6-12, and community choral music. Topics: the development and philosophy of choral music education, vocal development, choral literature, rehearsal techniques, literacy in the rehearsal, the structure and organization of choral ensembles, and classroom planning, organization, and management. Students are required to observe choral music educators in various settings (26 hours). Prerequisite: MUS 304 with a grade of C or better. Restricted to admission to the Teacher Education Program.

307-2 Computers and Music. An introduction to essential computer tools for musicians. Topics covered will include music notation software, searching the Internet for musical resources, and midi keyboard basics. Prerequisite: MUS 102, 104B, 105B.

308-2 Tonal Counterpoint. Basic contrapuntal principles and skills, especially as applied to 18th and 19th century styles. Extensive writing practice, and analysis of stylistic models. Introduction to major contrapuntal forms. Prerequisite: MUS 205A with a grade of C or better.

310-2 Piano Technique Seminar. An exhaustive study of three classics on the subject of piano technique by authors Reginald Gerig, Paul Roes and Abby Whiteside. This historical perspective is practically applied in a weekly routine of technical and theoretical studies at the piano. The course provides a foundation from which to deal with all aspects of piano technique development in teaching.

311-2 Advanced Piano Literature Seminar. In-depth study of an extensive catalogue of piano works for specific selection and design of a sequential curriculum of piano literature for teaching. Piano literature sight-reading, recorded music listening assignments and score study culminate in a final course project that details specific piano works for teaching baroque, classical, romantic and contemporary literature to students of elementary, intermediate and advanced abilities. Prerequisite: MUS 211.

316-1 Introduction to Conducting. An introductory conducting course designed to teaching beginning rehearsal techniques. Restricted to music major or minor and junior standing.

317-2 Choral Conducting and Methods. Score reading, baton techniques, and rehearsal techniques, organization and management problems of school choral groups. Prerequisite: MUS 316 with a grade of C or better. Restricted to music major or minor and junior standing.

318-2 Instrumental Conducting. Score reading, baton techniques, and rehearsal management. Supervised application in ensemble. Prerequisite: MUS 316 with a grade of C or better. Restricted to music major or minor and junior standing.

321-2 Form and Analysis. Comprehensive study of harmonic and formal structures and typical stylistic traits of 18th and 19th century music. Prerequisite: MUS 205B with a grade of C or better.

322-2 Principles of 20th Century Music. Comprehensive study of harmonic techniques and other stylistic traits of major 20th century idioms. Prerequisite: MUS 321 with a grade of C or better.

323-3 Instrumentation. A study of musical instruments history, construction, major manufacturers, cost, accessories, conventional ranges, transposition, traditional and expanded performance techniques, problems/idiosyncrasies, performance roles, commercial/recording applications and sources for information.

324-1 Instrumental and Choral Arranging. Practice in scoring of transcriptions, arrangements, and original compositions for standard instrumental groups and choral ensembles. Prerequisite: MUS 205 with a grade of C or better.

331A-1 Advanced Jazz Improvisation. Continuation of topics studied in beginning jazz improvisation, with the addition of more complex harmonies, asymmetrical forms, reharmonization, and modern jazz devices. Prerequisite: MUS 231B with a C or higher.

331B-1 Advanced Jazz Improvisation. Continuation of topics studied in beginning jazz improvisation, with the addition of more complex harmonies, asymmetrical forms, reharmonization, and modern jazz devices. Prerequisite: MUS 331A with a C or higher.

335-2 Jazz Styles and Analysis. Transcription based analysis focused on the jazz masters. Chord/scale relationships, digital patterns, complex upper structures, target notes, chord substitutions, notation, and in-class performance/lectures will be stressed. Prerequisite: permit required.

340A-X 1-3 Applied Music. May be repeated for credit as long as passing grade is maintained. Music majors and minors must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (x) not available to students outside the Music Theater degree. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

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| (e) Saxophone | (q) Piano |

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| (f) Horn | (r) Organ |
| (g) Trumpet | (s) Harpsichord |
| (h) Trombone | (t) Guitar |
| (i) Euphonium | (u) Recorder |
| (j) Tuba | (v) Coaching |
| (k) Percussion | (x) Musical Theater |
| (l) Violin | |

341-1 to 8 (1 or 2 per semester) Accompanying Laboratory. Experience, under supervision, in accompanying soloists and groups. Counts as a major ensemble for music majors studying at the 340 level or above specializing in keyboard performance and piano pedagogy only. Prerequisite: studying at the MUS 340 level or above or with permission of instructor. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

357A-3 Music History. (Advanced University Core Curriculum course) [IAI Course: F1 901] Study of musical examples and techniques evolving from the ancient period to the present. May take A or B in either order. Prerequisite: MUS 102 and MUS 105B with a grade of C or better. Restricted to junior standing. Satisfies the College of Liberal Arts Writing Across-the-Curriculum music major requirement. Both A and B satisfy University Core Curriculum Fine Arts requirement in lieu of 103.

357B-3 Music History. (Advanced University Core Curriculum course) [IAI Course: F1 901] Study of musical examples and techniques evolving from the ancient period to the present. May take A or B in either order. Prerequisite: MUS 102 and MUS 105B with a grade of C or better. Restricted to junior standing. Satisfies the College of Liberal Arts Writing Across-the-Curriculum music major requirement. Both A and B satisfy University Core Curriculum Fine Arts requirement in lieu of 103.

363A-1 Pronunciation and Diction for Singers-English and Italian. Establishment of proper pronunciation as applied to vocal literature. Prerequisite: one or more semesters of private or class voice instruction.

363B-1 Pronunciation and Diction for Singers-German and French. Establishment of proper pronunciation as applied to vocal literature. Prerequisite: one or more semesters of private or class voice instruction.

365A-H 1 to 64 (1 per section) Chamber Music. Groups of two to sixteen performers as organized and sponsored by individual faculty members. Includes duo-piano teams, piano in combination with other performers, and other instrumental/vocal combinations. Regular weekly rehearsals of appropriate music and public performance as feasible. Instrumentalists and singers experiment with new musical techniques and styles. Small ensembles will rehearse weekly. Special approval needed from the instructor. Technology and Instrument Repair/Replacement Fee: \$15/credit hour. (a) Vocal, (b) String, (c) Woodwind, (d) Brass, (e) Percussion, (f) Keyboard, (g) Guitar, (h) 20th Century.

365B-1 to 64 (1 per section) Chamber Music-String. Groups of two to sixteen performers as organized and sponsored by individual faculty members. Includes duo-piano teams, and piano in combination with other performers. Regular weekly rehearsals of appropriate music and public performance as feasible. Instrumentalists and singers experiment with new mu-

sical techniques and styles. Small ensembles and/or one large ensemble will rehearse weekly. Each subject may be repeated up to 8 hours. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

365C-1 to 64 (1 per section) Chamber Music-Woodwind. Groups of two to sixteen performers as organized and sponsored by individual faculty members. Includes duo-piano teams, and piano in combination with other performers. Regular weekly rehearsals of appropriate music and public performance as feasible. Instrumentalists and singers experiment with new musical techniques and styles. Small ensembles and/or one large ensemble will rehearse weekly. Each subject may be repeated up to 8 hours. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

365D-1 to 64 (1 per section) Chamber Music-Brass. Groups of two to sixteen performers as organized and sponsored by individual faculty members. Includes duo-piano teams, and piano in combination with other performers. Regular weekly rehearsals of appropriate music and public performance as feasible. Instrumentalists and singers experiment with new musical techniques and styles. Small ensembles and/or one large ensemble will rehearse weekly. Each subject may be repeated up to 8 hours. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

365E-1 to 64 (1 per section) Chamber Music-Percussion. Groups of two to sixteen performers as organized and sponsored by individual faculty members. Includes duo-piano teams, and piano in combination with other performers. Regular weekly rehearsals of appropriate music and public performance as feasible. Instrumentalists and singers experiment with new musical techniques and styles. Small ensembles and/or one large ensemble will rehearse weekly. Each subject may be repeated up to 8 hours. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

365F-1 to 64 (1 per section) Chamber Music-Keyboard. Groups of two to sixteen performers as organized and sponsored by individual faculty members. Includes duo-piano teams, and piano in combination with other performers. Regular weekly rehearsals of appropriate music and public performance as feasible. Instrumentalists and singers experiment with new musical techniques and styles. Small ensembles and/or one large ensemble will rehearse weekly. Each subject may be repeated up to 8 hours. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

365G-1 to 64 (1 per section) Chamber Music-Guitar. Groups of two to sixteen performers as organized and sponsored by individual faculty members. Includes duo-piano teams, and piano in combination with other performers. Regular weekly rehearsals of appropriate music and public performance as feasible. Section G counts as a major ensemble for music majors specializing in guitar and for juniors and seniors with non-performance specializations whose principal instrument is the guitar. Instrumentalists and singers experiment with new musical techniques and styles. Small ensembles and/or one large ensemble will rehearse weekly. Each subject may be repeated up to 8 hours. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

365H-1 to 64 (1 per section) Chamber Music-20th Century. Groups of two to sixteen performers as organized and

sponsored by individual faculty members. Includes duo-piano teams, and piano in combination with other performers. Regular weekly rehearsals of appropriate music and public performance as feasible. Instrumentalists and singers experiment with new musical techniques and styles. Small ensembles and/or one large ensemble will rehearse weekly. Each subject may be repeated up to 8 hours. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

374-2 Sight Reading for Guitar. This course is designed to develop the skills necessary for sight reading music on the guitar. Such skills will be applied to reading music written in the following manner: Melodic, polyphonic, homophonic, continuo, figured bass and chord symbols. Prerequisites: MUS 107A and concurrent enrollment in MUS 140-540T.

375-3 Introduction to Audio Engineering. (Same as RTD 375) Introduces basic principles of sound and how audio can be captured and manipulated utilizing current recording technology. The course incorporates concepts of signal flow, microphone selection and placement, signal processing and mixing. The objective is for the student to render a multi-track recording, from concept to completion, employing all the above concepts to demonstrate a solid knowledge of recording fundamentals. Restricted to junior Music major. Lab Fee: \$55.

376-3 Advanced Audio Engineering. (Same as RTD 376) This course further develops the skills introduced in RTD 375. Advanced methods will be practiced, including use of signal processing, routing, mixing and mastering. The objective is to have command of a larger format in-line console, and record/mix a multi-track session in Pro Tools, utilizing various microphone techniques, plug-ins, aux sends/returns, patchbay and automation. Prerequisite: MUS 375 or permission of instructor. Lab fee: \$55.

380-2 to 4 (2,2) Composition. Original composition in a contemporary language, intermediate in scope and form. Individual instruction and weekly seminar. Prerequisite: MUS 280 or consent of instructor. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

398-1 to 2 (1,1) Partial Recital. Preparation and presentation of a partial recital in any applied field. Recital should contain approximately 25-30 minutes of music. Prerequisite: prior or concurrent registration in MUS 340 and approval of applied jury.

399A-K 1 to 3 Graduate Music Review. Remedial course designed to correct deficiencies as indicated by Graduate Music Screening Exams. Restricted to Graduate Music Major. a) Music History pre-1750. b) Music History post-1750. c) French Diction. d) Italian Diction. e) German Diction. f) IPA Diction. g) Graduate Music Theory. h) Analysis and Chromatic Harmony. i) Graduate Ear Training. j) Fundamental Theory. k) Fundamental Ear Training.

400-1 to 2 (1,1) Performance Techniques. Individual instruction in any secondary applied field. Designed to provide added depth of preparation for teaching instrumental and vocal music. Restricted to: Graduate music major. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

401-1 to 12 (1 to 2 per semester) Opera Workshop. Open to all appropriately experienced singers, actors, dancers, instrumentalists and theater technicians. Study of opera/opera repertoire and performance techniques. Special approval needed from the instructor.

402-1 to 12 (1 to 2 per semester) Musical Theater Workshop. Open to all appropriately experienced actors, singers, dancers, instrumentalists and theater technicians. Study of musical theater/musical revue repertoire and performance techniques. Special approval needed from the instructor.

403-1 to 16 (1 to 2 per semester) Lyric Theater Ensemble. A select group which performs operatic or musical theater literature, usually in the form of a fully mounted production each semester. May be repeated for credit. Prerequisite: audition or consent of instructor. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

407-2 Modal Counterpoint. Study of Renaissance contrapuntal techniques. Extensive writing practice, and analysis of stylistic models. Prerequisite: MUS 308 with a C or better.

410A-2 Piano Pedagogy Practicum. Provides undergraduate and graduate piano pedagogy majors with the opportunity for supervised practice piano teaching. Course activities include lesson-planning, conducting and evaluating studio piano and class piano lessons, and a survey of important educational issues that impact on effective piano teaching. Special approval needed from the instructor.

410B-2 Piano Pedagogy Practicum. Provides undergraduate and graduate piano pedagogy majors with the opportunity for supervised practice piano teaching. Course activities include lesson-planning, conducting and evaluating studio piano and class piano lessons, and a survey of important educational issues that impact on effective piano teaching. Special approval needed from the instructor.

420-1 to 2 (1,1) Instrument Repair. A shop-laboratory course dealing with the selection, tuning, adjustment, maintenance, and repair of musical instruments. Prerequisite: two semesters of instrumental techniques courses or consent of instructor.

421-2 Advanced Analysis. Structure, form, and design in music as the coherent organization of all of its factors. Analysis of works chosen from a variety of styles and genres. Prerequisite: MUS 321 with a C or better.

430A-1 Jazz Arranging. Step-by-step approach to jazz arranging and techniques from lead sheet construction through full big band arrangements. Students will write and arrange for combos, trombone section and rhythm, saxophone section and rhythm, and full big band with all projects to be played by student ensembles. Special approval needed from the instructor.

430B-1 Jazz Arranging. Step-by-step approach to jazz arranging and techniques from lead sheet construction through full big band arrangements. Students will write and arrange for combos, trombone section and rhythm, saxophone section and rhythm, and full big band with all projects to be played by student ensembles. Prerequisite: MUS 430A with a C or higher.

440A-Y 1-3 Applied Music. May be repeated for credit as long as passing grade is maintained. Music majors and minors must attend the weekly studio class and be concurrently enrolled in one of the major ensembles. Prerequisite: passed Upper Divisional Exam and MUS 340 with C or better. Music majors and minors enroll for 1 or 2 credits as designated by their degree requirements, and must take an end of semester jury. Those with prior approval by their applied jury for the specialization in performance enroll for 3 credits. Six hours of individual practice per week required for each lesson. Applied music (x) not available to students outside the Music Theater degree. Technology

and Instrument Repair/Replacement Fee: \$15/credit hour.

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| (e) Saxophone | (q) Piano |
| (f) Horn | (r) Organ |
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| (h) Trombone | (t) Guitar |
| (i) Euphonium | (u) Recorder |
| (j) Tuba | (v) Coaching |
| (k) Percussion | (x) Musical Theater |
| (l) Violin | (y) Collaborative Piano |

450-3 Topics in Ethnomusicology. Courses in this series are designed for advanced undergraduate and graduate students in music and related disciplines to the issues, theories, and interdisciplinary research methodologies of ethnomusicology. Restricted to junior/senior/graduate music major or consent of instructor.

450A-3 Women in Music. (Same as WGSS 450A) Explores the creative contributions of women in music, examining women's participation across a range of genres, cultural/geographic areas, and time periods. Restricted to junior/senior/graduate music major or consent of instructor.

450B-3 Music and Social Change. Examines music as a force in movements for social change as well as music outside of formally identified movements serving this purpose. Seeks out musical sources and cultural meanings, along with connections between music in movements across time, space, culture, and genre. Restricted to junior/senior/graduate music major or consent of instructor.

452A-3 Traditions of Uppity Women's Blues. (Same as AFR 452A and WGSS 452A) Examines the tradition of "uppity" women's blues from the so-called "classic" blues singers of the 19th century (Gertrude "Ma" Rainey, Bessie Smith, Ida Cox, etc.) to the contemporary blues of Saffire, Denise LaSalle and others. Explores ways blues women challenge conventions of gender and sexuality, racism, sexism, classism and homophobia. Restricted to upper level music major. Special approval needed from the department.

452B-3 Blues and Boogie Woogie Piano Styles. (Same as AFR 452B) Traces the history, culture, and stylistic developments of blues and boogie woogie piano. Explores socio-cultural contexts and examines key players, pieces, and musical styles. Restricted to upper level music major. Special approval needed from the department.

453-2 to 4 (2 per semester) Advanced Topics in Choral Music. Practicum in the selection, rehearsal, and performance of appropriate literature. Study of techniques for achieving proficient performance and musical growth. For experienced teachers and advanced students.

454-2 to 4 (2 per semester) Advanced Topics in Instrumental Music. Practicum in the selection, rehearsal, and performance of appropriate literature. Study of techniques for achieving proficient performance and musical growth. Designed for experienced teachers and advanced students.

455-2 to 4 (2 per semester) Advanced Topics in Elementary School Music. Practicum in the selection and use of materials for the elementary school program. Study of techniques for

achieving balanced musical growth. For experienced teachers and advanced students.

456A-2 Music for Exceptional Children. Theories and techniques for therapeutic and recreational use of music with physically and mentally handicapped children. Includes keyboard, autoharp, guitar, and tuned and untuned classroom instruments. Take in sequence.

456B-2 Music for Exceptional Children. Applications for the gifted, emotionally disturbed, and culturally disadvantaged child. Take in sequence. Prerequisite: MUS 456A.

457-2 Conducting the Middle/High School Band. This course is designed to further develop the skills learned in Introduction to Conducting and Advanced Conducting. Emphasis will be placed on advanced conducting techniques and score study. Topics will include middle/high school band literature, error detection, rehearsal planning, and teaching techniques. Prerequisites: MUS 316, MUS 317, and/or MUS 318.

458-2 Survey of Wind Literature. The study of wind literature from its beginning in the music of Gabrieli through the classical wind serenades of Mozart to the composers of today. The course will include music written for wind chamber groups, as well as music for wind ensemble and the traditional concert band. Restricted to junior/senior/graduate music major or consent of instructor.

461-3 Applied Music Pedagogy. Specialized problems and techniques employed in studio teaching of any particular field of music performance. Study of music literature appropriate for the various levels of performance. Opportunity, as feasible, for supervised instruction of pupils. Meets with appropriate instructor, individually or in groups. Special approval needed from the instructor.

470-3 History of Opera. The development of the music, libretti and staging of opera from the late Renaissance to the present. Prerequisite: MUS 357B, or consent of instructor.

471-3 History of Musical Theater. The development of the music, book, lyrics and staging practices of musical theater from its late 19th Century beginnings to present, with a detailed study of selected contributors and their works. Satisfies the College of Liberal Arts Writing-Across-the-Curriculum music major requirement. Restricted to BFA or MM Opera/Musical Theater majors only, or consent of instructor.

472-3 Chamber Music Literature. A study of literature for the principal types of chamber music groups. Special approval needed from the instructor.

474-3 Survey of Jazz History. In-depth study of the history of jazz through examination of historical lineage and perspective, recorded output and important stylistic characteristics of each major period. Biographical backgrounds of major composers and performers will be considered as they contribute to the evolution of musical styles. Prerequisite: none.

475-3 Baroque Music. The development of vocal and instrumental music in the period 1600-1750, from Monteverdi to Bach and Handel. Oratorio and Cantata, the influence of opera, sonata, suite, and concerto. Prerequisite: MUS 357A with a grade of C or better, or graduate standing.

476-3 Classical Music. Development of the sonata, symphony, concerto, and chamber music in the 18th and early 19th centuries, with emphasis on the music of Haydn, Mozart, and Beethoven. Prerequisite: MUS 357B with a grade of C or better, or graduate standing.

477-3 Romantic Music. Development of the symphony and sonata forms, chamber music, and vocal music in the 19th and early 20th centuries. Rise of nationalism and impressionism. Prerequisite: MUS 357B with a grade of C or better, or graduate standing.

478A-3 Modern Music I. Examine important works and figures from Western Music in the first half of the 20th Century. Topics included will be Atonality, Serialism, Impressionism, Expressionism, Nationalism, Ballet and Theater Music, Neo-Classicism, Experimentalism, and Jazz. A strong emphasis will be placed on the social and political context in which the music was created. Prerequisite: MUS 357B with grade of C or better or instructor consent.

478B-3 Modern Music II. Examine important works and figures from Western Music in the second half of the 20th Century. Included will be atonality, serialism, avant-garde, minimalism, electronic music, experimental instruments and indeterminacy. Emphasis placed on the social, economic and political context. Students will examine the compositional philosophies and techniques of the era. Prerequisite: MUS 357B with grade of C or better or consent of instructor.

479A-G,I 2 to 8 (2 per topic) Solo Performance Literature. Topics presented will depend upon the needs of the students and upon instructors scheduled. (A) Piano Literature I, including an introductory study of harpsichord music; (B) Organ Literature, in relation to the history of the instrument; (C) Art Song, topics to rotate over a 3-year sequence, may be repeated for up to 6 credit hours; (D) Guitar and Lute Literature; (E) Solo String Literature; (F) Solo Wind Literature; (G) Percussion Literature; (I) Piano Literature II. Special approval needed from the instructor.

480-2 to 4 (2,2) Advanced Composition. Original composition involving the larger media. Individual instruction. Prerequisite: two semesters of MUS 380 with a grade of C or better and approval of composition jury. Undergraduate students limited to 2 credit hours per semester. Technology and Instrument Repair/Replacement Fee: \$15/credit hour.

481-1 to 4 Readings in Music Theory. Assigned readings and reporting of materials pertaining to a particular phase of music theory in historical perspective. Approximately three hours' preparation per week per credit (adjusted for shorter sessions). Prerequisite: MUS 321 and 322 or prior consent of instructor.

482-1 to 4 Readings in Music History and Literature. Assigned readings and reporting of materials pertaining to a particular phase of history or literature. Approximately three hours preparation per week per credit. Prerequisite: MUS 357A and B, or prior consent of instructor.

483-1 to 4 Readings in Music Education. Assigned readings and reporting of materials pertaining to a particular phase of music education. Approximately three hours preparation per week per credit (adjusted for shorter sessions). Special approval needed from the instructor.

484-3 Trends in Music Education. Evolving issues important to the music educator.

487-3 Music Business Senior Project. This capstone course offers an opportunity for students to pursue original projects or investigations of music business topics. The details and parameters of each project/investigation are dependent on the students' individual focus area. Each project is planned to occupy

typically three hours preparation per week credit hour. Not for graduate credit. Restricted to senior standing. Special approval needed from selected music business instructor.

488-2 Liberal Arts-Music Senior Project. This capstone course offers an opportunity for students to pursue original projects or investigations which combine music with their approved Elective Core area. The details and parameters of each project/investigation are established one-on-one with the appropriate School of Music faculty and completed with that instructor's guidance. Project proposals must be submitted and approved to the Chair of the Undergraduate Committee by posted deadlines. Each project will result in a major paper, project, lecture recital or presentation. Not for graduate credit. Restricted to senior standing. Special approval needed from the instructor.

489-2 Music Theater Senior Project. Designed as a capstone course for the bachelor of arts in music theater, student will prepare audition materials for a voice, acting and dance jury. Not for graduate credit. Restricted to senior standing. Special approval needed from the instructor.

498-2 to 4 (2,2) Recital. Preparation and presentation of a full solo recital in any applied field. Recital should contain approximately 50 minutes of music. Prerequisite: prior or concurrent registration in MUS 440 and approval of applied jury.

499-1 to 8 Independent Study. Original investigation of selected problems in music and music education with faculty guidance. Project planned to occupy approximately three hours preparation per week per credit (adjusted for shorter sessions). Not more than three hours toward 30 required for graduate degree. Special approval needed from the selected instructor.

Music Faculty

Allison, Robert, Associate Professor, D.M.A., University of Illinois, 1988.

Barta, Michael, Professor, M.M., Franz Liszt Academy of Music (Hungary), 1977.

Beattie, Donald, Associate Professor, *Emeritus*, M.Mus., University of Colorado, 1977.

Benyas, Edward, Professor, M.M., North-western University, 1994.

Best, Richard, Professor, *Emeritus*, North-western University.

Bottje, Will Gay, Professor, *Emeritus*, D.M.A., Eastman School of Music, 1955.

Breznikar, Joseph, Professor, *Emeritus*, M.Mus., University of Akron, 1977.

Brown, Philip, Professor, M.M.E., University of North Texas, 1983.

Carter, Clarence, Assistant Professor, *Emeritus*, M.Mus., Southern Illinois University Carbondale, 1973.

Coloton, Diane, Senior Lecturer, D.M., Indiana University, 2006.

Coulter, Ronald, Senior Lecturer, M.M., Youngstown State University, 2003.

Davenport, Susan, Associate Professor, D.M.A., Texas Tech University, 2001.

Delphin, Wilfred, Professor, *Emeritus*, D.M.A., University of Southern Mississippi, 1976.

Dillard, David, Associate Professor, D.M.A., University of Michigan, 2004.

Fink, Timothy, Professor, M.F.A., Southern Illinois University Carbondale, 1993.

Fligel, Charles, Associate Professor, *Emeritus*, M.M., University of Kentucky, 1966.

Ginther, Kathleen, Senior Lecturer, *Emerita*, D.M.A., Northwestern University, 1996.

Grzych, Frank, Professor and *Director*, D.M.A., The Catholic University of America, 2004.

Hanes, Michael, Professor, *Emeritus*, M.M.E., Southern Illinois University, 1965.

Hartline, Elisabeth, Assistant Professor, *Emerita*, M.Mus., Northwestern University, 1936.

Hussey, George, Professor, *Emeritus*, M.A.Ed., Washington University, 1963.

Johnson, Maria, Associate Professor, Ph.D., University of California, 1992.

Kato, Yuko, Assistant Professor, D.M.A., Manhattan School of Music, 2007.

Kelley, Richard, Assistant Professor, D.M.A., University of Illinois Urbana-Champaign, 2012.

Lausell, Isaac, Assistant Professor, Ph.D., State University of New York at Stony Brook, 2012.

Lee, Junghwa, Associate Professor, D.M.A., Eastman School of Music, 1999.

Lenz, Eric, Associate Professor, D.M.A., University of Alabama, 2002.

Lord, Suzanne, Associate Professor, *Emerita*, D.M.A., Louisiana State University, 1996.

Mandat, Eric P., Professor, D.M.A., Eastman School of Music, 1986.

Mellado, Daniel, Associate Professor, *Emeritus*, Ph.D., Michigan State University, 1979.

Mochnick, John, Professor, *Emeritus*, D.M.A., University of Cincinnati, 1978.

Morehouse, Christopher, Associate Professor, D.M.A., University of Cincinnati, 2005.

Poulos, Helen, Associate Professor, *Emerita*, D.M., Indiana University, 1971.

Presar, Jennifer, Senior Lecturer, M.M., West Virginia University, 2000.

Resnick, Robert, Professor, *Emeritus*, M.Mus., Wichita State University, 1949.

Simmons, Margaret, Professor, *Emerita*, M.M., University of Illinois, 1976.

Stemper, Frank, Professor, *Emeritus*, Ph.D., University of California, 1981.

Transue, Paul, Associate Professor, D.M.A., Eastman School of Music, 1999.

Underwood, Jervis, Professor, *Emeritus*, Ph.D., North Texas State University, 1970.

Wagner, Jeanine, Professor, *Emerita*, D.M.A., University of Illinois, 1987.

Webb, Marianne, Professor, *Emerita*, M.Mus., University of Michigan, 1959.

Weiss, Robert L., Jr., Professor, *Emeritus*, Ph.D., Southern Illinois University, 1984.

Werner, Kent, Associate Professor, *Emeritus*, Ph.D., University of Iowa, 1966.

Worthen, Douglas, Assistant Professor, D.M.A., Hartt School of Music, University of Hartford, 2007.

Musical Theater

(SEE THEATER)

Native American Studies (Minor)

The Native American Studies minor is interdisciplinary, designed to provide undergraduates with an enhanced understanding of the culture, history, language, literature, and arts of Native Peoples of the Americas. The minor consists of a minimum of 18 hours that are to be selected from the university's offerings on these topics and organized to reflect each individual student's interest. Through coursework in Native American Studies, students may prepare themselves for careers in teaching, government, the media, health care, business, law and the arts, among others. The requirements for Native American Studies minor are listed below.

NATIVE AMERICAN STUDIES MINOR

Successful completion of the Native American Studies minor consists of satisfying all course requirements.

Course Requirement: 18 credit hours, including 6 hours of required core courses and 12 hours of electives, of which 3 hours may be selected from a special interest or related course; for example, Africana Studies.

Required Core classes: one of ANTH 310E/470E, 310I/470I, 310K/470K; one of HIST 366.

Electives can be chosen from the following (note that some have prerequisites or restrictions): AD 317I, 428; ANTH 201, 205, 206, 302, 310E/470E, 310I/470I, 310K/470K, 328A/428A, 328B/428B, 328C/428C, 420, 424, 430A, 430B, 430F; ENGL 332; HIST 361, 403; SOC 215.

Natural Resource Economics

(SEE AGRIBUSINESS ECONOMICS)

Nursery Production

(SEE HORTICULTURE)

Nutrition

(SEE HUMAN NUTRITION AND DIETETICS)

Outdoor Leadership

(SEE RECREATION)

Outdoor Recreation

(SEE FORESTRY AND/OR RECREATION)

Paralegal Studies (Major, Courses, Faculty)

SIU Paralegal Studies is an American Bar Association approved program leading to the Bachelor of Science degree. A paralegal is qualified by specialized education, training, and experience to assist an attorney in non-clerical, substantive legal work. Paralegals – also known as legal assistants – may research law and

facts, interview witnesses and clients, compose pleadings and correspondence, draft and file court documents, and prepare for and assist with trial. Paralegals work under the supervision and direction of an attorney and may not provide legal services or advice directly to the public except as permitted by law. Most paralegals work as vital members of legal teams in small and large law firms and medical or government offices; in legal departments of corporations, insurance agencies, and banking or financial institutions; and, in local, county, state, and federal administrative agencies. Also, as a route to law school, many students major in Paralegal Studies.

The program’s goals and objectives reflect the Core Competencies for Paralegal Programs as stated by the American Association for Paralegal Education. Core competencies include essential knowledge of substantive and procedural law as well as evidence of practical legal skills developed from programmatic research, writing, and oral communication. Together these competencies demonstrate outstanding organizational, interpersonal, critical thinking, and analytical thinking skills. Also, program faculty and staff model and teach students to exemplify professionalism and the high ethical standards of the legal profession.

The program’s curriculum and degree requirements build on general education requirements in the University Core Curriculum and in the College of Liberal Arts. Students majoring in Paralegal Studies must complete 34 credit hours of core legal specialty courses. These courses are PARL 300A, 300B, 305, 310, 320, 330, 350, 360, 370, 380, and 405. At least 15 credit hours of these legal specialty courses must be completed at SIU Carbondale. Additionally, PARL 300A, 300B, and 310 require a grade of C or higher to satisfy program major requirements. For students who desire to begin their program of study with a basic paralegal skills course, PARL 295 is recommended but not required.

In addition to the 34 credit hours of core legal specialty course requirements, the major requires at least 12 credit hours of elective courses. There are two options for completing this requirement: the general option and the pre-law specialization option. The general option is an excellent choice for students planning to be employed in a law-related occupation upon graduation. The pre-law specialization is an excellent path for students planning to further their law-related education after graduation. To fulfill the general option, students must choose and complete at least 12 credit hours of office support/management-related courses (e.g., accounting, finance, office management) from a select list provided by the program. To earn the pre-law specialization, students must choose and complete 12 credit hours of 300-400 level Liberal Arts courses, at least one of which must be selected from a list of law-related courses provided by the program.

As a capstone experience, majors are required to complete a 4-credit course with an internship component that provides on-the-job training, and a classroom component that assists students with career planning. The complete program encourages the spirit of inquiry, embraces a range of social sciences, humanities, and communication skills that give students a grasp of the social and ethical contexts of the legal profession, and develops confidence.

Bachelor of Science Degree in Paralegal Studies, College of Liberal Arts

University Core Curriculum 41
College of Liberal Arts Academic Requirements
 (See Chapter 4) 18
 These requirements include 6 credit hours of foreign language and 6 credit hours of international coursework. Any or all of these 12 credit hours may be satisfied by choosing particular courses during completion of the University Core Curriculum. These requirements further include 6 credit hours of Writing-Across-the-Curriculum courses, and these 6 credits are fulfilled by competing PARL 300A and 300B.
Requirements for Major in Paralegal Studies 46
 Core Legal Specialty Courses: PARL 300A, 300B, 305, 310, 320, 330, 350, 360, 370, 380, and 405 34
 Four office support/management-related electives chosen from a program list 12
Electives 21-33
Total 120

Bachelor of Science Degree in Paralegal Studies with a Specialization in Pre-Law, College of Liberal Arts

University Core Curriculum 41
College of Liberal Arts Academic Requirements
 (See Chapter 4) 18
 These requirements include 6 credit hours of foreign language and 6 credit hours of international coursework. Any or all of these 12 credit hours may be satisfied by choosing particular courses during completion of the University Core Curriculum. These requirements further include 6 credit hours of Writing-Across-the-Curriculum courses, and these 6 credits are fulfilled by competing PARL 300A and 300B.
Requirements for Major in Paralegal Studies 46
 Core Legal Specialty Courses: PARL 300A, 300B, 305, 310, 320, 330, 350, 360, 370, 380, and 405 34
 Four 300/400-level Liberal Arts courses, at least one of which must be chosen from a program list of law-related courses 12
Electives 21-33
Total 120

Paralegal Studies Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
Science	3	3
UCOL 101, Social Science	3	3
Humanities.....	3	3
Mathematics.....	3	-
Fine Arts.....	-	3
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
Human Health, Social Science	2	3
CMST 101, PARL 305	3	3
Foreign Language	3	3
General/Pre-Law elective	-	3

Electives	7	3
<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING
PARL 300A, B	3	3
PARL 310, 320	3	3
PARL 330	3	-
Multicultural, PARL 350	3	3
General/Pre-Law elective	3	3
Electives	-	3
<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
PARL 360, 405.....	3	4
PARL 380, 370	3	3
General/Pre-Law Elective	3	-
Electives	6	8
<i>Total</i>	15	15

Paralegal Studies Minor

A minor in Paralegal Studies requires 15 credit hours from among any Paralegal Studies course except PARL 340 and 405 (internship courses). At least 9 of the required 15 credit hours must be earned at SIU Carbondale. The paralegal minor is not approved by the American Bar Association and is not intended to prepare a student for a career as a paralegal.

Courses (PARL)

295-3 Basic Paralegal Skills. This course focuses on essential skills for successful paralegals. The style of grammar, punctuation, sentence structure, and analytical progression in legal writing is emphasized. Course assignments expand students' reading comprehension, legal vocabulary, and proofreading and editing skills. Other skills practice includes using office machines, improving typing speed, and taking instruction and direction. The course prepares students to render a common core of legal knowledge into practical law office practice.

300A-3 Legal Analysis, Research, and Writing I. After examining the litigation process and structure of the federal and state court systems, students are introduced to a wide variety of legal research techniques and sources. Students will learn how to perform legal research using books within the law library and will learn computer-assisted legal research. Students will learn how to use and write proper legal citations, as students begin a process of analytical legal writing. Students will analyze legal-related articles, prepare case briefs, and multiple case analyses. Professional responsibilities will be stressed throughout the course. This course meets the CoLA Writing-Across-the-Curriculum requirement. Restricted to PARL majors and minors or special approval needed from the department.

300B-3 Legal Analysis, Research, and Writing II. Students will continue to develop their analytical skills and will learn how to conduct effective legal writing using policy arguments; identifying fallacious arguments; and systematically using IRAC, CRAC, IREAC, and CREAC. Students will use computer-assisted legal research techniques to find and validate cases, statutory annotation, and secondary sources. Students will prepare

legal correspondence, case briefs, motions, memoranda of law, and trial briefs. Proper legal citation and professional responsibilities will be stressed throughout the course. This course meets the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: A grade of C or better in PARL 300A. Restricted to PARL majors and minors or special approval needed from the department.

305-3 Introduction to Law. This course will provide a basic background of the United States legal process. It will provide an introduction to civil and criminal processes, legal terminology, a history of common law, and cover various areas of substantive law. Ethics, regulations, and professional responsibilities involved in the legal profession will be discussed, along with basic legal concepts and legal analysis. Students will be required to read and brief cases and to analyze factual situations involving civil and criminal law, and legal ethics.

310-3 Civil Procedure. Students will examine the roles of lawyers and paralegals in handling civil cases, and the means by which the objectives of litigation may be achieved. Strategies and mechanics of civil procedure will be explored in depth, and students will be required to prepare a complaint, discovery requests, and initial appellate documents. PARL 310 requires a grade of C or higher to satisfy program major requirements.

315-3 Introduction to Criminal Law. (Same as CCJ 310) An examination of the general principles that apply to all criminal offenses and the specific elements of particular crimes that prosecutors must prove beyond a reasonable doubt. Topics include actus reus, mens rea, concurrence, causation, and harmful result; the defenses of justification and excuse; the doctrines of complicity and inchoate (unfinished) crimes; and the elements of major crimes against persons, property, habitation, public order and morals, and the state.

320-3 Wills, Trusts, and Estates. Students will study the more common forms of wills and trusts and the fundamental principles of law applicable to each. The course will analyze administration of estates under the Illinois Probate Act. Students will be required to prepare a will, trust, power of attorney, and an estate project.

325-3 Contracts. This course will introduce students to basic principles of contract law, including required elements for a valid and enforceable contract. The various remedies for breach of contract will be analyzed and applied to contractual obligations. Students will develop skills required to interpret contractual language and to draft contractual clauses. A variety of simple contracts will be drafted during the semester.

330-3 Business Entities. Includes a review of the lawyer's role in the formation of business entities, including sole proprietorships, partnerships, and corporations, with a survey of the fundamental principles of law applicable to each and the preparation of documents necessary to the organization and operation of each. The student will be prepared to draft articles of incorporation and other legal documents relevant to the role of a paralegal in a modern law office.

335-3 Property. This course will introduce students to basic principles of property law and assist them in developing skills for drafting documents for the purchase, sale, and transfer of real estate; understanding a variety of types of estates in real property and rights associated with real property; and other real estate-related matters.

340-1 to 6 Internship in Paralegal Studies. This course involves supervised on-the-job training and experience in public or private offices typically employing paralegals. Students must work 50 hours per credit hour. A typical internship placement requires 150 hours for 3 credit hours. Only 3 credit hours of internship credit may be applied toward major requirements. Prerequisite: PARL 300A and 300B with minimum grade of C. Restricted to PARL majors and minors or special approval from the department.

345-3 Labor and Employment Law. This course will introduce students to the basic principles of Labor and Employment Law and deals with the definition of employer and employees and the nature of the employment relationship, and the course deals with the laws relating to employment in the union setting and employment discrimination.

350-3 Family Law. This course is a review of the law as it relates to the various aspects of domestic relations including marriage, divorce and separation, alimony, child custody and support, taxes, and illegitimacy and adoption. Students will be required to draft a petition for dissolution of marriage, marital settlement agreement, judgment for dissolution of marriage, and to prepare a child support calculation.

355-3 Criminal Law and Procedure. This course covers causes of action of criminal liability on the misdemeanor and felony levels. Some constitutional law issues raised by a criminal practice will also be addressed. Students will study the procedures of the criminal system from arrest through post-trial motions, sentencing, and appeal. Students will be required to draft a criminal complaint and motions commonly used in the practice of criminal law. Students will also engage in an interviewing exercise.

360-3 Torts. This course will provide an introduction to the broad area of civil wrongs and their appropriate remedies. Traditional areas of tort law principles will be discussed including intentional torts, negligence, absolute liability, product liability, nuisance and commonly employed defenses. Mock interviews of a client and a witness will be conducted. Students will prepare a complaint, request for production of documents, and other commonly used documents in the law of personal injury litigation.

365-3 Ethics and Professional Responsibility. This course is an in-depth review of the canons of professional responsibility, conduct, and ethics concerning the legal profession, including case study projects. The emphasis is on the duty of paralegals and lawyers to act so as to serve a client's best interests, to do so in an ethical manner, and to advance the interests of justice.

370-3 Bankruptcy and Creditors' Rights. This course will provide an introduction to bankruptcy and the debtor-creditor relationship. The main purpose of this course is to give a basic understanding of the laws that apply to debtors and creditors, as a foundation to unraveling the intricacies of the bankruptcy process. Students will prepare a Chapter 7 Bankruptcy and Schedules, and a Chapter 13 Plan.

375-3 International Law. Meets a need for increased global awareness in education, business, and society. The study of International Law looks at systems of values common to diverse societies, with a focus on treaties and laws regulating the relationships and trade between the United States and foreign

nations and agreements between countries and their effects on American society. Topics may include, but not be limited to, human rights, group rights, and treatment of aliens. Romano-Germanic civil law and Anglo-American common law will be presented, as will cross-border disputes. The course will also address laws and policies governing the European Union and its business practices. Students will be introduced to sources of international law and where to begin research, depending on what is at issue; litigation and arbitration for civil and criminal proceedings, including the extradition process; various parties who could become involved in an international dispute, including military, diplomats, and businesses; and develop practical skills for applying international law to businesses of varied sizes and diverse backgrounds.

380-3 Technology in the Law Office. This course will introduce the paralegal student to various law office technology, including case management programs, database development, and billing software. Restricted to PARL majors and minors or special approval from the department.

385-3 Court Procedures and Evidence. This course is designed to acquaint the student with the kinds of evidence and the rules governing the admissibility of evidence in court, including the effect of court decisions on the acquisition and admissibility of evidence. Students will be required to complete several writing assignments.

390-3 Law Office Management. This course is designed to acquaint the student with a variety of law office management issues including financial, human resources, records, information, facilities, and marketing.

400-3 Advanced Paralegalism. A course that shall review the many areas that will assist a student in a paralegal career, including; interviewing and investigation in the law office, use of computer in the office, office administration, lawyer and paralegal ethics, job opportunities, professionalism. Not for graduate credit. Restricted to senior standing. Special approval needed from the instructor. Lab fee: \$20.

405-4 to 7 Advanced Internship. This course has both an internship component and a class component. The class component (1 credit hour) assists students with career planning, interview techniques, and job performance skills. The internship component provides supervised on-the-job training experience in public or private offices. Interns must complete 150 hours for 3 hours of credit. An extra credit hour-up to a maximum of 6-may be earned for each additional 50 hours. Only 4 credit hours of internship credit may be applied toward major requirements. Prerequisite: PARL 300A and PARL 300B with a minimum grade of C. Restricted to PARL majors and minors or special approval of the department.

Paralegal Studies Faculty

Clemons, John, Lecturer, J.D., DePaul University College of Law, 1975.

Hillyard, Daniel, Associate Professor and *Interim Director*, J.D., Ph.D., University of California, Irvine, 2001.

Hughes, Kenneth, Lecturer, J.D., Southern Illinois University School of Law, 1982.

Silver, Daniel, Lecturer, J.D., Southern Illinois University School of Law, 1993.

Ting, Timothy, Lecturer, J.D., Southern Illinois University School of Law, 2008.

Park Administration

(SEE RECREATION)

Park Management

(SEE FORESTRY)

Peace Studies (Minor)

The Peace Studies minor is interdisciplinary, designed to provide undergraduates with a better understanding of the causes of war and violence, the history of war and peace, and alternatives to violence in thought and practice. The minor consists of a minimum of 18 hours that are to be selected from the university's offerings on these topics and organized to reflect each individual student's interests. Through coursework in Peace Studies, students may prepare themselves for careers in teaching, government, media, law, non-profit organizations and NGOs, and the arts, among others. The requirements for the Peace Studies minor are listed below.

Course Requirements

18 credit hours, including 6 hours of required core courses and 12 hours of electives. The 18 hours must be spread over at least three different departments.

Required Core courses: HIST 358I or CP 358I and PHIL 309I.

Electives can be chosen from the following list. Other courses may substitute, but only with the express approval of a member of the Peace Studies faculty coordinating committee:

AFR 360, 472; ANTH 330, 370, 4100; CP 470A; CCJ 418, 340, 370 (or POLS 370); HIST 340, 355, 361, 456, 457, 496A,B; LING 320I; PHIL 375; POLS 332I, 375; RTd 489; SOC 424, 435, 437, 438; CMST 301I, 341, 448, 463, 464; WGSS 300, 320I, 401.

Philosophy (Department, Major, Minor, Courses, Faculty)

Philosophy is a critical, speculative, and reflective discipline concerned with the exploration of ideas. The questions with which it deals can be found in every human pursuit and subject matter. Among the subjects it embraces are the nature of truth and reality, the possibility of knowledge, the quest for moral values and political justice, and the nature of mind, language, art, and reason. The field of logic is a formal study of the art of exact thinking. Given this breadth, philosophy can be related to almost any subject or profession.

Recent studies have shown that strong liberal arts majors are in much demand in the world outside the University. While preprofessionals may enter the job market with higher salaries, those with liberal arts majors tend to rise higher in their professions. This is because a liberal arts degree indicates a capacity for thinking, learning, writing, and breadth of understanding. Philosophy is a strong liberal arts major, and majors in philosophy rank in the highest percentages for GRE, LSAT, and GMAT scores. In addition to academic work, philosophy contributes toward careers in law, medicine, business, government, journalism, religion, computers, and education.

The Department of Philosophy at SIU is a pluralistic department, representing a variety of traditions, such as analytic philosophy, phenomenology, American philosophy, Asian philosophy, and feminism. It has faculty who specialize in the history of philosophy, logic, ethics, metaphysics, political and legal philosophy, the philosophy of science, the philosophy of technology and the philosophy of religion, among others.

The student electing to major in philosophy should consult the department's director of undergraduate studies. Majors may request to take a graduate level seminar (for undergraduate credit) as a substitute for three credit hours at the 400-level. Philosophy majors will satisfy the College of Liberal Arts Writing-Across-the-Curriculum requirement by passing Philosophy 304 and 305A or B. A minor is not required for a major in philosophy, though it is recommended that the student take foreign languages such as Greek, Latin, French or German.

Bachelor of Arts Degree in Philosophy, College of Liberal Arts

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements</i>	
(See Chapter 4)	14
<i>Requirements for Major in Philosophy</i>	33
Logic requirement: Philosophy 105 or 320	3
Ethics requirement: Philosophy 104 or 340	3
History of Philosophy requirement: Philosophy 304 and 305A,B.....	6
Six hours from 300 level courses in addition to 304 and 305A or B.....	6
At least nine hours of 400-level courses	9
Electives for major in Philosophy	6
<i>Electives</i>	32
<i>Total</i>	120

Philosophy Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
Core Curriculum	6	9
UCOL 101.....	3	-
ENGL 101, 102.....	3	3
PHIL 104, 105	3	3
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
Core Curriculum	9	12
PHIL 304	3	-
PHIL 305A	3	-
PHIL 300-level Elective	-	3
<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING
CoLA 300/400 Electives	12	9
PHIL 300-level Elective	3	-
PHIL 400-level Elective.....	-	3
PHIL 310	-	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
CoLA 300/400 Electives	9	9
PHIL Electives	3	3
PHIL 400-level Electives	3	3
<i>Total</i>	15	15

Bachelor of Arts Degree in Philosophy, Pre-Law Specialization

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements</i> (See Chapter 4)	14
<i>Requirements for Major in Philosophy-Pre-law</i> <i>specialization</i>	33
PHIL 104	3
PHIL 105	3
History of Philosophy requirement: PHIL 304 and 305A,B	6
PHIL 309I Philosophy of Peace/Law/Justice	3
PHIL 340 Ethical Theories	3
PHIL 310 Advanced Critical Thinking	3
PHIL 445 Philosophy of Law	3
At least six hours of 400-level courses	6
PHIL 499-Senior Thesis (in some area of philosophy and the law)	3
<i>Electives</i>	32
<i>Total</i>	120

Philosophy Minor

A minor in philosophy requires 15 hours, a maximum of 6 of which may be selected from philosophy courses offered in the University Core Curriculum and below the 300-level, 6 of which must be selected from the courses listed above for the major. Philosophy 304 and 305A or B are recommended.

Courses (PHIL)

102-3 Introduction to Philosophy. (University Core Curriculum) [IAI Course: H4 900] Introduction to fundamental philosophical issues across a broad spectrum. Problems in metaphysics, epistemology and ethics will be among the areas explored. Emphasis throughout is upon developing in the student an appreciation of the nature of philosophical questioning, analyzing and evaluating arguments and reflecting on the nature of human existence.

103A-3 World Humanities. (University Core Curriculum) [IAI Course: HF 904N] This course will explore the rise, development and interaction of the major world civilizations as embodied in ideas and their expressions in religion, philosophy, literature and art. The great traditions of Near Eastern, European, Central Asian, Indian, Chinese and Japanese cultures will be examined. (A) The first semester will cover the early civilization of the Near East, the classical world of Greece and Rome, early China and India.

103B-3 World Humanities. (University Core Curriculum) [IAI Course: H9 900] This course will explore the rise, development and interaction of the major world civilizations as embodied in ideas and their expressions in religion, philosophy, literature and art. The great traditions of Near Eastern, European, Central Asian, Indian, Chinese and Japanese cultures will be

examined. (B) The second semester will look at the integrative civilizations of Buddhism, Medieval Christianity and Islam, and Modern Europe.

104-3 Ethics. (University Core Curriculum) [IAI Course: H4 904] Introduction to contemporary and perennial problems of personal and social morality, and to methods proposed for their resolution by great thinkers past and present.

105-3 Elementary Logic. (University Core Curriculum) [IAI Course: H4 906] Study of the traditional and modern methods for evaluating arguments. Applications of logical analysis to practical, scientific and legal reasoning, and to the use of computers.

106-3 Philosophy of Self-Cultivation. An introduction to the history of the relation between mind and body. It focuses on how the relation of mind and body can help bring about well being or the good life. The course incorporates a physical activity component: walking, jogging, table tennis, for example.

210-3 The American Mind. (University Core Curriculum) [IAI Course: HF 906D] This course will survey the diverse traditions, ideas and ideals that have shaped American culture in the past and today. Major works from Native American, African American, feminist, Puritan, Quaker and American Zen Buddhist writers may be used as well as those from such intellectual movements as the Enlightenment, Transcendentalism and Pragmatism.

211-3 Philosophy and Diversity: Gender, Race and Class. (University Core Curriculum) This course is a philosophical introduction to diverse perspectives within modern American culture. It will address through reading and discussion important contemporary moral and social issues from the perspective of nontraditional orientations including African American, Native American and American feminism. The resources of philosophy and other related disciplines such as psychology, sociology and literature will be used to develop a culturally enriched perspective on important contemporary issues.

300-3 Metaphysics. Metaphysics deals with the broadest and most fundamental concepts: What does it mean to exist? It encompasses questions about whether what fundamentally exists is one or many. Is reality essentially physical or does it include something nonphysical? What is "causality"? Is there an ultimate or highest reality, that which some call God? If God exists, can there be anything that is not God? Can we know what reality truly is or is the human mind fated to behold only the world as it appears to us? Can we at least know ourselves? Is human existence basically similar to the existence of any "thing" or does our sense of history and mortality make us experience Being in a different way? This course will engage these and other questions through readings selected from the Western tradition, from the ancient Greeks to the modern age. Readings from Asian traditions may also be included.

301-3 Philosophy of Religion. An analysis of problems in the psychology, metaphysics, and social effects of religion. Among topics discussed are the nature of mystical experience, the existence of God, and problems of suffering, prayer, and immortality.

303I-3 Philosophy and the Arts. (University Core Curriculum) [IAI Course: H9 900] An interdisciplinary examination of (1) literary and other artistic works which raise philosophic issues and (2) philosophic writings on the relationship between

philosophy and literature. Possible topics include: source of and contemporary challenges to the traditional Western idea that literature cannot be or contribute to philosophy; the role of emotion, imagination and aesthetic value in philosophic reasoning; the role of literature in moral philosophy; and philosophic issues of interpretation.

304-3 Ancient Philosophy. (Advanced University Core Curriculum course) (Same as CLAS 304) The birth of Western philosophy in the Greek world, examining such Pre-Socratics as Anaximander, Heraclitus, Pythagoras, and Parmenides; focusing upon the flowering of the Athenian period with Socrates, Plato, and Aristotle. The course will conclude with a discussion of the Hellenistic systems of Stoicism, Epicureanism, and the Neo-Platonic mysticism of Plotinus of the Roman period. Fulfills CoLA Writing-Across-the-Curriculum requirement. Satisfies University Core Curriculum Humanities requirement in lieu of 102.

305A-3 Modern Philosophy-Metaphysics and Epistemology. (Advanced University Core Curriculum course) A survey course covering the major figures and themes in the development of modern philosophy up to Kant. Concentration on the Rationalist and Empiricist traditions and the simultaneous development of modern science. Either 305A or 305B fulfills the CoLA Writing-Across-the-Curriculum requirement. 305A or B satisfies the University Core Curriculum Humanities requirement in lieu of 102.

305B-3 Modern Philosophy-Moral and Political Philosophy. (Advanced University Core Curriculum course) A survey course covering the major figures and themes in the development of modern philosophy up to Kant. Concentration on the Rationalist and Empiricist traditions and the simultaneous development of modern science. Either 305A or 305B fulfills the CoLA Writing-Across-the-Curriculum requirement. 305A or B satisfies the University Core Curriculum Humanities requirement in lieu of 102.

306-3 Nineteenth Century Philosophy. Survey of 19th century European philosophy, focusing on the development of idealism and romanticism. Readings include selections from Fichte, Schelling, Hegel, and others.

307I-3 Philosophy of Science, Nature and Technology. (University Core Curriculum) Interdisciplinary study of major humanistic critiques of technology, science and nature; analysis of topics such as ecology, the information revolution, aesthetics and ethics in various branches of science and technology, relation of science to technology.

308I-3 Asian Religions: A Philosophical Approach. (University Core Curriculum) [IAI Course: H4 903N] This course examines three major areas of Asian religious traditions from a philosophical perspective: South Asia, East Asia, and Buddhist traditions. Since it is not possible to be all inclusive, concentration will be on those with continuing significant spiritual, philosophical, social, political, aesthetic and literary influence. More specifically, it is an introduction to some of the major Asian religious traditions, such as Hinduism, Buddhism, Confucianism, Taoism, and Zen Buddhism, approached through philosophical reflection. Emphasis is on classical traditions, since this provides a solid foundation upon which students are then able to pursue further independent readings in more recent developments. Furthermore, this emphasis permits an extended

exploration of the interaction among contemporary economic, sociological and religious developments and classical traditions.

309I-3 Philosophy of Peace, Law, and Justice. (University Core Curriculum) An interdisciplinary exploration of classical and modern theories of peace, law, and justice with special attention to their implications for important contemporary political issues.

310-3 Advanced Critical Thinking. A course designed to improve students' critical reading, thinking and writing skills and to help students planning to attend law school prepare for the LSAT exam. Uses LSAT guides on Logical Reasoning and Logic games as texts.

314-3 Love, Sex, Gender, and Philosophy. (Same as WGSS 314) A survey of philosophical approaches to love, sex, and gender. A philosophical inquiry into the representation of love, sex, and gender, including materials that combine text, words, and images. The course studies an ancient philosophy text on love, a classical text of twentieth-century feminist philosophy, and critiques of feminism that draw on the life of gender, sexuality, and race. It questions the nature and possibilities of love.

320-3 Deductive Logic. An introduction to first order logic, including the Boolean connectives, conditionals, and identity. The emphasis is on the concept of logical consequence and the related concepts of tautological and analytic (semantic) consequence. Other topics include truth functional and non-truth functional connectives, truth-tables, informal proofs, proofs of non-consequence, derivations using a Fitch natural deduction system, and translations to and from English.

340-3 Ethical Theories. (Advanced University Core Curriculum course) [IAI Course: H4 904] Nature of ethics and morality, ethical skepticism, emotivism, ethical relativism, and representative universalistic ethics. Bentham, Mill, Aristotle, Kant, Blanshard, and Brightman. Satisfies University Core Curriculum Humanities requirement in lieu of 104.

344-3 Biomedical Ethics. Changes in biology and medicine have brought into sharp focus such problems as allocation of scarce medical resources, use of human subjects in experiments, abortion, euthanasia, genetic screening, truth-telling in medical practice, moral rights of patients and other matters. This course brings ethical principles to bear on these issues.

360-3 Latin American Philosophy. The course deals with philosophy in Latin America from the 19th century to the present. Central themes of the course include: identity theory, philosophy and culture, and political philosophy.

371-3 Introduction to Contemporary Phenomenology. Introductory survey of individual thinkers and questions in the contemporary phenomenological tradition: Husserl, Sartre, Merleau-Ponty, Levinas, and Ricoeur.

375-3 Ecology and Ethics. An exploration of several views of the relationship between human beings and the natural world. This course will examine the changing paradigms of environmental studies for insights about our epistemological and moral approaches to nature. Both classical and contemporary literature on nature will be used. Such topics as the Gaia hypothesis, ecofeminism, deep ecology, and the use of nature for human purposes will be addressed.

385-3 Mystical Literature and Meditation. This course will introduce and explore the profound tradition of literature that has nourished religious, ethical, as well as philosophical and

literary, developments in Western and Eastern cultures, but has often been overlooked, not only by the sciences, but also by the humanities: the tradition of mystical literature. In addition to reading primary sources representative of Western and Eastern mystical traditions, this course will include a weekly lab during which the student will be exposed to meditative techniques and actual meditative practices. Finally, this course will integrate guest speakers/practitioners, audio and visual supports pertaining to the course, and work on the Web, allowing students to broaden their connections to others who also share an interest in this field of study and practice. Prerequisite: at least one course (three hours) in the humanities on the 100 or 200 level.

389-3 Existential Philosophy. Surveys the two main sources of existentialism, the philosophies of Kierkegaard and Nietzsche, with occasional reference to thinkers such as Sartre, Heidegger, Buber, Marcel, and others.

400-3 Philosophy of Mind. An investigation of the philosophical issues raised by several competing theories of mind, focusing on the fundamental debate between reductionistic accounts (e.g., central state materialism, identity theories of the physical and mental) and views which reject such proposed reductions. Traditional and contemporary theories will be examined. Designed for students in the life and social sciences with little or no background in philosophy as well as philosophy students.

405-3 Democratic Theory. (Same as POLS 405) An examination of various aspects of democratic thought, including the liberal tradition and its impact upon the United States. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Prerequisite: POLS 114 or consent of instructor.

415-3 Logic of Social Sciences. (Same as SOC 415) An examination of the theoretical structure and nature of the social sciences and their epistemological foundations. The relationship of social theory to social criticism; theory and praxis. Historical experience and social objectivity. Social theory as practical knowledge.

420-3 Symbolic Logic. An introduction to first order logic with an emphasis on quantification. Topics include the semantics of the quantifiers, first-order validity, quantifier equivalences, functions, informal proofs, proofs of non-consequence, derivations using a Fitch natural deduction system, translations to and from English, soundness and completeness, the axiomatic method, first order set theory, and mathematical induction. Prerequisite: PHIL 320 or consent of the instructor.

434-3 Media Ethics. (Same as JRNL 434) Explores the moral environment of the mass media and the ethical problems that confront media practitioners. Models of ethical decision-making and moral philosophy are introduced to encourage students to think critically about the mass media and their roles in modern society.

441-3 Philosophy of Politics. (Same as POLS 403) The theory of political and social foundations; the theory of the state, justice, and revolution. Classical and contemporary readings such as: Plato, Aristotle, Hobbes, Locke, Rousseau, Marx, Dewey, Adorno and others. Prerequisite: PHIL 340 or PHIL 102 or consent.

445-3 Philosophy of Law. Study of contemporary philosophical essays on topics at the intersection of law and philosophy, such as abortion on demand, capital punishment, plea bargain-

ing, campus speech codes, legalization of addictive drugs, and animal rights, and of what systematic philosophers, such as Thomas Hobbes, John Locke, John Stuart Mill, Karl Marx, and H.L.A. Hart, have written about the nature of a legal system and the appropriate realm of legal regulation.

446A-Feminist Philosophy. (Same as WGSS 456A) A general survey of feminist theory and philosophical perspectives.

446B-Special Topics in Feminist Philosophy. (Same as WGSS 456B) A special area in feminist philosophy explored in depth, such as Feminist Ethics, French Feminism, Feminist Philosophy of Science, etc.

446C-3 Women Philosophers. (Same as WGSS 456C) Explores the work of one or more specific women philosophers, for example Hannah Arendt, Simone DeBeauvoir, etc.

450-3 American Transcendentalism. This course will study the rise of Transcendentalism as a philosophical movement in early Nineteenth Century New England. Focus will be on Ralph Waldo Emerson and Henry David Thoreau with possible attention to Margaret Fuller and other figures like Hedge, Parker and Brownson.

451-3 History of African American Philosophy. (Same as AFR 499A) A survey of major thinkers and themes in the history of African American Philosophy from colonial times to the 20th century. Prerequisite: at least one previous course in either Philosophy or Africana Studies with a grade of C or better.

455-3 Philosophy of Race. (Same as AFR 499B) A survey and critical examination of a range of theories on the nature and meaning of "race," the intersection of race with class and gender, and the promotion of racial progress. Such theories include racial realism and idealism, racial biologism, cultural race theory, social constructivist theory, integrationism, separatism, racial eliminativism, cosmopolitanism, and especially critical race theory. Prerequisite: at least one previous course in Philosophy or Africana Studies with a minimum grade of C.

459-1 to 6 Topics in Africana Philosophy. (Same as AFR 499C) A seminar on varying topics, themes, and figures in African, African American, and/or Caribbean Philosophy, e.g., "W.E.B. Du Bois and His Contemporaries," "Pan-Africanism," "Philosophies of Liberation," "Black Feminism," "Contemporary African Philosophy," "Philosophies of the Caribbean." Prerequisite: At least one previous course in Philosophy or Africana Studies with a minimum grade of C.

460-3 Philosophy of Art. We will examine several important theories that define art by focusing in on only one aspect, for example, imitation, expression, form, institutional setting, or even indefinability. What role does imagination play in each of these accounts, and does this tell us something important about how people experience their world?

468A-3 Kant-Theoretical Philosophy.

468B-3 Kant-Practical Philosophy.

468C-3 Kant-Aesthetics, Teleology and Religion.

469-3 Hellenistic and Roman Philosophy to Augustine. (Same as CLAS 469) The career of philosophy during the Hellenistic, Roman and Early Medieval period, especially as a means of personal salvation, exploring such figures and movements as: Epicurus, Stoicism, the Middle Academy, Skepticism, Gnosticism, Plotinus, Early Christianity, Augustine, and Boethius. Prerequisite: PHIL 304 or consent of instructor.

470A-3 Greek Philosophy-Plato. (Same as CLAS 470A) Sur-

vey of Plato's dialogues mostly selected from those of the middle period (Meno, Phaedo, Symposium, Republic, Phaedrus), perhaps along with some from the early period (especially Protagoras) and late period (Sophist, Timaeus).

470B-3 Greek Philosophy-Aristotle. (Same as CLAS 470B) A general survey of the Aristotelian philosophy including the theory of nature, metaphysics, ethics, and political philosophy. Readings will consist of selections from the corpus.

471A-3 History of Medieval Philosophy. An examination of some of the most important figures and themes in medieval philosophical thought. Medieval debates in the area of metaphysics, natural philosophy, epistemology, ethics and politics will be explored in reading the works of such figures as Augustine, Boethius, Abelard Avicenna, Averroes, Maimonides, Bonaventure, Thomas Aquinas, Duns Scotus, Ockham and Nicholas of Cusa. Prerequisite: PHIL 304 or consent of instructor.

471B-3 The Medieval Thinker. An examination of the thought of one of the central and most influential figures of the medieval world. Possible subjects of the course are Augustine of Hippo, Al-Ghazali, Moses Maimonides, Bonaventure, Thomas Aquinas, Duns Scotus, Dante Alighieri or William Ockham. Prerequisite: PHIL 304 or consent of instructor.

472-3 The Rationalists. Study of the philosophy of one or more of Descartes, Spinoza, Leibniz, Malebranche, Wolff. Prerequisite: PHIL 305A or B or consent of instructor.

473A-3 The Empiricists-Locke. Study of the principles of British empiricism as represented by Locke. May also include study of Berkeley. Prerequisite: PHIL 305 or consent of instructor.

473B-3 The Empiricists-Hume. Study of the principles of British empiricism as represented by Hume. May also include study of Berkeley. Prerequisite: PHIL 305 or consent of instructor.

474-3 Aristotle's Ethics. This course will focus on reading Aristotle's *Nicomachean Ethics*. Topics will include: the idea of a well-lived life (happiness), the relation of reason and desire, character formation, deliberative and moral reasoning, the types of human excellence, friendship and the role of philosophy in a well-lived life. Readings may include: Greek drama (e.g., *Antigone*, *Medea*), Aristotle's *Politics*, and contemporary writers in "virtue ethics." Prerequisite: PHIL 304 with a grade of B or better.

475-3 Topics in Asian Philosophy. Extended examination of one or two major texts, figures or philosophical schools in Asian philosophy. Topics vary; students are advised to consult with the instructor.

477-3 Indian Philosophy. An examination of several major traditions and texts of Indian philosophy, such as the Upanishads, the *Bhagavad Gita*, Vedanta, Nyaya, and contemporary philosophy, with an emphasis on their social and historical contexts.

478-3 Buddhist Philosophy. An examination of several major philosophical traditions or figures in Buddhism, such as Madhyamika, Yogacara, Zen, Mind-Only, and the Kyoto school, emphasis on their social and historical contexts.

479-3 Chinese Philosophy. An examination of several major traditions of Chinese philosophy, such as Confucianism, Taoism, Mohism and Maoism, Neoconfucianism, emphasis on their social and historical contexts.

480-3 History of Analytic Philosophy. An introduction to the works of several major 20th Century philosophers in the analytic tradition, including several of the following: Frege, Russell, Moore, Wittgenstein (early and later), members of the Vienna

Circle, Ayer, Ryle, Quine, Putnam, Davidson. Includes discussion of challenges to the tradition that have developed within it.

482-3 Recent European Philosophy. Philosophical trends in Europe from the end of the 19th Century to the present. Phenomenology, existentialism, the new Marxism, structuralism, and other developments. Language, history, culture and politics.

485-3 The Presocratics. The course will survey the Presocratic movement from the Milesians, Heraclitus and the Pythagoreans to the Eleatics, Empedocles, Anaxagoras and Democritus. Topics will include: the idea of nature, origin/source/principle (arche), the mathematical and nature, Being, pluralism and monism, the atomic theory. Some attention may be paid to the Sophists and the Epicureans. Prerequisite: PHIL 304 with a minimum grade of B.

486-3 Early American Philosophy. From the Colonial period to the Eve of World War I. This course will trace the transplantation of European philosophy to the New World. Puritanism, Quakerism, the theory of the American Revolution, the philosophical basis of the Constitution, transcendentalism, idealism, Darwinism and pragmatism and such figures as: Jonathan Edwards, John Woolman, Thomas Jefferson, James Madison, Ralph Waldo Emerson, Josiah Royce, Charles Sanders Peirce, and William James.

487-3 Recent American Philosophy. From World War I to the Present. The major American philosophers of the 20th Century, covering such issues as naturalism, emergentism, process philosophy, and neopragmatism. Figures include: John Dewey, George Herbert Mead, George Santayana, Alfred N. Whitehead, C. I. Lewis, W. V. Quine, and Richard Rorty.

490-1 to 8 Special Problems. Hours and credits to be arranged. Courses for qualified students who need to pursue certain topics further than regularly titled courses permit. Special topics announced from time to time. Students are invited to suggest topics. Special approval needed from the department.

491-1 to 6 Undergraduate Directed Readings. Supervised readings for qualified students. Open to undergraduates only. Additional hours beyond three (3) must have approval of the Director of Undergraduate Studies. Special approval needed from the instructor.

499-3 Senior Thesis. A paper on a topic agreed to by the student and a faculty thesis director. The paper should be of sufficient length to manifest the student's mastery of a philosophical area and logical and critical skills. Not for graduate credit. Special approval needed from the instructor and department.

Philosophy Faculty

Alexander, Thomas, Professor, Ph.D., Emory University, 1984.

Anderson, Douglas, Professor, Ph.D., Pennsylvania State University, 1984.

Auxier, Randall E., Professor, Ph.D., Emory University, 1992.

Beardsworth, Sara, Associate Professor, Ph.D., University of Warwick, 1994.

Berger, Douglas L., Associate Professor, Ph.D., Temple University, 2000.

Clarke, David S., Jr., Professor, Emeritus, Ph.D., Emory University, 1964.

Eames, Elizabeth R., Professor, *Emerita*, Ph.D., Bryn Mawr College, 1951.

Gatens-Robinson, Eugenie, Associate Professor, Emerita, Ph.D., Southern Illinois University, 1984.

Gillan, Garth J., Professor, *Emeritus*, Ph.D., Duquesne University, 1966.

Hahn, Robert A., Professor, Ph.D., Yale University, 1976.

Hickman, Larry A., Professor, Ph.D., University of Texas at Austin, 1971.

Kelly, Matthew J., Associate Professor, *Emeritus*, Ph.D., University of Notre Dame, 1963.

Manfredi, Pat A., Associate Professor, Ph.D., University of Notre Dame, 1982.

Plochmann, George Kimball, Professor, *Emeritus*, Ph.D., University of Chicago, 1950.

Price, Thomas W., Lecturer, M.A., Southern Illinois University, 1989.

Schedler, George E., Professor, *Emeritus*, Ph.D., University of California at San Diego, 1973; J.D., Southern Illinois University, 1987.

Steinbock, Anthony J., Professor, Ph.D., SUNY, Stony Brook, NY, 1993.

Stickers, Kenneth W., Professor, Ph.D., De Paul University, 1982.

Tyman, Stephen, Associate Professor, University of Toronto, 1980.

Youpa, Andrew, Associate Professor, Ph.D., University of California, Irvine, 2002.

Physical Education

(SEE KINESIOLOGY)

Physical Therapist Assistant

(Major, Courses)

The physical therapist assistant program is accredited by the Commission on Accreditation in Physical Therapy Education. It is designed to prepare the graduate to work under the supervision of a physical therapist to treat disabilities resulting from birth defects, disease, or injury. Physical therapy helps the patient to develop strength, mobility, coordination, and skills needed to manage pain. Physical Therapist Assistant is a licensed profession. In order to meet licensure requirements, the student must graduate from an accredited program and successfully pass a National Examination for licensure in the state in which they will practice. Successful completion of the program provides graduates with the educational requirements necessary to take the national licensing examinations for physical therapist assistants.

Students are provided hands-on experience in exercise, physical agents, and other therapeutic techniques in actual practice at Sports Medicine and Physical Therapy at the University, local hospitals, rehabilitation facilities, and outpatient clinics. They will work with physical therapists and physical therapist assistants performing therapeutic techniques and carrying out the patient's physical therapy plan of care. While the regular semesters will utilize classroom, laboratory and clinical education experiences, the final summer semester requires two full-time, six-week internships at two separate facilities away from the University campus. In accordance with Federal and State

guidelines, the clinical sites will require proof of the following: vaccination for measles, mumps, and rubella, varicella, tetanus, TB, and Hepatitis B, flu vaccine, current CPR card, and proof of completion of HIPAA and blood borne pathogens training as well as a criminal background check and drug screening.

A minimum grade of C for all physical therapist assistant courses is required to maintain enrollment in the Physical Therapist Assistant program. Physical Therapist Assistant courses are taught one time in an academic year. A student who fails a course (or drops out of the physical therapist assistant sequence) must reapply to the physical therapists assistant program.

The program is served by an advisory committee made up of practicing physical therapists, physical therapist assistants, students and educators who provide expertise to assure a curriculum which will prepare graduates to meet the physical therapy needs of the public.

Increasing numbers of elderly and chronically ill persons and the rapid expansion of health care programs in both urban and rural areas have created a demand for physical therapy personnel. Employment opportunities are available in hospitals, rehabilitation centers, extended care facilities, outpatient clinics and schools. Physical therapy provides a unique service and requires a close interpersonal relationship with the patient.

To be considered for enrollment into the physical therapist assistant program, prospective students must first obtain admission into the University. A program application is required and should be completed the beginning of the spring semester for entry the following fall. Classes are admitted only in the fall semester.

The physical therapist assistant program has Linkage Agreements with Southeastern Illinois College, Rend Lake College, John A. Logan College, Frontier College, Lakeland College, Southeast Missouri State University, Olney College, Wabash Valley College, and Shawnee College. If you have questions about a linkage agreement, please contact the appropriate Community College advisor or SIU's School of Allied Health at (618) 453-7172.

Associate in Applied Science Degree in Physical Therapist Assistant, College of Applied Sciences and Arts

Requirements for Major in Physical Therapist Assistant

Zoology 115, Allied Health 241 or Physiology 201 and 208	7
Psychology 102	3
English 101	3
Communication Studies 101	3
Allied Health 105	2
Health Education 334	3
Kinesiology 320 and 321	6
Psychology 301, or 303, or 304, or 305	3
Physical Therapist Assistant 107, 123A*,B*, 203, 204, 205, 207, 210A*,B*, 212A*,B*, 220A*,B*, 230A*,B*, 233A*,B*, 234, 321A*,B*, 322	43
<i>Total</i>	73

A minimum of C/Pass is required in all PTH courses.

* A and B are co-requisites. They must be taken together and completed with a minimum grade of C/Pass.

A is a prerequisite to B. A must be successfully completed with a minimum grade of C before the student can progress to the B sequence internship.

Physical Therapist Assistant Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
PTH 207, ZOOL 115.....	3	3
HED 334, KIN 321.....	3	3
AH 105, ENGL 101.....	2	3
AH 241, PTH 212A.....	4	3
PTH 107, 212B.....	3	1
PTH 123A, 204.....	2	2
PTH 123B.....	1	-
<i>Total</i>	18	15
SECOND YEAR	FALL	SPRING
PSYC 102, CMST 101.....	3	3
KIN 320, PSYC 301.....	3	3
PTH 203, 205.....	2	2
PTH 210A, 220A.....	2	2
PTH 210B, 220B.....	1	1
PTH 233A, 230A.....	2	1
PTH 233B, 230B.....	1	1
PTH 234.....	-	3
<i>Total</i>	14	16
SECOND YEAR	SUMMER	
PTH 321A.....	4	
PTH 321B.....	4	
PTH 322.....	2	
<i>Total</i>	10	

AH 241: may substitute PHSL 201/208.
 PSYC 301: may substitute PSYC 303, 304, or 305.
 PTH 207 must be taken before KIN 321.
 KIN 320 and/or 321 may be taken summer after first year in program.
 PTH 203 and PTH 205 can be moved up a year.
 AH 241 must be taken before KIN 320.
 C or better in all PTH classes.
 Residency Requirement: 15 semester hours.
 AAS Degree: 60 semester hours required.

Courses (PTH)

107-3 Introduction to Physical Therapy Practice and Procedures. Students will be introduced to the historical background, professional, ethical, and legal aspects of the physical therapy profession, as well as the relationship of physical therapy to total health care.

123A-2 Physical Agents I Theory. Students will be able to describe the theories and physiological effects of physical therapy interventions such as superficial and deep heat, cryotherapy, hydrotherapy, massage and laser therapy. Co-requisite: PTH 123B. Restricted to PTH majors.

123B-1 Physical Agents I Application. Students will be able to safely and effectively apply physical therapy interventions

such as superficial heat and deep heat, cryotherapy, hydrotherapy, massage, and laser therapy. Co-requisite: PTH 123A. Restricted to PTH majors.

199-1 to 10 Independent Study. Provides first year students with the opportunity to develop a special program of study to fit a particular need not met by other offerings. Enrollment provides access to program and clinical resources. Each student will work under the supervision of a faculty or staff member. Restricted to PTH majors. Special approval needed from the instructor.

203-2 Pathology. Students will be able to describe the fundamental basis of diseases including inflammation, cardiovascular diseases, vascular diseases, orthopedic conditions, repair of bone and soft tissue injuries. Emphasis is placed on those conditions treated through physical therapy interventions. Prerequisite: AH 241 or PHSL 201 and 208. Restricted to PTH majors.

204-2 Physical Therapist Assistant Practicum I. Students will be able to carry out routine physical therapy interventions with select patients. They will be able to demonstrate skill in the application of heat, cold, radiant energy, range of motion therapeutic exercise, activities of daily living, hydrotherapy and massage. Students will also assist in maintaining records and equipment. Course includes clinical experience. Restricted to PTH majors.

205-2 Physical Therapy Science. Students will be able to describe selected medical and surgical conditions from the stand point of etiology, clinical signs and symptoms, and their impact on physical therapy interventions. Prerequisite: AH 241 or PHSL 201 and 208. Restricted to PTH majors.

207-3 Human Neuromusculoskeletal Anatomy. Students will be able to describe and identify the structure, function, and integration of the component parts of the skeletal, muscular, and nervous systems of the human body.

210A-2 Introduction to Therapeutic Exercise Theory. This course is an introduction to therapeutic exercise theory. Students will apply basic neuroanatomy and theoretical concepts related to therapeutic exercise and identify treatment interventions and special tests associated with specific orthopedic conditions. Co-requisite: PTH 210B. Prerequisite: PTH 207 with a minimum grade of C. Restricted to PTH majors.

210B-1 Introduction to Therapeutic Exercise Application. This course is an introduction to therapeutic exercise application. Students will be able to palpate anatomical landmarks, perform length tests and manual muscle tests to individual muscles and muscle groups. Students will also learn to select, instruct, and perform exercises to improve flexibility and muscle performance. Co-requisite: PTH 210A. Prerequisite: PTH 207 with a minimum grade of C. Restricted to PTH majors.

212A-3 Physical Rehabilitative Theory. Students will be able to understand and explain the need for and concepts involved in physical rehabilitation interventions that assist patients in obtaining a state of optimal function. Co-requisite: PTH 212B. Restricted to PTH majors.

212B-1 Physical Rehabilitative Application. Students will be able to demonstrate competency in performing physical rehabilitative patient care skills and interventions that assist patients in obtaining a state of optimal function. Interventions covered include: range of motion, goniometry, transfers, chest physical therapy, and utilization of assistive devices. Co-requi-

site: PTH 212A. Restricted to PTH majors.

217-3 Physiology of Exercise. Students will be able describe fundamental physiological responses to exercise, focusing on therapeutic exercise and the neuromuscular system. Prerequisite: AH 241 or PHSL 201 and 208. Restricted to PTH majors.

220A-2 Neurologic Therapeutic Exercise Theory. Students will understand the principles of advanced therapeutic exercise for patients with neurologic dysfunction. Theories behind motor control, motor reflexes, motor learning, sensory integration, motor development, and utilization of synergies are covered. Students will be able to identify the need for adaptive equipment for individuals with neurologic dysfunction. Co-requisite: PTH 220B. Prerequisites: PTH 210A with a minimum grade of C and PTH 210B with a pass. Restricted to PTH majors.

220B-1 Neurologic Therapeutic Exercise Application. Students will be able to demonstrate through supervised application, advanced therapeutic exercise interventions such as sensory integration, motor reflexes, motor development, and utilization of synergies for specific clinical neurological conditions. Co-requisite: PTH 220A. Prerequisites: PTH 210A with a minimum grade of C and PTH 210B with a pass. Restricted to PTH majors.

230A-1 Advanced Therapeutic Exercise Theory. This course is a progression of PTH 210A designed to present advanced theoretical concepts related to therapeutic exercise. Students will apply neuroanatomy and therapeutic principles to the spine, peripheral joints, connective tissue, vestibular, sensotensory and neuromuscular systems. Co-requisite: PTH 230B. Prerequisites: PTH 210A with a minimum grade of C and PTH 210B with a pass. Restricted to PTH majors.

230B-1 Advanced Therapeutic Exercise Application. This course is a progression of PTH 210B designed to develop advanced competencies in therapeutic exercise. Students will perform techniques related to spinal stabilization, movement impairments, soft tissue and joint mobilization, muscle energy, proprioceptive neuromuscular facilitation, and proprioceptive/vestibular systems. Co-requisite: PTH 230A. Prerequisites: PTH 210A with a minimum grade of C and PTH 210B with a pass. Restricted to PTH majors.

233A-2 Physical Agents II Theory. Students will understand and describe the physiological effects, indications, and contraindications for electrotherapy, traction, and intermittent compression. Students will also explain the different theories and mechanics of pain. Co-requisite: PTH 233B. Restricted to PTH majors.

233B-1 Physical Agents II Application. Students will be able to demonstrate the safe and effective application of: compression units, traction, electrical currents, electrical muscle stimulation, and electrotherapy for pain and healing functions. Students will administer standardized questionnaires, graphs, behavioral scales or visual analog scales for pain. Co-requisite: PTH 233A. Restricted to PTH majors.

234-3 Physical Therapist Assistant Practicum II. Students will be able to perform the skills acquired in Practicum I as well as more complex interventions with selected patients. They will demonstrate skills in therapeutic exercise, application of physical agents, and record keeping. Course includes clinical experience. Prerequisites: PTH 107, 123A, 203, 204, and 212A with a minimum grade of C; PTH 123B and 212B with a pass.

299-1 to 14 Independent Study. Provides second-year students with the opportunity to develop a special program of study to fit a particular need not met by other offerings. Enrollment provides access to program and clinical resources. Each student will work under the supervision of a faculty or staff member. Restricted to PTH majors. Special approval needed from the instructor.

319-1 to 15 Occupational Internship. The students will be assigned to a University approved organization engaged in activities related to the student's academic and career objectives. The student will provide duties/services as assigned by the program director or supervising faculty member. Reports and assignments are required to be completed by the student. Restricted to PTH majors. Special approval needed from the instructor.

321A-4 Clinical Internship. Students will be able to apply previously learned theories and perform interventions of patient care through closely supervised internship experiences in two separate physical therapy facilities. First six week internship. Must be taken in A, B sequence. Co-requisite: PTH 322. Prerequisites: PTH 220A, 220B, 230A, 230B, 233A, 233B, 234 with a minimum grade of C. Restricted to PTH majors.

321B-4 Clinical Internship. Students will be able to apply previously learned theories and perform interventions of patient care through closely supervised internship experiences in two separate physical therapy facilities. Second six-week internship. Must be taken in A, B sequence. Co-requisite: PTH 322. Prerequisites: PTH 321A with a minimum grade of C. Restricted to PTH majors.

322-2 Clinical Seminar. Students will be able to discuss with the program director or faculty member their internship patient care experiences and case study or presentation. Students will also evaluate their clinical internship experience as well as their academic preparation at SIU. Co-requisites: PTH 321A and 321B. Prerequisites: PTH 220A, 220B, 230A, 230B, 233A, 233B, 234 with a minimum grade of C. Restricted to PTH majors.

350-1 to 32 Technical Careers Subjects. Students will be given the opportunity to develop in-depth competency and skill development through the exploration of innovative techniques and procedures used in the health care professions through various workshops, special short courses, and seminars. This course may be classified as an Independent Study. Restricted to PTH majors. Special approval needed from the instructor.

Physics (Department, Major, Courses, Faculty)

As the most basic of the physical sciences, physics can serve as the building block for many different careers. Using their understanding of physical principles, physicists have been at the forefront of many of the most exciting discoveries of the twentieth century and will continue to lead the way to many exciting discoveries in the future. They have contributed to a wide range of areas, including, but not limited to, biology, chemistry, communication, computer science, electronics, engineering, finance, managerial consulting, geophysics, medical physics, and transportation.

The SIU Carbondale Physics department focuses on applied physics. Therefore the department seeks to provide under-

graduate students with the skills necessary to apply their basic understanding of physics to real-world problems for which the solutions are of near-future concern. With this in mind, the physics department at SIU offers a first-rate undergraduate program with four different specializations in applied physics-biomedical physics, computational physics, materials and nanophysics, and the traditional physics curriculum. These specializations are targeted to high-demand areas of science and take advantage of the expertise of our faculty. Members of the physics faculty are involved in a wide range of physics research projects, both theoretical and experimental, including low temperature physics, surface physics, materials physics, superconductivity, magnetism, synchrotron radiation, infrared spectroscopy, solid-state physics, quantum mechanics, quantum computation, computational physics, and statistical mechanics. Participation in faculty research projects by students is strongly encouraged and can be very useful to students since it provides them with faculty mentors, and experience applying learned skills to real-world physics problem-solving.

Physics is an exciting field; its graduates are in high demand and enjoy high salaries and job security. Employment opportunities in physics are varied and abundant, from industrial research and development to teaching. Physicists are employed by all sectors of society, including health care, various corporations, government, and universities. Students who wish to learn more are encouraged to contact the physics department directly or visit the department web site at <http://www.physics.siu.edu>.

A minimum GPA of 2.0 in all physics and mathematics course work is needed in order for a student to receive a degree in Physics. In terms of credit hour requirements toward a degree in Physics, a course will be counted only once. A student may not repeat a course or its equivalent in which a grade of B or better was earned without the consent of the department.

**Bachelor of Science Degree in Physics, College of Science
Physics, Materials and Nanophysics, and Computational Physics**

<i>University Core Curriculum Requirements</i>	41
<i>College of Science Requirements</i>	9 ¹
Biological Science (not University Core)	3 ¹
Supportive Skills	6
Choose six hours from the following:	
One to two semesters of any foreign language offered at Southern Illinois University Carbondale	
English 290 or 291 or Management 202 (select only one)	
Computer Science 105, 201, 202, Engineering 222A,B (select one)	
<i>Requirements for Major in Physics</i>	70 ¹
Chemistry 200, 201, 202	5 ¹
Mathematics 150, 250, 251, 305, 221	17
Mathematics 405 or 406 or 407 or 409 or 450 or 455 or 475	3
Physics 100, 205A, 255A, 205B, 255B, 305, 355, 301, 310, 320, 420, 430, 440, 445, 450	37
Physics electives chosen from: PHYS 390, 424, 425, 428, 431, 432, 458, 470, 475, 490, CS 215, 220, 475, 476	0-10 ²
Total	120

¹Three of these hours count toward the 41 hours required for the core curriculum.

²This number depends on the physics degree concentration option, if chosen.

Physics Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
PHYS 100	1	-
PHYS 205A, 255A	-	4
MATH 150, 250	4	4
MATH 221	-	3
CHEM 200, 201, 202	5	-
ENGL 101, 102	3	3
UCOL 101	3	-
UCC Human Health	-	2
<i>Total</i>	16	16

SECOND YEAR	FALL	SPRING
PHYS 205B, 255B	4	-
PHYS 305, 355	-	4
PHYS 301, 310	3	3
MATH 251, 305	3	3
CMST 101, Supportive Skills	3	3
UCC Humanities	3	3
<i>Total</i>	16	16

THIRD YEAR	FALL	SPRING
PHYS 320, 420	3	3
PHYS 390	-	2
PHYS 428	-	3
PHYS 430	-	3
PHYS Elective (300-400)	3	-
MATH 407	3	-
Biological Science	3	3
Supportive Skills	3	-
<i>Total</i>	15	14

FOURTH YEAR	FALL	SPRING
PHYS 425	-	3
PHYS 440	3	-
PHYS 445	3	-
PHYS 450	-	3
PHYS 490	3	-
UCC Social Science	3	3
UCC Fine Arts, Multicultural	3	3
<i>Total</i>	15	12

Physics Specialization Options

Computational Physics 15
 For students interested in computational/numerical methods in physics.
 Required: CS 202, 215, 220, and PHYS 475
 Not required: PHYS 450

Materials and Nanophysics 6
 For students interested in applications of physics to nano-scale devices and materials.
 Required: PHYS 425 and 475

Biomedical Physics 11
 For students interested in the applications of physics in biology and medicine.
 Required: BIOL 200A, 200B, and PHYS 475
 Not required: MATH 221, PHYS 440, and PHYS 450

Computational Physics Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
PHYS 100	1	-
PHYS 205A, 255A	-	4
MATH 150, 250	4	4
MATH 221	-	3
CHEM 200, 201, 202	5	-
ENGL 101, 102	3	3
UCOL 101	3	-
UCC Human Health	-	2
<i>Total</i>	16	16

SECOND YEAR	FALL	SPRING
PHYS 205B, 255B	4	-
PHYS 305, 355	-	4
PHYS 301, 310	3	3
MATH 251	3	-
MATH 305	-	3
CS 202	4	-
CMST 101, Supportive Skills	3	3
UCC Humanities	-	3
<i>Total</i>	17	16

THIRD YEAR	FALL	SPRING
PHYS 320, 420	3	3
PHYS 430	-	3
CS 215, 220	4	4
Biological Science	3	3
UCC Social Science	3	3
<i>Total</i>	13	16

FOURTH YEAR	FALL	SPRING
PHYS 440	3	-
PHYS 445	3	-
PHYS 475	-	3
PHYS 490	2	-
MATH 475, 476	3	3
UCC Humanities	-	3
UCC Fine Arts, Multicultural	3	3
<i>Total</i>	14	12

Materials/Nanophysics Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
PHYS 100	1	-
PHYS 205A, 255A	-	4
MATH 150, 250	4	4
MATH 221	-	3
CHEM 200, 201, 202	5	-
ENGL 101, 102	3	3

UCOL 101	3	-
UCC Human Health	-	2
<i>Total</i>	16	16

SECOND YEAR	FALL	SPRING
PHYS 205B, 255B	4	-
PHYS 305, 355	-	4
PHYS 301, 310	3	3
MATH 251, 305	3	3
CMST 101, Supportive Skills	3	3
Core Humanities	3	3
<i>Total</i>	16	16

THIRD YEAR	FALL	SPRING
PHYS 320, 420	3	3
PHYS 428	-	3
PHYS 430	-	3
MATH Elective	3	-
UCC Social Science	3	3
Biological Science	3	3
Supportive Skills	3	-
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
PHYS 425	-	3
PHYS 440	3	-
PHYS 445	3	-
PHYS 450	-	3
PHYS 475	-	3
PHYS 490	2	-
PHYS Elective	3	-
UCC Fine Arts, Multicultural	3	3
<i>Total</i>	14	12

**Bachelor of Science Degree in Physics, College of Science
 Biomedical Physics**

<i>University Core Curriculum Requirements</i>	41
<i>College of Science Requirements</i>	9 ¹
Biological Science (not University Core)	3 ¹
Supportive Skills	6

Choose six hours from the following:
 One to two semesters of any foreign language offered at Southern Illinois University Carbondale
 English 290 or 291 or Management 202 (select only one)
 Computer Science 105, 201, 202, Engineering 222 (select one)

<i>Requirements for Major in Biomedical Physics</i>	70 ¹
Biology 200A, 200B	8
Chemistry 200, 201, 202, 210, 211, 212	10 ¹
Mathematics 150, 250, 251, 305	14
Physics 100, 205A, 255A, 205B, 255B, 305, 355, 301, 310, 320, 420, 430, 445	31
Physics electives chosen from: PHYS 390, 424, 425, 428, 431, 432, 458, 475, 470, 490, CHEM 340, 341, 350, 351, 451A, 451B, MATH 221, and MICR 302	7
<i>Total</i>	120

¹Three of these hours count toward the 41 hours required for the core curriculum.

Biomedical Physics Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
PHYS 100	1	-
PHYS 205A, 255A	-	4
MATH 150, 250	4	4
CHEM 200, 201, 202.....	5	-
CHEM 210, 211, 212.....	-	5
ENGL 101, 102.....	3	3
UCOL 101.....	3	-
<i>Total</i>	16	16

SECOND YEAR	FALL	SPRING
PHYS 205B, 255B	4	-
PHYS 305, 355	-	4
PHYS 301, 310	3	3
MATH 251	3	-
MATH 305	-	3
CMST 101, Supportive Skills.....	3	3
UCC Humanities.....	3	-
UCC Human Health	-	2
<i>Total</i>	16	15

THIRD YEAR	FALL	SPRING
PHYS 320, 420	3	3
PHYS 430	-	3
CHEM 340, 341	5	-
CHEM 350, 351.....	-	5
BIOL 200A, 200B.....	4	4
UCC Humanities.....	3	-
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
PHYS 445, 475	3	3
PHYS Elective (300-400)	-	3
MICR 302	-	3
UCC Fine Arts, Multicultural.....	3	3
UCC Social Science	3	3
Supportive Skills	3	-
<i>Total</i>	12	15

Physics Minor

A minor in physics requires 17 hours and must include Physics 203A,B, and 253A,B, or 205A,B, and 255A,B, as well as 305 and 355 and 5 hours from any 300- or 400-level physics course except Physics 470.

Courses (PHYS)

100-1 Undergraduate Seminar. Lectures and discussions by students, faculty and invited guests on topics in physics. Will include discussions on employment opportunities, graduate school admission and undergraduate research. Graded: Pass/Fail.

101-3 Physics that Changed the World. (University Core

Curriculum) [IAI course: P1 901L] This course will survey some of the most important developments in physics which have occurred over the past two millennia. Along the way, students will be introduced to fundamental physical principles such as energy conservation. Topics will include early astronomy, laws of motion, electricity, magnetism, waves, quantum mechanics and relatively. Lab fee: \$20.

102-1 Everybody's Einstein. A non-mathematical presentation of Einstein's relativity theories on a popular level. No prerequisite.

103-3 Astronomy. (University Core Curriculum) Fundamental concepts of the physical sciences are used in the exploration of the observable universe. Studies include the history and techniques of astronomy, planets, stars, black holes, galaxies and cosmology. Lectures are supplemented by outdoor astronomical observations and/or indoor laboratory exercises. Lab fee: \$20.

201-1 Introduction to Physics. Vectors (definitions, operations, etc.). Kinematics in one and two dimensions (including projectile motion). Newton's Laws of Motion. One hour of lecture and one hour of problem discussion per week. This course will be required for students wishing to enroll in PHYS 205A if they either: - have a score in a Physics placement test indicative of their need for having a course in these topics; or - if they have had no previous Physics classes.

203A-3 College Physics. (Advanced University Core Curriculum course) [IAI Course: P1 900] Mechanics, heat, and sound. Prerequisite: completing with grade C or better MATH 109 or 111 or 125 or 140 or 150. PHYS 203 A or B with PHYS 253 satisfies a Science Group I Core Curriculum requirement in lieu of PHYS 101 or 103.

203B-3 College Physics. (Advanced University Core Curriculum course) Electricity, magnetism, light, aspects of modern physics. Prerequisite: PHYS 203A. PHYS 203 A or B with PHYS 253 satisfies a Science Group I Core Curriculum requirement in lieu of PHYS 101 or 103.

205A-3 University Physics. (Advanced University Core Curriculum course) [IAI course: P2 900] Designed to meet requirements of physics, engineering and chemistry majors. Mechanics, heat and waves. Prerequisites: MATH 150 with grade of C or better. With PHYS 255A, satisfies the UCC Science Group I requirement instead of PHYS 101 or 103. Not for graduate credit.

205B-3 University Physics. (Advanced University Core Curriculum course) Designed to meet requirements of physics, engineering and chemistry majors. Electricity, magnetism and optics. Prerequisites: PHYS 205A and MATH 250 each with a grade of C or better. With PHYS 255B satisfies the UCC Science Group I requirement instead of PHYS 101 or 103. Not for graduate credit.

253A-1 College Physics Laboratory. (Advanced University Core Curriculum course) [IAI Course: P1 900L] One two-hour laboratory per week. Prerequisite: completion of or concurrent enrollment in 203A,B respectively; if the corresponding lecture course is dropped, the laboratory course must also be dropped. With 203A or B, satisfies the University Core Curriculum Science Group I requirement in lieu of PHYS 101 or 103. Lab fee: \$25.

253B-1 College Physics Laboratory. (Advanced University Core Curriculum course) [IAI Course: P1 900L] One two-hour

laboratory per week. Prerequisite: completion of or concurrent enrollment in 203A,B respectively; if the corresponding lecture course is dropped, the laboratory course must also be dropped. With 203A or B, satisfies the University Core Curriculum Science Group I requirement in lieu of PHYS 101 or 103. Lab fee: \$25.

255A-1 University Physics Laboratory. (Advanced University Core Curriculum course) [IAI Course: P2 900L] One two-hour laboratory per week. Prerequisite: completion of or concurrent enrollment in 205A,B respectively; if the corresponding lecture course is dropped, the laboratory course must also be dropped. With 205A or B, satisfies the University Core Curriculum Group I requirement in lieu of PHYS 101, 103. Lab fee: \$25.

255B-1 University Physics Laboratory. (Advanced University Core Curriculum course) One two-hour laboratory per week. Prerequisite: completion of or concurrent enrollment in 205A,B respectively; if the corresponding lecture course is dropped, the laboratory course must also be dropped. With 205A or B, satisfies the University Core Curriculum Group I requirement in lieu of PHYS 101, 103. Lab fee: \$25.

301-3 Theoretical Methods in Physics. Introduction to theoretical methods of general usefulness in intermediate and advanced undergraduate physics, with particular emphasis on applications of vector algebra and calculus, complex numbers, matrices, ordinary differential equations and Fourier series to selected topics in physics. Required of all physics majors prior to or concurrently taking 310 or 320. Prerequisite: PHYS 205A, MATH 250 with a grade of C or better.

302-3 Astronomy - Honors. Current knowledge of the universe and the gathering of that knowledge. Includes properties of the solar system and theories of its origin, the structure and evolution of stars. Supplemented by occasional hours of evening observation. Prerequisite: one of PHYS 203A, 205A, plus MATH 111, or consent of instructor.

305-3 Modern Physics. (Advanced University Core Curriculum course) The physics of the twentieth century: special relativity (experimental basis; time dilation, length contraction, Lorentz transformations; addition of velocities; relativistic momentum, mass and energy). Quantum mechanics (wave-particle duality, early quantum theory, tunneling phenomena, the Schrodinger equation in one and in three dimensions). Applications of quantum theory to: atomic and molecular structure; lasers, condensed matter physics; nuclear and particle physics. Prerequisites: PHYS 205A and B with a grade of C or above, or PHYS 203A and PHYS 203B both with a grade of C or above.

310-3 Classical Mechanics. Review of Newtonian mechanics of particles and rigid bodies, and Lagrangian and Hamiltonian dynamics. Prerequisite: PHYS 301 or MATH 305 or concurrent enrollment, PHYS 205A, and PHYS 205B with grade of C or better.

320-3 Electricity and Magnetism I. The theory of electric and magnetic fields; electrostatic fields in vacuum and in material media, special methods for the solution of electrostatics problems, energy, and force relations in electrostatic fields; stationary electric fields in conducting media, electric currents, magnetic fields, magnetic properties of matter. Prerequisite: PHYS 301 or MATH 305 or concurrent enrollment, and PHYS 205A,B and MATH 251 with grade of C or better.

328-2 Light. Light propagation, reflection, refraction, interference, diffraction, polarization, and optical instruments. Prerequisite: PHYS 203B or 205B with grade of C or better.

345-3 Thermodynamics and Statistical Physics. Thermal behavior of macroscopic matter, the laws of thermodynamics; basis for thermodynamics in statistical mechanics; basic methods and applications of classical and quantum statistical mechanics. Elementary kinetic theory of matter. Prerequisite: PHYS 301, MATH 251 with grade of C or better.

355-1 Modern Physics Laboratory. A laboratory class which meets for a two hour session once a week. The laboratory experiments include several of the seminal experimental discoveries that helped establish quantum theory (spectral lines, the charge to mass ratio for the electron, the photoelectric effect, the Franck-Hertz experiment, radioactivity, superconductivity, etc.). Prerequisites: PHYS 205A and PHYS 205B or PHYS 203A and PHYS 203B with a grade of C or better. Lab fee: \$25.

390-1 to 4 Undergraduate Research. An introduction to investigations in physics. Individual work under the supervision of a physics faculty member on a special topic in physics. Not for graduate credit. Special approval needed from the instructor.

420-3 Electricity and Magnetism II. Induced electromotive force, quasisteady currents and fields, Maxwell's equations, electromagnetic waves and radiation, with applications. Prerequisite: PHYS 320 with grade of C or better.

424-4 Electronics for Scientists. Coordinated two-hour lecture and four-hour laboratory study of electronics. Emphasis is on overall modern electronics and its applications in the experimental research laboratory setting. Topics include DC and AC circuit theory, measurement techniques, semiconductor active devices, operational amplifiers and feedback, digital circuits, Boolean algebra, microprocessors and large scale integration, digital to analog/analog to digital conversion, and data acquisition. Prerequisite: PHYS 203B or 205B and MATH 111 with a grade of C or better.

425-3 Solid State Physics I. Structure of a crystalline solid; lattice vibrations and thermal properties; electrons in metals; band theory; electrons and holes in semiconductors; optoelectronic phenomena in solids; dielectric and magnetic properties; superconductivity. Prerequisite: PHYS 310, 320, and 430 with grade of C or better.

428-3 Modern Optics and Lasers. Properties of electromagnetic waves in space and media, polarization and interference phenomena and devices, electro- and magneto-optic effects, optical gain, and lasers. Prerequisite: PHYS 420 with grade of C or better.

430-3 Quantum Mechanics I. An introduction to quantum phenomena, wells, barriers, Hydrogenic atoms, angular momentum and identical particles. Prerequisite: PHYS 305, 310, and 320 with a grade of C or better. Prior or concurrent enrollment in PHYS 420 is desirable.

431-3 Atomic and Molecular Physics I. Atomic spectra and structure; molecular spectra and structure. Prerequisite: PHYS 430 with a grade of C or better.

432-3 Nuclear Physics I. Basic nuclear properties and structure; radioactivity, nuclear excitation, and reactions, nuclear forces; fission and fusion. Prerequisite: PHYS 430 with grade of C or better.

440-3 Applications of Quantum Mechanics. Applications of

quantum mechanics to include time-independent and time-dependent perturbation theory, variational methods, introduction to solid-state physics and materials. Prerequisite: PHYS 430 with grade of C or better.

445-3 Thermodynamics and Statistical Mechanics. Laws of thermodynamics; Principles and Applications of Classical and Quantum Statistical Mechanics; Introduction to Phase Transitions. Prerequisites: PHYS 305 and PHYS 301 both with a grade of C or better; MATH 251 with a grade of C or better.

450-3 Advanced Laboratory Techniques. Introduces students to experimental research and encourages them to develop and carry out experiments. Prerequisite: PHYS 305 and PHYS 355 with a grade of C or better. Lab fee: \$50.

458-2 Laser and Optical Physics Laboratory. Properties of laser beams and resonators, fluorescence and two photon spectroscopy, diffraction, Fourier transformation and frequency filtering, electro- and magneto-optic modulation, fiber propagation and related experiments. Prerequisite: PHYS 428 with grade of C or better.

470-1 to 3 Special Projects. Each student chooses or is assigned a definite investigative project or topic. Prerequisite: PHYS 310, 320 or consent of instructor.

475-3 Special Topics in Physics. These courses are advanced special topics in physics designed to enable undergraduate and graduate students to become well-versed in a particular and current research area of physics with the intention of preparing them for future research and/or industrial applications. They are offered as the need arises and interest and time permit. Students are required to give presentations. Special approval needed from the instructor.

490-1 to 4 Advanced Undergraduate Research. Advanced undergraduate research under the supervision of a physics faculty member. A presentation of the results will be made at the end of the term. Not for graduate credit. Prerequisite: PHYS 310, 320 or consent of instructor and undergraduate advisor.

Physics Faculty

Ali, Naushad, Professor and *Chair*, Ph.D., University of Alberta, 1984.

Byrd, Mark, Professor, University of Texas, Austin, 1999.

Chitambar, Eric, Assistant Professor, Ph.D., University of Michigan, Ann Arbor, 2010.

Cutnell, John D., Professor, Emeritus, Ph.D., University of Wisconsin, 1967.

Gruber, Bruno J., Professor, Emeritus, Ph.D., University of Vienna, Austria, 1962.

Henneberger, Walter C., Professor, Emeritus, Ph.D., Göttingen University, Germany, 1959.

Jayasekera, Thushari, Assistant Professor, Ph.D., University of Oklahoma, Norman, 1999.

Johnson, Kenneth W., Professor, Emeritus, Ph.D., Ohio State University, 1967.

Malhotra, Vivak, Professor, *Emeritus*, Ph.D., Indian Institute of Technology, Kanpur, 1978.

Malik, F. Bary, Professor, *Emeritus*, Ph.D., Göttingen University, West Germany, 1958.

Masden, J. Thomas, Associate Professor, *Emeritus*, Ph.D., Purdue University, 1983.

Mazumdar, Dipanjan, Assistant Professor, Ph.D., Brown University, 2008.

Migone, Aldo, Professor, Ph.D., Pennsylvania State University, 1984.

Sanders, Frank C., Associate Professor, Emeritus, Ph.D., University of Texas, 1968.

Saporoschenko, Mykola, Professor, *Emeritus*, Ph.D., Washington University, 1958.

Silbert, Leonardo, Associate Professor, Ph.D., University of Cambridge, England, 1998.

Talapatra, Saikat, Associate Professor, Ph.D., Southern Illinois University, 2002.

Physiology (Department, Major, Courses, Faculty)

The Department of Physiology offers training in mammalian, cellular and comparative physiology, pharmacology, and human anatomy. Students majoring in physiology are encouraged to gain research experience under faculty supervision. The undergraduate major provides general rather than specialized training in physiology. To become a professional physiologist usually requires the completion of an advanced degree in the field. An undergraduate major in physiology would provide an excellent foundation for those planning a career in teaching or research or a medical field such as medicine, dentistry, veterinary science, nursing or medical technology. Students considering a major in Physiology should discuss their program with the Program Director for Undergraduate Studies in Physiology. A grade of C or better is required in every Physiology course used to satisfy departmental requirements for a degree in Physiology. A student cannot repeat a course or its equivalent in which a grade of B or better was earned without the consent of the department.

Bachelor of Science in Physiology Degree, College of Science

<i>University Core Curriculum Requirements</i>	41 ¹
<i>College of Science Requirements</i>	6
Supportive Skills to include foreign language (two semesters at 200 level) ² ; or two from the following: English 290 or 291 or 391 or 491; Plant Biology 360 or Mathematics 282; Computer Science 200, 201	
<i>Requirements for Major in Physiology</i>	(11) +58 ¹
Physiology 310	5
Physiology 410A,B	8
Physiology electives (11 hours at the 300 or 400-level)	(2) + 9 ¹
Biology 200A	(3) + 1 ¹
Biology 305, 306, 308, 309 (any two)	6
Chemistry 200, 201, 210, 211, 340, 341, 342, 343, 350, 351	(3) + 20 ¹
Physics 203A,B; 253A,B	8
Mathematics 150 ³	(3) + 1 ^{1,3}
<i>Electives</i>	15
<i>Total</i>	120

¹Total of eleven hours of biology, chemistry, mathematics and physiology elective course work are accounted for in the 41-hour Core Curriculum requirement.

²If two years of a foreign language are taken to complete this requirement,

the total hours will be 16. The elective hours are reduced by 10 hours.

³Prerequisite is Mathematics 111. The elective hours are reduced by 4 hours for students who place into a course lower than calculus.

Physiology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
CHEM 200, 201	4	-
CHEM 210, 211	-	4
ENGL 101, 102	3	3
MATH 108, 109	3	3
Social Science	3	3
UCOL 101, Elective	3	2
<i>Total</i>	16	15

SECOND YEAR	FALL	SPRING
BIOL 200A, 300-level	4	3
MATH 150, PHSL Elective	4	3
PHSL 492	-	1
CHEM 340, 341	5	-
CHEM 342, 343	-	5
CMST 101, Humanities	3	3
<i>Total</i>	16	15

THIRD YEAR	FALL	SPRING
PHYS 203B, 253B	-	4
PHYS 203A, 253A	4	-
Fine Arts, CHEM 350, 351	3	5
Humanities, Multicultural	3	3
PHSL 310, 301	5	4
<i>Total</i>	15	16

FOURTH YEAR	FALL	SPRING
BIOL 300-level	3	-
PHSL 410A, B	4	4
PHSL 492, PHSL Elective	1	3
Supportive Skill	3	3
Electives	3	3
<i>Total</i>	14	13

Physiology Minor

A minor in physiology requires completion, with at least a C grade, of Physiology 410 (8 hours) and 8 hours of 300 or 400-level courses offered by the department.

Junior-Senior Honors Program

Juniors who have shown outstanding ability in biology courses and related subjects in their freshman and sophomore years may apply for acceptance into the honors program. Honors students do independent study in the physiological sciences (Physiology 491) during their junior and senior years.

Courses (PHSL)

201-3 Human Physiology. (University Core Curriculum) [IAI Course: L1 904] A course which relates the normal function of the human body to the disruptions which occur in a variety of disease states. Three lecture hours per week. Not open to stu-

dents who have taken 310. With 208 (if not used for health) satisfies University Core Curriculum Science Group II requirement.

208-1 Laboratory Experiences in Physiology. (Advanced University Core Curriculum course) [IAI Course: L1 904L] Laboratory course which provides experiences with small animal experimentation and measurements made on the human subject. One two-hour laboratory per week. Prerequisite: completion of, or current enrollment in, PHSL 201. With 201 (if not used for health) satisfies the University Core Curriculum Science Group II requirement. Lab fee: \$20.

240A-4 Anatomy & Physiology for Nursing. A-B Sequence. Functional architecture of the human body. Tissues, skeletal, muscular and nervous systems. Three hour lectures and one three-hour laboratory per week. Not for major credit. Prerequisites: ZOOL 118 and CHEM 140A. Restricted to Pre-Nursing and Nursing majors. Lab fee: \$25.

240B-4 Anatomy & Physiology for Nursing. A-B Sequence. Functional architecture of the human body. Continuation of A. Endocrine, Circulatory, Respiratory, Digestive and Urinary systems. Three hours lectures and one three-hour laboratory per week. Not for major credit. Prerequisites: PHSL 240A. Restricted to Pre-Nursing and Nursing majors. Lab fee: \$25.

257-1 to 6 Concurrent Work Experience. Under exceptional circumstances, and with prior approval of the departmental chair, credit may be granted for practical experience or other work directly related to physiology. Mandatory Pass/Fail.

258-1 to 6 Previous Work Experience. Under exceptional circumstances, and after petition to the departmental chair, credit may be granted for practical experience or other work directly related to physiology. Mandatory Pass/Fail.

259-2 to 8 Occupational Education Credit. Under special circumstances, advanced training in a paramedical or other field directly related to physiology can be used as a basis for granting credit in physiology. Such credit is sought by petition to the chair of department and requires approval of dean of the College of Science.

301-4 Basic Human Anatomy with Laboratory. Lectures, demonstrations and observations of the prosected body, plus experiences in the anatomy laboratory. Course is designed for students in nursing, mortuary science, biological science, and related disciplines. Three lecture hours and one two-hour laboratory per week. Lab fee: \$20.

310-5 Principles of Physiology. (Advanced University Core Curriculum course) Beginning course in human physiology designed for majors in physiology and other biological sciences, and recommended to pre-medical and other students considering biological sciences and health professions. Three lectures per week, one hour discussion and one two-hour laboratory. Prerequisite: BIOL 200A; CHEM 200 & 210. Satisfies the University Core Curriculum Human Health requirement in lieu of 201. Lab fee: \$20.

320-3 Reproduction and Sexuality. (Same as WGSS 321) Comprehensive course examining the physiological basis of mammalian reproduction and the behavioral aspects of sexuality. Human sexuality and reproductive function is the primary focus. Topics include hormonal control, anatomy, ovulation, sexual response and behavior, fertilization, pregnancy and parturition. Human specific topics include reproductive medicine,

STDs, paraphilias, birth control and infertility. Prerequisite: BIOL 200A.

401A-5 Advanced Human Anatomy with Laboratory. A-B sequence. Laboratory dissection of the human body with lectures as needed. Primarily for students majoring in physiology, biological sciences, anthropology or pre-medical fields. Prerequisite: PHSL 301. Enrollment by consent of instructor. Lab fee: \$20.

401B-5 Advanced Human Anatomy with Laboratory. A-B sequence. Laboratory dissection of the human body with lectures as needed. Primarily for students majoring in physiology, biological sciences, anthropology or pre-medical fields. Prerequisite: PHSL 301. Enrollment by consent of instructor. Lab fee: \$20.

410A-4 Mammalian Physiology. Physical and chemical organization and function in mammals, with emphasis on the human. Physiology of blood and circulation, respiration, digestion, metabolism, excretion, endocrines, sensory organs, nervous systems, muscle and reproduction. Primary course for all students majoring in physiology or related sciences. Four lectures per week. May be taken in any sequence. Prerequisite: CHEM 210, 211; PHYS 203B AND PHYS 253B OR PHYS 205B AND PHYS 255B; PHSL 310.

410B-4 Mammalian Physiology. Physical and chemical organization and function in mammals, with emphasis on the human. Physiology of blood and circulation, respiration, digestion, metabolism, excretion, endocrines, sensory organs, nervous systems, muscle and reproduction. Primary course for all students majoring in physiology or related sciences. Four lectures per week. May be taken in any sequence. Prerequisite: CHEM 210, 211; PHYS 203B AND PHYS 253B OR PHYS 205B AND PHYS 255B; PHSL 310.

420A-3 Principles of Pharmacology. Examines basic principles of pharmacology (pharmacokinetics) and the action of various classes of drugs on living organisms. Drug classes covered include those affecting most organ systems of the human body, such as the nervous, cardiovascular, gastrointestinal and renal systems as well as drugs used for antibiotic and cancer chemotherapy. Three lectures per week. Prerequisite: PHSL 310 or 410, CHEM 340 and 342 (or equivalent).

420B-3 Principles of Pharmacology. Examines basic principles of pharmacology (pharmacokinetics) and the action of various classes of drugs on living organisms. Drug classes covered include those affecting most organ systems of the human body, such as the nervous, cardiovascular, gastrointestinal and renal systems as well as drugs used for antibiotic and cancer chemotherapy. Three lectures per week. Prerequisite: PHSL 310 or 410, CHEM 340 and 342 (or equivalent).

426-3 Comparative Endocrinology. (Same as ANS 426, ZOO 426) Comparison of mechanisms influencing hormone release, hormone biosynthesis, and the effects of hormones on target tissues, including mechanisms of transport, receptor kinetics, and signal transduction. Prerequisites: PHSL 310 or ANS 331 or ZOO 220 with a grade of C.

430-3 Cellular and Molecular Physiology. This course will examine the molecular and cellular aspects of physiology, with special emphasis on the experiments used to examine the regulation of gene expression, protein activities, and cellular functions in eukaryotes. Topics include: mechanisms regulating

gene expression, signaling pathways, cancer biology, and the use of experimental model organisms. Required of Physiology majors. Prerequisite: BIOL 200 A & B or CHEM 350 & 351.

433-3 Comparative Animal Physiology. (Same as ZOO 433) Variations of physiological processes in animal phyla, comparison with human physiology, and review of basic physiology principles and comparative aspects of mechanism and function. Prerequisites: BIOL 200A; BIOL 200B or PHSL 310 with grades of C or better.

434-3 Environmental Physiology. (Same as ZOO 434) Physiological adaptations to environmental conditions in animals and humans. Lab/lecture course explores molecular, hormonal, immunological, developmental and phenotypic processes mediating responses to factors such as stress, disease, contaminants, nutrition and life history trade-offs. Prerequisite: BIOL 307 or PHSL 310 or PHSL 433 or ZOO 433 with a grade of C or better. Laboratory/field trip fee: \$20.

440A-3 Biophysics. Biomathematics, biomechanics and bio-transport. Three lectures per week. Prerequisites: MATH 141 or 150; PHSL 310; PHYS 203 A&B and 253 A&B or PHYS 205 A&B and 255 A&B. May be taken in B,A sequence with consent of instructor.

440B-3 Biophysics. Bioelectrics and bio-optics applied to physiological problems. Three lectures per week. Prerequisites: MATH 141 or 150; PHSL 310; PHYS 203 A&B and 253 A&B or PHYS 205 A&B and 255 A&B. May be taken in B,A sequence with consent of instructor.

450-3 Advanced Human Sexuality. (Same as WGSS 449) Advanced, comprehensive course intended to supplement and expand the critical examination of topics covered in PHSL 320, Reproduction and Sexuality. The objectives of this class are to examine the physiological and behavioral basis of human reproduction and sexuality. Examining how humans reproduce from a physiological perspective including all aberrations and clinically relevant dysfunctions, as well as, the spectrum of human sexual behaviors including typical and atypical sexual behavior, paraphilias and diversity of human relationships. Prerequisite: PHSL 320.

460-2 Electron Microscopy. Lecture course designed to introduce the student to the theory and principles of electron microscopy. Two lecture hours per week. Restricted to senior standing or permission of instructor.

462-3 Biomedical Instrumentation. (Same as ECE 462) Diagnostic and therapeutic modalities related to engineering. Cardiovascular, neural, sensory and respiratory instrumentation. Special approval needed from the instructor.

470-3 Biological Clocks. Study of the temporal aspects of diverse physiological and behavioral functions which possess diurnal and sectional periodicity. Species covered will include many eukaryotic organisms including plants, but will mainly stress mammals. Oscillations in sleep-wake cycle, locomotion, reproduction, hormonal secretion and numerous other processes will be explored. In addition, the effects of biological clocks in humans and the effect of jet lag and depression will be examined. Prerequisite: PHSL 310.

490-1 Senior Seminar. Readings, writings, presentations and discussions of current topics in physiology. One hour per week. Not for graduate credit. Restricted to senior standing or consent of instructor.

491-3 to 8 Independent Research for Honors. Supervised readings and laboratory research in physiology directed by a member of the physiology faculty. Undergraduate honors students only. By special arrangement with the instructor in the physiology department with whom the student wishes to work.

492-1 to 8 Special Problems in Physiology. Supervised readings and laboratory research in physiology directed by a member of the physiology faculty. Open to undergraduate students only. By special arrangement with the instructor in the physiology department with whom the student wishes to work. No more than 3 hours may be counted as electives towards the major in physiology.

Physiology Faculty

Arbogast, Lydia A., Professor, Ph.D., Indiana University, 1988.

Bany, Brent, Associate Professor, Ph.D., University of Western Ontario, 1997.

Bartke, Andrzej, Professor, *Emeritus*, Ph.D., University of Kansas, 1965.

Browning, Ronald A., Professor, *Emeritus*, Ph.D., University of Illinois Medical Center, Chicago, 1971.

Cai, Xiang, Assistant Professor, Ph.D., Sun Yat-Sen University of Medical Sciences, China, 2000.

Collard, Michael W., Associate Professor, *Emeritus*, Ph.D., Washington State University, 1987.

Dunagan, Tommy T., Professor, *Emeritus*, Ph.D., Purdue University, 1960.

Ellsworth, Buffy S., Assistant Professor, Ph.D., Colorado State University, 2002.

Ferraro, James S., Associate Professor, Ph.D., The Chicago Medical School, 1984.

Hales, Dale B., Professor and *Chair*, Ph.D., University of Colorado Health Sciences Center, 1983.

Hales, Karen H., Assistant Professor, Ph. D., University of Colorado Health Sciences Center, 1985.

Hayashi, Kanako, Assistant Professor, Ph.D., Iwate University, Japan, 2002.

Huggenvik, Jodi I., Associate Professor, *Emerita*, Ph.D., Washington State University, 1985.

Kang, Song Ok, Instructor, M.S., University of Illinois, 2002.

Macklin, Lauren N., Instructor, M.S., Southern Illinois University Carbondale, 2011.

MacLean, James A., Assistant Professor, Ph.D., University of Missouri, 2000.

Murphy, Laura L., Professor, *Emerita*, Ph.D., Medical College of Georgia, 1983.

Narayan, Prema, Associate Professor, Ph.D., University of Minnesota, 1984.

Patrylo, Peter, Associate Professor, Ph.D., Rutgers University/UMDNJ-RWJMS, 1991.

Raymer, Angela M., Instructor, M.S., Southern Illinois University Carbondale, 1999.

Strader, April, Associate Professor Ph.D., University of Wisconsin, 2002.

Zaczek, Denise J., Instructor, Ph.D., Southern Illinois University, 2003.

Zheng, Zhengui (Patrick), Assistant Professor, Ph.D., Shanghai University of Traditional Chinese Medicine, 1997.

Plant Biology (Department, Major, Courses, Faculty)

Plant Biology is the study of all aspects of plants including their diversity, anatomy, physiology, biochemistry, genetics, evolution, conservation, and ecology. The need for botanical expertise is rapidly increasing in response to habitat loss, species extinctions, invasive species, and global climate change. Additionally, plants provide us with food, shelter, medicines, clothing, and many other products. Thus the demand for plant biologists will never diminish. A degree in Plant Biology will provide a strong foundation for a wide range of careers in plant biology, agriculture, conservation, environmental sciences, health-related fields, and other life science disciplines.

The Department of Plant Biology is one of only two such programs in Illinois. Our undergraduate curriculum has a number of features that insure our graduates' success 1) a flexible undergraduate curriculum that includes both B.A. and B.S. degrees, 2) practical experience and training in modern skills and research techniques, 3) a high degree of personalized faculty mentoring, 4) an atmosphere where undergraduate, graduate students, and faculty interact, and 5) ample opportunities for undergraduates to participate in outreach and service.

Bachelor of Arts in Plant Biology Degree, College of Science

University Core Curriculum Requirements 41¹

College of Science Academic Requirements (3) + 7-9
(To include UCOL 101 and PLB 300I)

Supportive Skills 6-8

Mathematics 108 and 109 or 111 (or its equivalent)

or 141 4-6

Requirements for Major in Plant Biology (6)+ 52

Biology 307 3

Plant Biology 200, 300, 304, 320, 360, 480 20

Chemistry 200, 201, 202 plus one additional semester of physical science with laboratory at the 200-level or above from Chemistry, Geography, or Physics 10

Disciplinary Electives 24

Disciplinary electives can be chosen from Plant Biology, Biological Sciences, Zoology, Forestry, or Geography. Courses from other departments can be substituted with the permission of the Plant Biology Chair. A minimum of 24 credit hours must be at the 300-level and above, and at least four of the courses selected must have a formal laboratory component.

Disciplinary Electives can be individualized in one of two ways depending upon the goals and interests of the individual student. Individualized options, and any changes thereof, must be arranged with the student's Plant Biology undergraduate advisor. Options available are:

1. *General Plant Biology.* Students desiring a diverse background in Plant Biology are required to have at least one course from each of the three specializations described below.

2. *Specializations.* Students wishing to study specific topics in more detail may specialize in one of three areas.

Conservation and Biodiversity

This specialization is intended for students who are seeking an undergraduate program that provides foundational Knowledge and technical skills to prepare them for careers

with industries, private foundations or state and federal agencies responsible for environmental stewardship, conservation of biodiversity, and sustainability. The curriculum provides students the flexibility to select courses from multiple disciplines to assemble a customized base of knowledge and skills.

Requires PLB 451, at least one credit of PLB 493A, B, or C, and ZOOL 410. Requires a minimum of 13 credit hours of the total disciplinary electives to be chosen from the following courses: PLB 439, 444; FOR 202, 341, 351, 413, 415, 423, 451; GEOG 401, 406, 412, 428, 471; ZOOL 444.

Ecology

Requires a minimum 12-13 credit hours of the total disciplinary electives to be chosen from the following courses: PLB 410, 416, 435, 439, 440, 443, 444, 445, 447, 450, 452.

Molecular and Biochemical Physiology

Requires PLB 419, plus a minimum of 9 credit hours of the total disciplinary electives to be chosen from the following courses: PLB 400, 425, 427, 433, 438, 471, 475.

<i>Electives</i>	18-20
<i>Total</i>	120

¹The 41-hour requirement may be reduced by taking College of Science or major requirements that are approved substitutes for University Core Curriculum courses.

Bachelor of Arts in Plant Biology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
CHEM 200, 201, 202; 210, 211, 212.....	5	5
ENGL 101, 102.....	3	3
MATH 108, 109.....	3	3
PLB 200, Disciplinary Elective	4	3
UCOL 101S.....	3	-
<i>Total</i>	18	14

SECOND YEAR	FALL	SPRING
PLB 301L.....	-	3
BIOL 307, Social Science.....	3	3
PLB 320	4	-
CMST 101, Fine Arts	3	3
Social Science	3	-
General Electives	3	6
<i>Total</i>	16	15

THIRD YEAR	FALL	SPRING
Disciplinary Electives	4	7
Humanities.....	6	-
PLB 300, 304	4	4
Supportive Skill, PLB 360	3	3
BIOL 304	-	3
<i>Total</i>	17	14

FOURTH YEAR	FALL	SPRING
Multicultural.....	3	-
PLB 480	-	1

Disciplinary Electives	6	6
General Electives	4	3
Supportive Skills	-	3
<i>Total</i>	13	13

Bachelor of Science in Plant Biology Degree, College of Science

<i>University Core Curriculum Requirements</i>	41 ¹
<i>College of Science Academic Requirements</i>	(3) + 7-9
(To include UCOL 101)	

Supportive Skills	6-8
Mathematics 108 and 109, or 111 (or its equivalent)	4-6
<i>Requirements for Major in Plant Biology</i>	(6)+ 63
Biology 200A, 200B, and three of the following: BIOL 304, 305, 306, 307	17
Plant Biology 300, 304, 320, 360, 480	16
Chemistry and/or Physics	18-20
Two years with laboratory at the 200-level or above.	
Mathematics 141 or approved substitution	4
Disciplinary Electives	16

Plant Biology Electives can be individualized depending upon the goals and interests of the individual student. Individualized options, and any changes thereof, must be arranged with the student's Plant Biology undergraduate advisor. Options available are:

1. *General Plant Biology.* Students desiring a diverse background in Plant Biology are required to have 16 elective hours, with at least one course from each of the three specializations listed below.
2. *Specializations.* Students wishing to study specific topics in more detail may specialize in one of three areas. Approved courses from other departments may be taken to fulfill specialization requirements.

Ecology

Requires BIOL 304, 307 and a minimum of 16 credit hours with 12-13 credit hours selected from: Plant Biology 410, 416, 435, 439, 440, 443, 444, 445, 447, 450, 452, or approved substitution and 3-4 credit hours from one of the other specializations.

Molecular and Biochemical Physiology

Requires BIOL 305, 306 and PLB 419, a minimum of 9-10 credit hours selected from PLB 400, 425, 427, 438, 471, 475, 476, or approved substitution and 3-4 credit hours from one of the other specializations.

Systematics and Biodiversity

Requires BIOL 304, 307 and PLB 449, a minimum of 9-10 credit hours from PLB 400, 405, 406, 409, 415, 438, 439, 447, 450, 451, or approved substitution and 3-4 credit hours from one of the other specializations.

<i>General Electives</i>	6-8
<i>Total</i>	121

¹The 41-hour requirement may be reduced by taking College of Science or major requirements that are approved advanced University Core Curriculum courses.

Bachelor of Science in Plant Biology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
CHEM 200, 201, 202; 210, 211, 212.....	5	5
ENGL 101, 102.....	3	3
MATH 108, 109.....	3	3
BIOL 200A, 200B.....	4	4
UCOL 101S.....	3	-
<i>Total</i>	18	15

SECOND YEAR	FALL	SPRING
PLB 320, BIOL 305.....	4	3
BIOL 307, Social Science.....	3	3
CHEM or PHYS.....	4	4
Humanities.....	3	-
Disciplinary Electives.....	-	3
Human Health.....	2	-
<i>Total</i>	16	13

THIRD YEAR	FALL	SPRING
CMST 101.....	3	-
General Elective, Humanities.....	3	3
PLB 300, 304.....	4	4
Disciplinary Electives.....	-	4
MATH 141 or approved substitution, PLB 360.....	4	3
BIOL 304.....	-	3
<i>Total</i>	14	17

FOURTH YEAR	FALL	SPRING
Multicultural.....	-	3
Fine Arts, PLB 480.....	3	1
Disciplinary Electives.....	6	3
Supportive Skills.....	3	3
Social Science.....	-	3
General Electives.....	3	-
<i>Total</i>	15	13

General Minor

A general minor in plant biology consists of a minimum of 16 semester hours, selected from any plant biology offerings except University Core Curriculum courses (PLB 115, 117, 301I and 303I) and PLB 360, 390, 391, 490, 491, or 492.

Tracked Minors

A. *Plant Biology, with emphasis in Plant Biodiversity*: Consists of 16 credit hours selected from the course listed below. The or indicates a one-or-the-other choice option.
PLB 300; 304 or 451; 400 or 415, 404 or 405 or 409; 406 or 410; 430 or 450.

B. *Plant Biology, with emphasis in Plant Ecology*: Consists of 16 credit hours taken from the list of courses below.
BIOL 307, PLB 304, any three of the following courses:
PLB 435, 440, 443, 444, 445, 447 or 452.

C. *Plant Biology, with emphasis in Plant Biotechnology*: Consists of 16 credit hours from the following courses:
BIOL 305, 306, PLB 320, 419, 420, 433, or 471.

Courses (PLB)

For all field courses in plant biology, students will be assessed a transportation fee. In addition, certain courses may require the purchase of additional materials and supplies. The fees listed may not be current. Contact the Department of Plant Biology to obtain information on the fees for specific courses.

115-3 General Biology. (University Core Curriculum) (Same as ZOO 115) [IAI Course: L1 900L] Introduction to fundamental biological concepts for non-life science majors interested in learning about interrelationships of human, plant and animal communities. Integrated lecture and laboratory cover topics that include structure and function of living systems, reproduction and inheritance, evolution, biological diversity and environmental biology. Laboratory applies scientific methods to the study of living systems. Lab fee: \$15.

117-3 Plants and Society. (University Core Curriculum) [IAI Course: L1 901L] A multidisciplinary approach to understanding the relationships between plants and humans: basic botanical principles (cell structure, morphology, anatomy, physiology, genetics, systematics, diversity and ecology); historical and modern uses of plant (fibers, building materials, crops, beverages, medicines); crops, poisonous plants, and biotechnology. Observational and experimental labs reinforce lecture topics. Lab fee: \$15.

200-4 General Plant Biology. (Advanced University Core Curriculum course) An introduction to Plant Biology. Emphasis is placed on structure and reproduction, embryo development, and vital developmental processes needed for plant survival, such as photosynthesis, respiration, water transport and nutrient assimilation. Other topics include cell division, basic Mendelian genetics, DNA, RNA, protein synthesis, taxonomy, evolution, ecology, and conservation. The course also includes a brief overview of medicinal plants and their biologically active compounds. Satisfies University Core Curriculum Science Group II requirement in lieu of PLB 115 or ZOO 115. Lab fee: \$15.

300-4 Diversity of Plants, Algae, and Fungi. This course surveys the history and diversity of algae, land plants, and fungi-branches of the tree of life that are of immense importance both to the ecosystem and to human interests. Emphasis is on evolution, ecology, symbiotic relationships, life cycles, and adaptive morphology. Three lectures and one 2-hour laboratory per week. Prerequisite: either BIOL 200B or PLB 200. Lab fee: \$50.

301I-3 Environmental Issues. (University Core Curriculum) Fundamental biological and ecological processes important in the individual, population and community life of organisms integrating with the philosophical and ethical relationships of the contemporary, domestically diverse human society are examined. Emphasis is placed on a pragmatic understanding of environmental issues. Lab fee: \$15.

303I-3 Evolution and Society. (University Core Curriculum: Students with a catalog year prior to Summer, 2012 only) An introduction to the basics of biological evolution and the effect of biological evolution on society. Historical and modern inter-

pretations of biological evolution on the human experience will be developed. This will include legal, political, religious, scientific, racist, sexist, philosophical and educational aspects. Topics will be covered via discussions, presentations, papers and debates. Prerequisite: strongly recommend completion of University Core Curriculum Science requirements. Lab fee: \$15.

304-4 Elements of Plant Systematics. This course covers the principles of plant classification including history, nomenclature, specimen collection and preservation, current systematic methodologies, and a survey of major plant families. Two lectures and four hours of lab per week. Prerequisites: BIOL 200B or PLB 200. Lab fee: \$50.

317-4 Introduction to Medical Botany. A survey of plants affecting human health and how they are used historically and in modern times, with emphasis on the biologically active constituents. Laboratory experiments will introduce students to techniques in production, isolation, chemical analysis and biological testing of medical compounds from plants. Two lectures and 4 hours of laboratory per week. Prerequisites: BIOL 200A and 200B, CHEM 140A or CHEM 200 and 201. Lab fee: \$25.

320-4 Elements of Plant Physiology. The processes used by plants to meet their basic needs and to control growth and development. Three lectures and two laboratory hours per week. Prerequisite: Biology 200B or Plant Biology 200; CHEM 200 and CHEM 201. Lab fee: \$50.

351-3 Ecological Methods. (Same as ZOO 351) Basic ecological field techniques for analysis of community structure and functional relationships. Two 4-hour laboratories per week. Prerequisite: BIOL 307. Laboratory/field trip fee: \$25.

360-3 Introductory Biostatistics. (Same as ZOO 360) Introduction to basic statistical concepts and methods as applied to biological data. Includes descriptive techniques such as measures of central tendency, variability, hypothesis testing, analysis of variance and simple linear regression and correlation. Analysis of computer generated output and report writing required. This course does not fulfill the College of Science Biological Sciences requirement. Prerequisite: MATH 108.

390-1 to 3 Readings in Plant Biology. Individually assigned readings in botanical literature. Every semester. Special approval needed from the departmental chair.

400-4 Plant Anatomy. This course is an introduction to the differentiation, diversification and structure of plant tissues and organs, with emphasis on the organization of seed plants. Laboratory will include instruction in the techniques of microscopy used in the study of plant structure. Two lectures and two laboratories per week. Prerequisite: BIOL 200B or PLB 200. Lab fee: \$50.

406-3 Bryology. An introduction to the biology of mosses, liverworts, and hornworts, with emphasis on structure, development, and phylogeny, but also including the study of their genetics, biochemistry, and physiology. Two lectures and one laboratory per week. Prerequisite: PLB 300. Lab fee: \$15.

415-5 Morphology of Vascular Plants. This course examines the external form, internal structure, and relationships of vascular plants. Three lectures and two labs per week. Prerequisite: BIOL 200A and BIOL 200B, or PLB 200; PLB 300 and PLB 400 recommended. Lab fee: \$40.

416-3 Limnology. (Same as ZOO 415) Lakes and inland waters; the organisms living in them, and the factors affecting

these organisms. Two lectures and one 4-hour laboratory alternate weeks. Prerequisite: BIOL 307 with a grade of C or better. Laboratory/Field Trip Fee: \$15.

419-3 Plant Molecular Biology. (Same as PSAS 419, CSEM 419) A survey of molecular phenomena unique to plant systems. Topics will include: genome organization and synteny between plant genomes, transcriptional and post-transcriptional control of gene expression, signal transduction, epigenetics, plant-pathogen interactions and responses to biotic- and abiotic-stresses. Prerequisite: BIOL 305 or CSEM 305. Restricted to junior standing.

425-4 Environmental Physiology of Plants. (Same as CSEM 425; Same as PSAS 425) The environmental physiology of plants focuses on the 1) influence of abiotic factors (e.g., light, water, temperature, nutrients, pollutants) on growth, development, and yield; 2) mechanisms by which plants respond to these abiotic factors; 3) use of biotechnology to increase abiotic stress tolerance in model and crop plants. Prerequisite: PLB 320 or CSEM 409. A \$35 laboratory fee will be assessed.

427-5 Plant Biochemistry. (Same as CSEM 427 and PSAS 427) Exploration of fundamental biochemical pathways in plants with an emphasis upon carbon and nitrogen metabolism. Prerequisite: PLB 320 or consent of instructor. Lab fee: \$35.

433-4 Introduction to Agricultural Biotechnology. (Same as ANS 433) (Same as CSEM 433) (Same as PSAS 433) This course will cover the basic principles of plant and animal biotechnology using current examples; gene mapping in breeding, transgenic approaches to improve crop plants and transgenic approaches to improve animals will be considered. Technology transfer from laboratory to marketplace will be considered. An understanding of gene mapping, cloning, transfer and expression will be derived.

435-3 Plant-Insect Interactions. (Same as ZOO 435) Plants and insects have played major roles influencing each other's evolutionary diversification. This course will be evolutionary and ecological examination of the interactions between plants and insects. Topics will include herbivory, pollination relationships, ant-plant mutualisms, host plant choice, specialization vs. generalized relationship, seed and fruit dispersal, coevolution/cospeciation, and chemical, and chemical ecology. Prerequisite: BIOL 200A,B or equivalent, BIOL 307 or equivalent.

438-3 Plant and Animal Molecular Genetics Laboratory. (Same as AGSE 438, CSEM 438, PSAS 438, ZOO 438) Arabidopsis and Drosophila model organisms, lab-based training in laboratory safety, reagent preparation, phenotype analysis, genetics, DNA and RNA analysis, PCR, cDNA construction, cloning and sequencing of genes. Includes plant and bacterial transformation, and a population level analysis of genetic variation using RAPD markers in grasses and Alu insertion in humans. Two 2-hr labs and one 1-hr lecture per week. Prerequisite: BIOL 305 or equivalent or consent of instructor. Lab fee: \$30.

440-3 Grassland Ecology. This course examines grassland structure and function in relation to various biotic and abiotic factors. Field trips will visit local grasslands. Two lectures and one 4-hour lab per week. Prerequisite: BIOL 307 or consent of instructor. Lab fee: \$50.

443-3 Restoration Ecology. (Same as ZOO 443) Ecological restoration tests current understanding of ecosystem assembly and function. This course applies ecological theory to restora-

tion, with an emphasis on factors influencing plant community assembly and evaluating restoration success. Two lectures a week and one four-hour lab alternate weeks. Prerequisite: BIOL 307.

444-4 Ecological Analysis of Communities. (Same as ZOO 444) Includes concepts and methods pertaining to the analysis of ecological data. Approaches will include a variety of methods for analyzing multivariate ecology, diversity, pattern, and spatial data. Laboratory will include the computer application of these concepts and methods to field situations. Two lectures and one 4 hour lab per week. Prerequisite: PLB/ZOO 360, BIOL 307. Lab fee: \$15.

445-4 Wetland Ecology and Management. (Same as ZOO 445) This course provides students with experience in wetland ecology and management with an emphasis on wetland functioning, field sampling, and identification of common wetland plants. Prerequisite: either BIOL 200B or PLB 200; and BIOL 307; or consent of instructor. Two lectures and one 4-hour lab per week. Lab fee: \$25.

449-3 Plant Systematics and Evolution. Plant systematics and evolution using traditional and molecular characters. Includes classification methods, phenetics, cladistics, maximum likelihood, and plant molecular evolution. Prerequisite: PLB 304 (or equivalent) or consent of instructor.

451-3 Flora of Southern Illinois. Exposure to the major upland and lowland communities of southern Illinois with an emphasis on the identification, distribution and ecology of the natural and introduced floristic components. This is a field-based course wherein the students travel to local areas for plant identification. Each week, 4-8 hours per weekly session is spent in field work and travel to specific field sites is required via a university vehicle. Prerequisite: PLB 304 or consent of instructor. Field Trip Fee not to exceed \$160.

452-4 Plant Population Ecology. This course covers principles and research techniques of plant population ecology including the spatial, age, size and genetic structures of plant populations. The origin of these different aspects of population structure, their influences upon each other and their temporal dynamics are also examined. Two lectures and one 4-hour lab per week. Prerequisite: BIOL 307 or consent of instructor. Lab fee: \$35.

455-3 Genome Evolution. (Same as ZOO 450) This course introduces the diversity of genomes and the evolutionary forces shaping them. Molecular evolution from the level of single nucleotides to whole genomes will be covered. Prerequisites: BIOL 305 and BIOL 304.

471-3 Introduction to Systems Biology. (Same as ZOO 472) The bioinformatic analysis of large genomic and post-genomic data sets. Integration of gene regulation, protein interaction, metabolite and hormonal signaling provides an understanding of basic cellular circuitry networks. Examine redundancy, robustness and decision making in biological systems. Lab includes databases, tools, and manipulation of large data sets. Prerequisite: BIOL 305 or CS 330. Lab fee: \$15.

475-3 Advanced Cell Biology. Cell structure at molecular and cytological levels. Includes discussions of research methods, plasma membrane, cell exterior and recognition, the endomembrane system and related organelles, self-replicating

organelles, the cytoskeleton, nuclear structure and function in cell replication, cell differentiation and response, and eukaryotic cell evolution. Prerequisite: BIOL 306 or equivalent.

476-2 Advanced Cell Biology Laboratory. Laboratory course to accompany Plant Biology 475. Light and electron microscopy, cell culturing, biochemical methods, and experimental protocols are used to study the structure of cell membranes, intracellular organelles, including the Golgi apparatus, ER, mitochondria, plastids, lysosomes, the cytoskeleton, and nucleus. Prerequisite: PLB 475 or concurrent enrollment.

480-1 Senior Seminar. Reading, writings, discussions and presentations of current research topics in plant biology. Not for graduate credit. Restricted to senior standing or consent of instructor.

490-3 Energetics, Food Webs, and Ecosystems. (Same as ZOO 490) This course places conservation of particular species into the context of community and ecosystem management. Approaches to quantifying energy needs of individual species will be extended to models of trophic networks among multiple species. Food web structure and function, species interactions, and resilience to species loss species invasions, and environmental changes will be examined in light of landscape processes. Prerequisite: BIOL 307 or consent of instructor.

492-2 to 6 Honors in Plant Biology. Individual research problems available to qualified juniors and seniors. Special approval needed from the department chair.

493A-1 to 4 Research Topics in Plant Biology-Ecology. Individual laboratory or field research under supervised direction. Does not count for thesis (PLB 599) or dissertation (PLB 600) credit. Special approval needed from the departmental chair.

493B-1 to 4 Research Topics in Plant Biology-Systematics. Individual laboratory or field research under supervised direction. Does not count for thesis (PLB 599) or dissertation (PLB 600) credit. Special approval needed from the departmental chair.

493C-1 to 4 Research Topics in Plant Biology-Physiology/Molecular Biology. Individual laboratory or field research under supervised direction. Does not count for thesis (PLB 599) or dissertation (PLB 600) credit. Special approval needed from the departmental chair.

Plant Biology Faculty

Anterola, Aldwin M., Associate Professor, Ph.D., Washington State University, 2001.

Ashby, William C., Professor, *Emeritus*, Ph.D., University of Chicago, 1950.

Baer, Sara G., Professor, Ph.D., Kansas State University.

Battaglia, Loretta L., Associate Professor, Ph.D., University of Georgia, 1998.

Bozzola, John J., Professor, *Emeritus*, Ph.D., Southern Illinois University, 1975.

Crandall-Stotler, Barbara C., Professor, *Emerita*, Ph.D., University of Cincinnati, 1968.

Ebbs, Stephen D., Professor and *Chair*, Ph.D., Cornell University, 1997.

Geisler, Matthew J. B., Associate Professor, Ph.D., The Ohio State University, 1999.

Gibson, David J., Distinguished Professor, Ph.D., University of Wales -Bangor, 1984.

- Matten, Lawrence C.**, Professor, *Emeritus*, Ph.D., Cornell University, 1965
Mohlenbrock, Robert H., Distinguished Professor, *Emeritus*, Ph.D., Washington University, 1957.
Neubig, Kurt M., Assistant Professor, Ph.D., University of Florida, 2012.
Nickrent, Daniel L., Professor, *Emeritus*, Ph.D., Miami University, Ohio, 1984.
Renzaglia, Karen S., Professor, Ph.D., SIUC, 1981.
Richardson, John A., Associate Professor, *Emeritus*, M.F.A., Ohio University, 1969.
Robertson, Philip A., Professor, *Emeritus*, Ph.D., Colorado State University, 1968.
Sipes, Sedonia D., Associate Professor, Ph.D., Utah State University, 2001.
Sundberg, Walter J., Professor, *Emeritus*, Ph.D., University of California, 1971.
Tindall, Donald R., Professor, *Emeritus*, Ph.D., University of Louisville, 1966.
Vitt, Dale H., Distinguished Professor, *Emeritus*, Ph.D., University of Michigan, 1970.
Wood, Andrew J., Professor, Ph.D., Purdue University, 1994.
Yopp, John H., Professor, *Emeritus*, Ph.D., University of Louisville, 1969.

Policy Analysis

(SEE AGRIBUSINESS ECONOMICS)

Political Science

(Department, Major, Courses, Faculty)

Political Science is the study of issues that most immediately and profoundly affect our lives. In the global, national and local political arenas, decisions are made every day that influence the way we live. The political science major will prepare you to address these issues intelligently. You will gain knowledge and skills to make a contribution in today’s dynamic economic and political world. Courses in political science teach you skills in writing, analysis and communication and prepare you for work in all sectors of our society: business, education, government and industry.

Students planning to major in political science should consult with an academic advisor as early as possible to plan their program of study. As a political science major you will be able to choose from a curriculum that combines structure with flexibility. The department offers three specializations: International Affairs, Pre-Law, and Public Service, as well as several programs of study including Political Elections and Campaigns and Political Reporting and Political Theory. Within each, students choose from the wide range of courses that prepare them best for their future plans and careers. Students are encouraged to gain practical experience by enrolling in internships and study abroad programs. Upon obtaining senior status, students with a 3.50 or higher GPA in political science and a 3.25 overall, may enter the political science honors program.

Students majoring in political science must complete core and elective requirements listed below for a minimum of 33 hours of which at least 15 must be earned at Southern Illinois Uni-

versity Carbondale. A minimum of three of these courses must be taken at the 400 level. Political Science 405, 406, 416, 420, 435, 455, 459, or 480 also satisfies the College of Liberal Arts Writing-Across-the-Curriculum (WAC) requirement. One paper from a Political Science 400-level course in which the student earned a C or higher must be submitted to the departmental academic advisor prior to graduating. Students must complete the departmental exit survey as a final graduation requirement for the major in political science.

Bachelor of Arts Degree in Political Science, College of Liberal Arts

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements</i>	
(See Chapter 4)	11
<i>Requirements for Major in Political Science</i>	33
Core Courses: POLS 114, 205, 250, 270, and 300	15
Political Science 400 level courses	9
Political Science electives	9
<i>Minor</i>	15-18
<i>Electives</i>	17-20
<i>Total</i>	120

Political Science Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
Core Science (Biological/Physical).....	3	3
UCOL 101, POLS 114.....	3	3
Core Humanities	3	3
ENGL 101, 102.....	3	3
Core Math, Fine Arts	3	3
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
CMST 101, Core Multicultural.....	3	3
Human Health, Core Social Science	2	3
Foreign Languages	4	4
POLS 205, 270.....	3	3
POLS 250, POLS 300	3	3
<i>Total</i>	15	16
THIRD YEAR	FALL	SPRING
POLS Electives 300-400 level.....	3	3
POLS 400-level	3	3
Minor courses	6	6
Electives 300-400 level	3	3
<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
POLS Elective 300-400 level	3	-
POLS 400-level	3	-
Minor courses	3	3
Electives 300-400 level	5	11
<i>Total</i>	14	14

**POLITICAL SCIENCE MAJOR—INTERNATIONAL AFFAIRS
SPECIALIZATION**

Political science majors preparing for careers in international affairs must meet the basic requirements for the political science major including core courses, a minimum of 33 credit hours in political science, three 400-level courses, international affairs specialization requirements and completion of an existing minor or interdisciplinary program of study. In fulfilling these requirements, majors preparing for international affairs will have the opportunity to study international relations, comparative politics, international political economy and the politics of specific countries and regions. (The Director of Undergraduate Studies approves minors and study abroad programs).

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Requirement</i> (See Chapter 4).....	11
<i>Requirements for Major in Political Science</i>	49-52
Core Requirements POLS 114, 205, 250, 270, and 300	15
International Affairs Course Sequence	
POLS 372I, 375, 480	9
Political Science 400 level courses	6
Political Science electives	3
Minor (or interdisciplinary study)	15-18
<i>Electives</i>	17-20
<i>Total</i>	120

POLITICAL SCIENCE MAJOR—PRE-LAW SPECIALIZATION

Political science majors preparing for law school must meet the basic requirements for the political science major including core courses, a minimum of 33 credit hours in political science, three 400 level courses, pre-law specialization requirements, and completion of an existing minor, internship, or interdisciplinary program of study. In fulfilling these requirements political science majors preparing for law school will have the opportunity to take courses in subjects like administrative law, civil liberties, civil rights, constitutional law, court management, democratic theory, judicial process, legal process, policy analysis and the theory of law. The Pre-law advisor approves minors and internships. (The Director of Undergraduate Studies approves minors and study abroad programs).

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Requirements</i> (See Chapter 4).....	11
<i>Requirements for Major in Political Science</i>	48-54
Core Requirements POLS 114, 205, 250, 270, and 300	15
Public Law Course Sequence POLS 230, 333A, 333B, and any two of the following: 435, 436, 437, 438, or 475	15
Political Science 400 level courses	3
Political Science 300-400 level electives	6
Minor, Internship, or Interdisciplinary Study	12-18
(12 hrs. of minor course must be 300-400 level)	
<i>Electives</i>	17-20
<i>Total</i>	120

**POLITICAL SCIENCE MAJOR—PUBLIC SERVICE
SPECIALIZATION**

Political science majors preparing for public service careers must meet the basic requirements for the political science major including core courses, a minimum of 33 credit hours in political science, three 400-level courses, public service specialization requirements and completion of an existing minor,

internship, or interdisciplinary program of study. In fulfilling these requirements, majors preparing for public service have the opportunity to study subjects like administrative law, intergovernmental relations, organizational politics, public policy analysis and public financial administration. (The Director of Undergraduate Studies approves minors and study abroad programs).

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Requirements</i> (See Chapter 4).....	11
<i>Requirements for Major in Political Science</i>	49-52
Core Requirements POLS 114, 205, 250, 270, and 300	15
Public Service Course Sequence	
POLS 340, 413, 415, 444	9
Political Science Electives	9
Minor, Internship, (or interdisciplinary study)	12-18
<i>Electives</i>	17-20
<i>Total</i>	120

Political Science Minor

A minor in political science consists of fifteen hours to be approved by the department advisor. At least nine of the required fifteen credit hours must be earned at Southern Illinois University Carbondale.

Research and Teaching

The faculty in the department come from major academic institutions from around the country. Faculty teaching and research have received national and university wide recognition. Full-time faculty teach virtually all political science courses. The department emphasizes small sections and a close student/faculty relationship.

Advisement

Students in political science have access to the advisement services in the College of Liberal Arts. Students may also see a political science professor for more specialized counseling. Help is offered in course selection and registration, in long-range planning, and career information.

Awards

The department administers several endowed annual awards. See the departmental web page: politicalscience.siu.edu or contact the Director of Undergraduate Studies for additional information on eligibility requirements.

Courses (POLS)

114-3 Introduction to American Politics. (University Core Curriculum) [IAI Course: S5 900] The development and current state of the American political system.

150-1 Political Science Orientation. This course introduces students to the study of political science at SIUC. Students will meet the professors in the department and learn about the major subfields of the discipline, opportunities for internships and careers with a political science degree, the activities of SIUC student organizations affiliated with the department, options for graduate study in political science, and resources for improving students' research and writing skills.

205-3 Introduction to Political Thought. This course introduces students to the fundamental questions of political life through reading classical texts in the history of political

thought. Topics covered include the nature of the state, justice, equality, liberty, and political morality. Emphasis is placed on students learning how to think about political phenomena in a systematic, explicit, and critical manner.

207-3 Contemporary Political Ideologies. [IAI Course: PLS 913] [IAI Course: S5 905] A survey of recent political ideologies: Nationalism, Socialism, Communism, Liberal Democracy, Conservatism, Christian Socialism, Fascism, Contemporary Liberation Movements.

213-3 State and Local Government. [IAI Course: S5 902] Functions and decision-making processes of governments at the state and local levels in the United States.

214-3 Illinois Politics. The government and current political issues of Illinois. Prerequisite: POLS 114.

215-3 Politics of Diversity in the United States. (University Core Curriculum course) This course analyzes identity politics in the United States. Students will study American ethnic, racial, religious, cultural and gender relations and the policies available for their improvement. Topics include affirmative action, immigration policy, multiculturalism, assimilation, feminist politics, and church-state relations.

230-3 Law in American Society. This is an introductory course recommended for students who want to consider possible careers in law. The following topics will be covered: the relation between law, justice, morality and religion; types and sources of law and legal rules; origin and development of common law; the role of lawyers, judges and juries; legal education in the United States. These topics will be explored through lectures, discussion groups and occasional guest speakers.

250-3 Introduction to Comparative Politics. [IAI Course: S5 905] This course provides an introduction to some major issues in the study of politics of countries around the world. Students analyze the broad array of political systems and political institutions in these countries. Topics include differences between democratic and non-democratic regimes, the causes of revolution, the role of social movements, and the politics of multi-ethnicity.

270-3 Introduction to International Relations. This course provides a general introduction to major issues and controversies in the study of international relations. Topics can include war, nuclear deterrence, arms proliferation, terrorism and counter-terrorism, the United Nations, global trade and investment, economic sanctions, human rights and ethics in foreign policy.

300-3 Research Methods in Political Science. An examination of the research methods and data analysis techniques used by political scientists in their analysis of political questions and problems. Prerequisite: POLS 114.

304-3 Classical Political Theory: Greeks, Romans, and Christians. (Same as CLAS 305) A survey of the works of important political thinkers in the ancient and medieval world including Homer, Thucydides, Plato, Aristotle, Cicero, Augustine, Maimonides, Averroes, and Thomas Aquinas.

305-3 Modern Political Theory: Reformation and Revolution. This course is a survey of the works of important political thinkers in the period extending from the beginning of the 16th Century (the time of Machiavelli) to the end of the 19th Century (the time of Nietzsche). Included in this survey are the works of such thinkers as Machiavelli, Luther, Calvin, Hobbes,

Locke, Rousseau, Hume, Burke, Wollstonecraft, Kant, Hegel, Mill, Tocqueville, Marx and Nietzsche.

306-3 Contemporary Political Theory: Justice, Identity and Power. This course is a survey of the works of important political thinkers in the 20th and 21st centuries. Key figures in this survey may include Hannah Arendt, Judith Butler, John Dewey, Michael Foucault, Jürgen Habermas, Friedrich Hayek, John Rawls, Leo Strauss and Iris Marion Young.

314I-3 American Politics and the Mass Media. (University Core Curriculum) (Same as JRNL 314I) The role of the mass media in American politics. Emphasis will be on the way in which the news media covers political actors and institutions, the effects of media on political behavior, and the expanding role of the internet in politics.

316-3 Latino Politics. Provides an overview of Latino politics in the United States. Students will explore the complexities of Latino identities, histories, social movements, political participation, and political representation. The course will also address such contemporary political issues as citizenship, immigration, and language policy.

317-3 Polling and Public Opinion. The nature of public opinion and its role in American democracy. Prerequisite: POLS 114.

318-3 Political Campaigns and Elections. Political campaigns and the role they play in American democracy. Prerequisite: POLS 114.

319-3 Political Parties. The role of political parties in American democracy, including the roles and activities of political parties in the United States. Prerequisite: POLS 114.

321-3 Congressional Politics. This course examines the origins and structure of Congress, congressional campaign behavior, legislative process, debates about representation and the relationship between Congress and the executive and judicial branches of government.

322-3 Presidential Politics. The role of the presidency in American democracy, including origin and background of the presidency, the organization of the executive branch, and the powers and functions of the president. Prerequisite: POLS 114.

326-3 African American Politics. (Same as AFR 326) Designed to familiarize students with the role of African-Americans in American politics. An emphasis is placed on describing and analyzing how the structure of the American political system affects efforts by African-Americans in gaining the full benefits of the American political system. It will also address contentious sociopolitical issues that affect how African-Americans are treated in the context of the larger society.

332I-3 Introduction to Civil Liberties and Civil Rights. (University Core Curriculum) This course deals with civil liberties and civil rights in the United States and how the United States Supreme Court has interpreted and applied these rights over time. Specifically, our focus will be on the First Amendment, the Right to Privacy, Discrimination, and Voting Rights. We will also address how social, economic, and political forces have shaped the evolution and nature of these protections.

333A-3 Constitutional Law I. This, the initial course in a two-course sequence, is concerned with the basic structure and power relationships in the American constitutional system. Topics include judicial review, judicial restraint, separation of powers, the federal system, national powers, state powers, the

contract clause, and substantive due process. POLS 114 and POLS 230 recommended.

333B-3 Constitutional Law II. This, the second course in the constitutional law sequence, concentrates on those provisions of the U.S. Constitution which protect individual rights and liberties against government encroachment. POLS 114 and POLS 230 recommended.

334-3 The Constitution and Defendants' Rights. This course is designed to introduce students to the development of the law as it relates to the criminally accused. Topics include search and seizure, self-incrimination, double jeopardy, the right to counsel, cruel and unusual punishment and the right to due process.

340-3 Introduction to Public Administration. An introduction to the study of public bureaucracy. Theoretical, political, and practical issues of organization, staffing, financing, and other matters are surveyed. United States administration and organizational behavior are stressed. Prerequisite: POLS 114.

352I-3 Ethnicity, Nationalism and Culture. (University Core Curriculum) This course examines the causes, consequences and management of ethnic conflict and nationalism. Theoretical analysis will be combined with empirical case studies of ethnic and cultural competition, conflict and cooperation both within and between countries. Contributions from various scholarly disciplines will be incorporated into the examination of these issues. Additionally, moral dilemmas in the sphere of ethnicity and nationalism will be discussed.

355-3 Social Movements and Political Change. Designed for students to learn and apply various theoretical and methodological approaches in the study of different types of social movements around the world. Focuses on such issues as: what constitutes a social movement; why some people participate while others do not; types of mobilization strategies; and movement outcomes.

357-3 Comparative Nation Building. A comparative study of the growth of the relationship of the armed forces with the civilian sector of the body politic, the selection, training, and professionalism of the officer corps, the control of the armed forces by the executive and legislature, the growth of strategic doctrine, insurgency and counter-insurgency warfare, and the analysis of the role of the armed forces as a governing group in a large number of non-western states. Prerequisite: POLS 250 recommended.

366-3 Latin American Politics. An in-depth analysis of specific problem areas in Latin American political processes as well as comparative study of selected Latin American nation-states.

370-3 Terrorism and Counter-Terrorism. (Same as CCJ 370) Using an interdisciplinary social science perspective, an analysis of the history, sources and consequences of domestic and international terrorism and the response by policymakers. Topics include tactics, goals, recruitment and financing of terrorists; the use of military force and legal institutions in dealing with terrorism; comparison of different state responses to terrorism; and international law, human rights and counter-terrorism.

372I-3 Politics of the Global Economy. (University Core Curriculum) Examines the interaction of politics and economics and of states and markets at the international level. Special attention to inequalities of wealth and power and to the politics

of international trade, finance, investment, production, energy, transportation, information, technology and development.

373-3 International and Transnational Organizations. The growth and role of international organizations, with special attention to the political effects of military, economic and ecological interdependence. The United Nations, regional organizations, and non-governmental organizations. The effects of these organizations on international peace and justice. Prerequisite: POLS 270 recommended.

375-3 War and Force in World Politics. An examination of the use of military power and force in modern world politics. Theoretical and empirical analysis of the causes and conduct of war, and investigation of the ways states, ethnic groups, and other actors develop, manage, and employ military power to further their interests. Topics include nuclear deterrence, arms control, weapons proliferation and terrorism. Prerequisite: POLS 270 recommended.

390-1 to 3 Readings in Political Science. Specialized and advanced readings in areas not covered in other political science courses. The course must incorporate both reading and writing assignments, and should entail approximately the same amount of work as a standard 300-level political science course. A minimum of five pages of writing per credit hour is required, subject to the discretion of the Director of Undergraduate Studies (DUS). Students must choose a faculty member to direct the course and submit to the DUS a proposed syllabus and a completed Readings Approval Form prior to registration. For purposes of course assessment, students will submit to the DUS a copy of all written work done for the course. Students must have at least a 3.0 political science grade point average, and a minimum of 21 hours already earned in the major or completed the introductory course and six additional hours in the subfield of the proposed readings. No more than six hours of POLS 390 may be counted toward the departmental major. Special approval needed from the department.

391-1 Model Illinois Government. This course is designed to prepare students for the annual Model Illinois Government (MIG) simulation held in Springfield, Illinois. The class is organized to help students develop their oral, written, and verbal presentation skills for participation in the MIG simulation. Prerequisite: POLS 213 or POLS 214 and consent of instructor.

395-1 to 12 Internship in Public Affairs. Supervised field work in the office of a governmental agency, political party, interest group, legal agency, or other public affairs-oriented organization. The academic component of the course must incorporate both reading and writing assignments. A minimum of five pages of writing per credit hour is required, subject to the discretion of the Director of Undergraduate Studies (DUS). Students must choose a faculty member to direct the internship, and submit to the DUS a written proposal for the internship and a completed Internship Approval Form prior to registration. Students will normally be granted a maximum of 3 credit hours per internship, though they may petition the DUS for more. Political Science 395 is open only to political science majors and minors. Students must have at least a 2.5 political science grade point average and six hours in the major. No more than six hours of POLS 395 may be counted toward the departmental major. Special approval needed from the department.

396-1 Political Science Ambassadors. Political Science Stu-

dent Ambassadors are undergraduate majors involved in outreach activities on behalf of the Department. Ambassadors are engaged in a variety of activities, including the preparation of a newsletter for undergraduates, mentoring students, organizing regular forums for the discussion of political issues, and meeting with prospective students, faculty, and nationally known visiting scholars and political figures.

397-1 to 15 Springfield Internship Program. The Program places qualified students with political interest groups and lobbying firms for the Spring semester which coincides with the Illinois legislative session. Interns perform a variety of tasks, including legislative and issue research, committee monitoring, and lobbying support activities. Students are also required to complete an academic component that includes assigned readings and a written project assigned by the faculty sponsor.

398-1 to 3 Vince Demuzio Governmental Internship Program. The program offers legislative and agency internships. Legislative interns work with House and Senate members of both parties. Typically, interns work in the home office while attending classes full time and perform duties as regular staff members. Students may also intern with a state agency. Agency interns work in one of several local code department offices while attending classes full time and perform duties as regular staff members. Maximum of 15 hours.

403-3 Philosophy of Politics. (See PHIL 441)

405-3 Democratic Theory. (Same as PHIL 405) An examination of various aspects of democratic thought, including the liberal tradition and its impact upon the United States. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Prerequisite: POLS 114 or consent of instructor.

406-3 American Political Thought. This course is an advanced seminar in American political thought. The course focuses on the founding ideals and practices of the American republic and how these ideals functioned in subsequent social movements, political struggles, and ideological conflicts in American political history. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement.

408-3 Formal Political Theory. This course is an introductory survey of formal modeling techniques that have been important in Political Science during the latter half of the 20th Century. Included in this survey are such topics and approaches as Game Theory, Social and Public Choice Theory, Voting Theory, Spatial Modeling, Prisoners' Dilemma, Impossibility Theorems, Vote Trading, and Public Goods.

413-3 Federalism. An examination of relationships among national, state, and local governments in the American federal system, with emphasis on recent literature and contemporary issues. Special attention is given to fiscal relations, interbranch cooperation and specific intergovernmental programs. Prerequisite: POLS 114 with a grade of C or better.

415-3 Urban Politics. An examination of the environment, institutions, processes and functions of government in an urban society with particular emphasis on current problems of social control and the provision of services in the cities of the U.S.

416-3 Senior Seminar in Political Science. Seminar for advanced undergraduate Political Science students to examine in depth a wide variety of topics; to be taught by different instructors. Available for use as the honors seminar. Graduate students not admitted. Not for graduate credit. Restricted to political sci-

ence majors. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement.

418-3 Political Communication. (See CMST 451) A critical review of theory and research, which relate to the influence of communication variables on political values, attitudes, and behavior.

419-3 Political Sociology. (Same as SOC 475) An examination of the social bases of power and politics, including attention to global and societal political relations, as well as individual-level political beliefs and commitments; primary focus on American politics.

420-3 Interest Group Politics. The role interest groups in American democracy, including the political influence of contemporary interest groups, such as labor, racial and women's organizations. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Prerequisite: POLS 114 with a minimum grade of C.

435-3 Judicial Process and Behavior. An examination of the process by which judges in both trial and appellate courts at federal and state levels are selected and of the ways in which they make decisions. Attention to the structure of the courts. Study of the communication and impact of judicial decisions. The course provides some insight into the methods used to study judicial behavior. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. POLS 114 and 230 recommended prerequisites.

436-3 Administrative Law. The procedural law of public agencies, particularly the regulatory commissions but also executive branch agencies exercising regulatory functions. The exercise of discretion and its control through internal mechanisms and judicial review. POLS 114 and 230 recommended.

437-3 Jurisprudence (Theories of Law). This course provides an examination of the major schools in legal thinking. We will investigate classic jurisprudential questions, including: theories of how judges decide cases, the role of morality and natural rights in determinations of law, and the role of legislative and judicial actors in the creation of law. POLS 114 and 230 recommended.

438-3 Women and the Law. (Same as WGSS 438) This course is an advanced seminar in public law with a focus on gender, law and society. The course will engage with issues in feminist legal practice and the development of legal theories regarding gender. We will interrogate the relationship between theory and practice and the ways in which feminist jurisprudence has taken shape in the dynamics of this relationship. POLS 114 and 230 recommended prerequisites.

442-3 Human Resources Administration. This course examines foundations of human resources administration. Emphasis is placed on the study of personnel management strategies, public sector labor relations, and other issues in the field of human resources.

443-3 Fiscal Aspects of Public Administration. An examination of governmental budgeting and related financial institutions and processes. All levels of government are considered and attention is given to both revenues and expenditures. Topics include budget preparation, taxation, financial management and the respective fiscal roles and practices of the chief executive, legislature and administrative agencies. Not for graduate credit. Prerequisite: POLS 114. POLS 340 recommended.

444-3 Policy Analysis. An examination of basic concepts in the

policy sciences, approaches to policy analysis, applications to selected areas of policy, and instruments of policy development.

446-3 Museum Administration. A comprehensive introduction to museum administration and management, including fiscal and budget oversight; an understanding of museum ethics; acquisition, conservation, and exhibition planning; personnel matters; and museum research. Museum practicum and research stressed.

447-3 Nonprofit Marketing and Fundraising. This course examines the unique resource development needs of nonprofit organizations and public organizations and looks at the principles and practical sides of meeting those through relationship management, marketing and fundraising. Time will be taken to look at all the aspects of a successful relationship, fundraising and marketing management plan. Students will be expected to participate in at least one fundraiser for a local nonprofit during the semester.

448-3 Museum Colloquium. Provides the student with in-depth experience with four major functional areas of museum administration, curation, education and exhibition-through project-based, practical experience in a professional, working museum. Prerequisite: AD 447 or consent of instructor.

449-3 Management of Nonprofit Organizations. This course examines the unique characteristics of nonprofit organizations that distinguish them from the public and for-profit sectors. It will explore the historical, legal, and socio-culture and economic contexts in which nonprofits function and the expectations that are attached in these contexts. Time will be devoted to such administrative issues as board development, strategic evaluation and planning, fiscal management, fundraising, human resources issues, working with staff, volunteers and governing boards, satisfying tax codes and service distribution.

455-3 Democratization: Global Struggles for Political Change. An examination of transitions to democracy from authoritarian rule in countries around the world. Emphasis is on understanding from a comparative perspective and the social, economic, institutional, political, cultural and international circumstances that promote, inhibit, and even reverse the spread of democratic forms of government. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement.

456-3 Gender and Global Politics. (Same as WGSS 446) An advanced course examining gender systems and women's situations across cultures and countries. This course also studies the impact globalization has had on gender issues by looking at women's activism at international and transnational levels. Topics covered include women's political representation, gender and culture, women's social movements, gender and development, and gendered policy issues. POLS 250 recommended.

459-3 Russia and the Post-Soviet States. This course examines political developments in Russia and the other fourteen Soviet successor states that gained (or regained) independence following the demise of the Soviet Union in 1991. Particular attention is paid to the degree to which Soviet legacies of communist political institutions, state socialist economic policies and ethno-federalism continue to shape the politics and economics of these countries in the post-independence period. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement.

460-3 European Politics. This course provides students an overview of European integration and a better understanding of

the functioning of the European Union. The course opens with a survey of historical developments in both Eastern and Western Europe from 1914 to 1989. After this historical overview, the institutions and policies of the European Union are studied in detail.

461-3 Asian Politics. What explains the economic transformation that has spread from India to China? Why has this so-called "economic miracle" bypassed other countries in the Asian continent? Why have democratic institutions been adopted in certain countries and not in others? This course provides a broad overview of the politics and economics of South and Southeast Asia since 1945.

467-3 Middle Politics. This course is designed to examine the regional politics and security of the Middle East and North Africa in a historical and comparative context. This course discusses the historical evolution of the modern states in the region, the dynamics of inter-Arab and Arab-Israeli politics and security, the role of ethnicity and religion in domestic and regional politics, and great powers' penetration of the region.

475-3 International Law. Rules and practices governing states in their relations in peace and war. Prerequisite: POLS 270 recommended.

476-3 Religion and Politics. (Same as SOC 476) Examines the connection between religious beliefs and institutions and political beliefs and institutions. Comparative studies will focus on religious political movements in the United States and throughout the world.

477-3 American Foreign Policy. This course surveys the conduct, goals and evolution of American foreign policy since World War II. It analyzes such issues as the role of institutions, culture and individuals in the formulation of American foreign policy, the interaction between domestic and foreign politics, and the debate over American grand strategy. Prerequisite: POLS 270 recommended.

480-3 Seminar in International Relations. Discussion-based course analyzing empirical and normative (ethical) issues in the study of international relations. Particular emphasis is placed on developing students' critical thinking skills. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Prerequisite: POLS 270 recommended.

494A-1 to 3 Honors Research. Directed research for senior honors students. Political science honors students may register for these credits if they have met all the prerequisites described in the political science Handbook. A three-person faculty committee will administer an oral examination upon completion of senior thesis. Not for graduate credit.

494B-1 to 3 Honors Research. Available to students who have completed all prerequisites of the University Honors Program and receive approval of their project from a Political Science instructor. Not for graduate credit.

Political Science Faculty

Baker, John H., Associate Professor, *Emeritus*, Ph.D., Princeton University, 1961.

Bloom, Stephen, Associate Professor, Ph.D., UCLA, 2004.

Burnside, Randy, Associate Professor and *Director of MPA Program*, Ph.D., University of New Orleans, 2004.

Bhattacharyya, Jnanabrota, Associate Professor, *Emeritus*, Ph.D., University of Delhi, 1969.

Clinton, Robert L., Professor, *Emeritus*, Ph.D., University of Texas at Austin, 1985.

Comparato, Scott A., Associate Professor, Ph.D., Washington University, 2000.

Foster, John L., Associate Professor, *Emeritus*, Ph.D., University of Minnesota, 1971.

Garner, William R., Associate Professor, *Emeritus*, Ph.D., Tulane University, 1963.

Grant, J. Tobin, Professor, Ph.D., The Ohio State University, 2001.

Hamman, John A., Associate Professor, Ph.D., University of Illinois, 1988.

Hildreth, Roudy, Associate Professor, Ph.D., University of Minnesota, 2005.

Jackson, John S., III, Professor, *Emeritus*, Ph.D., Vanderbilt University, 1971.

Kamarasy, Egon K., Assistant Professor, *Emeritus*, Doctor Politics, Budapest University, Hungary, 1942.

Kenney, David, Professor, *Emeritus*, Ph.D., University of Illinois, 1952.

Mason, Ronald M., Associate Professor, *Emeritus*, Ph.D., University of Iowa, 1976.

McClurg, Scott, Professor, Ph.D., Washington University, 2000.

Melone, Albert, Professor, *Emeritus*, Ph.D., University of Iowa, 1972.

Miller, Roy E., Associate Professor, *Emeritus*, Ph.D., University of Illinois, 1971.

Mulligan, Kenneth, Associate Professor and *Director of Undergraduate Studies*, Ph.D., The Ohio State University, 2004.

Pink, Stephanie, Assistant Professor, Ph.D., Mississippi State University, 2011.

Shulman, Stephen, Associate Professor and *Director of Graduate Studies*, Ph.D., University of Michigan, 1996.

Snively, Keith, Professor, *Emeritus*, Ph.D., University of California at Davis, 1984.

Somit, Albert, *Distinguished Service Professor*, *Emeritus*, Ph.D., University of Chicago, 1947.

Stewart, La Shonda, Associate Professor, Ph.D., Mississippi State University, 2008.

Stout, Christopher, Assistant Professor, Ph.D., University of California, Irvine, 2010.

Tilley, Virginia Q., Professor and *Chair*, Ph.D., University of Wisconsin, 1997.

Turley, William S., Professor, *Emeritus*, Ph.D., University of Washington, 1972.

Pre-Health Professional Programs

(SEE COLLEGE OF SCIENCE-CHAPTER 4)

Psychology

(Department, Major, Minor, Courses, Faculty)

The undergraduate program in psychology provides a broad general education in the tradition of the liberal arts. This tradition focuses on the development of wide-ranging interests in the arts, humanities, and social sciences, and on the development of critical and analytical thinking. A student who has earned a

degree in one of the liberal arts, such as psychology, should be prepared to pursue lifelong learning and personal enrichment, as well as enter the work force or pursue advanced studies.

Graduates of the psychology program who have entered the work force immediately have found employment in a wide variety of settings, ranging from sales and personnel work in the business sector, to positions with the human service agencies of local, state, and federal governments. Graduates who have gone on to advanced study have successfully prepared themselves for professional careers in such fields as business, law, medicine, and psychology.

Students planning to apply to medical schools or law after completing a major in psychology should plan their programs of study in close consultation with the pre-medical or pre-law advisors on campus. Students planning to apply for admission to graduate study in psychology should plan their undergraduate program of study very carefully in consultation with advisors in the Department of Psychology. At least two years, and as many as six years, of graduate study are required for qualification as a professional psychologist.

Students who enter the University with a major in psychology should meet with the director of undergraduate studies in the Department of Psychology as soon as possible after arrival at the University in order to discuss their interests and plans of study. Students already at the University who wish to change to a major in psychology should contact the office of the director of undergraduate studies in the Department of Psychology in order to initiate the request for a change of major.

Bachelor of Arts Degree in Psychology, College of Liberal Arts

University Core Curriculum Requirements 41

College of Liberal Arts Academic Requirements

(See Chapter 4)..... 12

ENGL, Global Studies, and FL.

Requirements for Major in Psychology 42-44

PSYC 102 (with a grade of C or better) (3)¹

UCOL 101P/PSYC 202 (with a grade of C or better) (3)

MATH 108, 111, 101 or 139 (choose one) (3)¹⁺ 0-2

PSYC 211, 311 (passed with a grade of C or better,

completion of 211 before senior year recommended) 8

Psychology Electives 29-30

Ten courses from the list below. At least six must be from

Groups A, B, and C, with at least one course from each

of these three groups. A minimum of three courses must

be chosen at the 400-level from among the total offerings

in the A, B, and C Groups and PSYC 489 in Group D.

Group A: 233, 301, 303, 304, 305, 306, 307, 331, 333,

334, 431, 432, 440, 451, 461, 464, 470, CI 403

Group B: 302, 309, 310, 312, 407, 409, 415, 416, 419,

443, 445, 471

Group C: 223, 314, 322, 323, 340, 411, 413, 420, 421,

425, 441, 465, 480

Group D: 222, 389, 391, 392, 393, 394, 489, 499A,B,

EPSY 402, MATH 282

Of all credits that a student completes for PSYC 391, 392,

393, and 394, a maximum of three hours to count as one of

the required 10 courses, 3 credits must be completed in 391,

392, 393, or 394 towards the major.

Electives 25-34
 Total 120

¹Courses in parenthesis will also count toward the 41 hours of University Core Curriculum requirements.

Psychology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
MATH 101, Science (Group I)	3	3
CMST 101, Human Health.....	3	2
UCC Fine Arts, Social Science	3	3
PSYC 102 ¹	-	3
UCOL 101P/PSYC 202.....	3	-
<i>Total</i>	15	14

SECOND YEAR	FALL	SPRING
UCC Social Science, Science (GR II)	3	3
UCC Humanities, Multicultural	3	3
ENGL, PSYC 211	3	4
PSYC Electives.....	3	3
Elective	3	3
<i>Total</i>	15	16

THIRD YEAR	FALL	SPRING
PSYC 311.....	4	-
PSYC Electives.....	6	3
Electives	5	12
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
PSYC 400-Level	6	3
PSYC Electives.....	3	3
Electives	6	9
<i>Total</i>	15	15

¹Satisfies Core Curriculum Social Science requirement.

Psychology Major-Parent Training Specialization

Psychology majors intending to pursue careers as mental health counselors and therapists providing services to children and families may wish to pursue a specialization in Parent Training. The specialization includes course work focused on psychological development across the child and adolescent lifespan, child and adolescent psychopathology, training in helping skills, and evidence-based parenting strategies to promote positive relationships and develop effective disciplinary techniques.

University Core Curriculum Requirements 41
 College of Liberal Arts Academic Requirements
 (See Chapter 4)..... 12
 Requirements for Major in Psychology 38-43
 PSYC 102 (with a grade of C or better) (3)¹
 UCOL 101P/PSYC 202 (with a grade of C or better) (3)¹
 MATH 108, 111, 101 or 139 (choose one) (3)¹+ 0-2
 PSYC 211, 311 (passed with a grade of C or better, completion of 211 before senior year recommended) 8

Specialization requirements:

PSYC 301, 451 or 391, 303, 432, 425, 441 or 393 18
 Psychology Electives 12
 Four additional courses from the list below. At least six courses for the Major in total must be from Groups A, B, and C, with at least one course from each of these three groups.
Group A: 233, 301, 303, 304, 305, 306, 307, 331, 333, 334, 431, 432, 440, 451, 461, 464, 470
Group B: 302, 309, 310, 312, 407, 409, 415, 416, 419, 443, 445, 471
Group C: 223, 314, 322, 323, 340, 411, 413, 420, 421, 441, 465, 480
Group D: 222, 389, 391, 392, 393, 394, 489, 499A,B, EPSY 402, MATH 282
 Of all credits that a student completes for PSYC 391, 392, 393, and 394, a maximum of three hours to count as one of the required 10 courses, 3 credits must be completed in 391, 392, 393, or 394 towards the major.

Electives 24-29
 Total 120

¹Courses in parenthesis will also count toward the 41 hours of University Core Curriculum requirements.

Psychology Minor

A minor in psychology requires the successful completion of at least 15 semester hours (5 courses) in courses offered by the Department of Psychology and acceptable to the department for fulfillment of major requirements. Psychology 393 may not be included. A maximum of three hours from Psychology 391, 392 or 394 may count towards the minor. To count as one of the 5 required courses, 3 credits must be completed in 391, 392 or 394. Courses in other departments, such as the Department of Educational Psychology, do not fulfill minor requirements. An average GPA of at least 2.0 in psychology courses must be successfully completed. Students completing a minor in psychology for purposes of qualifying to teach psychology in the State of Illinois must complete a minimum of 20 semester hours in psychology.

A student wishing to complete a minor in psychology must apply to the Department of Psychology for approval of the program of study for the minor. Without this approval the minor will not be officially listed on the student’s transcript at the time of graduation. Application forms are available in the office of the director of undergraduate studies in psychology.

Courses taken at other institutions may count towards the minor only if those courses are acceptable for transfer credit in psychology. If credit is not accepted for transfer, a revised application for the minor must be approved. No more than two transfer courses can count toward a minor.

Transfer Credit

Credit for a course in psychology successfully completed at another accredited institution will be transferred to meet major or minor requirements in psychology at SIU Carbondale, subject to the following conditions:

1. The course number must bear a departmental prefix clearly indicating the course is a psychology course. Examples are PSYCH and PSYC.

2. The course must have covered substantially the same content material as a course currently offered at SIU to meet major requirements.
3. Credit for a course completed at a community or junior college is not transferable if the corresponding course at SIU is offered at the 400-level.
4. A grade point average of 2.0 or higher must have been earned in the course.
5. No more than five transfer courses can count for the major, and no more than two transfer courses can count toward a minor.
6. All transfers of credit to meet major or minor requirements in psychology must be explicitly approved by the department of psychology.

Courses from other institutions that do not meet these conditions may still be acceptable for elective credit to meet general University requirements. Students should consult their departmental or college advisor about such courses.

Senior Honors Program

A small number of students are selected each year for the honors program. Selection criteria are promising academic performance (3.0 overall grade point average and 3.25 psychology grade point average minimum), expressed interest, recommendation by departmental advisor, and capacity of program to take new students. Emphasis is on small seminar and individual research work by the student. Concurrent membership in the University Honors Program is strongly encouraged.

Courses (PSYC)

102-3 Introduction to Psychology. (University Core Curriculum) [IAI Course: S6 900] An examination of the variables related to the origins and modifications of human behavior using the viewpoints and techniques of contemporary psychology. Purchase of syllabus from local vendor required.

202-3 Careers in Psychology. A survey of fields of psychology from the perspective of available career options. Activities, required skills, rewards, and external constraints that characterize different career paths are practiced and discussed in relation to students' abilities and interests. Required of psychology majors, but open to any interested student. Prerequisite: None.

211-4 Research Methods and Statistics. An introduction to the use of scientific methods in the study of behavior. Considerations of experimental design and methodology are integrated with the treatment of data analysis, interpretation of results and writing of a research report. Students will write a research proposal, conduct an experiment, and write a report of the experiment. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Lecture and laboratory. Prerequisite: MATH 101 or UCC Math; PSYC 102.

222-3 Effects of Recreational Drugs on Mind and Body. Describes the physiological and psychological effects of substances used as recreational drugs for their psychoactive effects. Drugs discussed will include alcohol, amphetamines, cocaine and other stimulants, the barbiturates, methaqualone, the psychedelics, marijuana, tranquilizers, and the opiates. The

purpose of the course is to provide the student with facts concerning the effects of these drugs and the potential for their abuse and physiological and psychological dependence.

223-3 Diversity in the Workplace. (University Core Curriculum) Examination of factors affecting the full utilization of women, racioethnic minorities, older workers, disabled workers and workers with nontraditional sexual orientations in the workplace. Individual processes, such as group identities, stereotyping, prejudice; group processes such as intergroup conflict; and organizational processes such as structural barriers and informal integration will be studied. The class utilizes a lecture and small discussion-section format with in-class, team, and individual exercises and projects.

233-3 Psychology of Gender in Diverse Context. (Same as WGSS 233) (University Core Curriculum) The course examines how gender affects all aspects of our lives at the individual, societal and cultural levels. It will cover psychological theories and topics related to gender, and will examine issues of diversity, such as race/ethnicity, class, sexuality, disability and age as they interact with gender.

301-3 Child Psychology. The biological and psychological development of the child from birth through puberty, and relevant research methods and results. Prerequisite: PSYC 102.

302-3 Introduction to Neuroscience. A survey of the role of biological processes in the behavior of humans and other species. Topics include structure and function of the nervous system, behavioral endocrinology, psychopharmacology, sensorimotor functions, sleep and waking, motivation and emotion, reinforcement, psychopathology, and learning and memory.

303-3 Adolescence and Young Adulthood. Examines interrelated psychological, biological and social aspects of development during adolescence and young adulthood based on a life-span perspective of development. Prerequisite: PSYC 102.

304-3 Adulthood and Aging. Examines the interrelated psychological, biological, and social aspects of development during middle and later adulthood based on a life-span perspective of development. Neuropsychological changes associated with normal and pathological aging will be considered. Prerequisite: PSYC 102.

305-3 Psychology of Personality. The inferred patterns underlying an individual's unique reactions to the environment. Investigates the motivation, development, and methods of changing these patterns, and how personality processes are studied. Prerequisite: PSYC 102.

306-3 Positive Psychology and Human Strengths. An introduction to a contemporary movement seeking to understand the nature of human strengths, characteristics, resources, and aspirations. Surveys this emerging discipline, emphasizing theory and practical applications promoting human potential. Topics include happiness, creativity, confidence, wisdom, and intelligence among other aspects of optimal human functioning. Prerequisite: PSYC 102.

307-3 Social Psychology. Surveys contemporary issues such as love and friendship, shyness and loneliness, sexual attitudes and behavior, management of impressions made on others, attitude change and persuasion, leadership, group processes, aggression, and helping behavior. Prerequisite: PSYC 102.

308-3 Psychology of Motivation. Examines variables affecting motivation in animals and humans. Topics include moti-

vation based on cultural processes as well as those based on biological needs. Prerequisite: PSYC 102.

309-3 Psychology of Learning. Principles and laws of learning as derived from the classical and instrumental learning literature - acquisition, extinction, punishment, persistence, generalization, discrimination, motivation, drives, and incentives. Prerequisite: PSYC 102.

310-3 Cognitive Psychology. A survey of theory and research on attention, memory, language behavior, and problem solving. The principal orientation will be the information processing approach to the study of behavior. Prerequisite: PSYC 102.

311-4 Field Research Methods in Psychology. An introduction to field and other quasi-experimental methods appropriate for use in settings in which the researcher can exercise minimal control and manipulation. Included are designs and analytical methods for exploring cause-effect relationships in naturalistic settings. Lecture and laboratory. Prerequisite: PSYC 211 or consent of instructor.

312-3 Sensation and Perception. Surveys the structure and function of the sensory organs as well as the perceptual experiences associated with these systems (e.g., color perception, speech perception). Examines physical, neural, and chemical mechanisms responsible for sensory and perceptual experience. Prerequisite: PSYC 102.

314-3 The Brain and Emotion. Great advances have been made in understanding how the brain works in areas such as visual processing and memory. Recently, brain researchers have begun to turn their attention towards understanding emotions, given the importance of emotions to human functioning. This course examines the relationship between the brain and emotions. Prerequisite: PSYC 102.

322-3 Personnel Psychology. (Same as MGMT 385) Examines the methods of psychology used in the selection, placement, and evaluation of employees. Government regulations requiring equal opportunity, psychological measurement concepts, and employee performance evaluation in the work environment are covered. Prerequisite: PSYC 102.

323-3 Organizational Psychology. Applied human relations at work focusing on interpersonal and small-group behavior. Covers effective communication, employee morale, motivation, behavior modification, leadership and group dynamics, human relations and the law, and stress and coping. Prerequisite: PSYC 102.

331-3 Abnormal Psychology. An introduction to the major forms of psychopathology (e.g., depression, schizophrenia, anxiety disorders). Topics include the symptomatology of different mental disorders, their etiology from psychological, biological, and sociocultural perspectives, and issues pertaining to diagnosis and treatment. Prerequisite: PSYC 102.

333-3 Psychology of Women. (Same as WGSS 341) An examination of empirical evidence on the biological, psychological, and social functioning of women, describing women's roles, the genetic versus social determinants of women's behavior, and the implications for women's potential. Prerequisite: PSYC 102 or consent of instructor.

334-4 Psychology of African American Experience. (Same as AFR 334) Course examines psychological characteristics of people of African descent, using an Africentric conceptual model. Theoretical models will be critiqued and empirical data

will be examined. Selected issues include: critiques of research methodologies involving African descended population; African American identities and personality development, psychopathology, and cognitive development issues (i.e., language). Special approval needed from the instructor.

340-3 Introduction to Clinical and Counseling Psychology. Provides an in-depth understanding of the nature of two major specialties in the field of psychology: clinical and counseling psychology. Students will examine the historical origins of the two areas, study their major theoretical definitions, compare and contrast the areas, and sample empirical and practitioner activities unique to them. Prerequisite: PSYC 102.

389-1 to 9 Seminar: Selected Topics. Varied content. Offered as need exists and as faculty interests and time permit. May be repeated as topics vary. Special approval needed from the instructor.

391-1 to 9 Individual Project. Individual study, research or experience under the supervision of a member of the Department of Psychology faculty. Of all credits that a student completes for PSYC 391, 392, 393, and 394, a maximum of three hours from any or all of these courses may count towards the major. Mandatory Pass/Fail. Special approval needed from the instructor.

392-1 to 9 Individual Project. Individual study, research or experience under the supervision of a member of the Department of Psychology faculty. For use in those cases where the faculty member deems a graded course to be appropriate. Of all credits that a student completes for PSYC 391, 392, 393, and 394, a maximum of three hours from any or all of these courses may count towards the major. Special approval needed from the instructor.

393-1 to 9 Preprofessional Practicum. Directed experience in human services or other activities relevant to psychology at a public or private institution, agency, or organization. The experience is on a volunteer basis. Enrollment must be approved in advance by the director of undergraduate field placements for the Department of Psychology. Mandatory Pass/Fail. Special approval needed from the instructor.

394-1 to 9 Undergraduate Practicum in the College Teaching of Psychology. Supervised practicum in the college teaching of psychology for selected senior psychology majors. Of all credits that a student completes for Psychology 391, 392, 393, and 394, a maximum of three hours from any or all of these courses may count towards the major. Restricted to senior psychology major. Special approval needed from the instructor.

407-3 Theoretical Issues in Learning. An introduction to the major theoretical issues in learning and their importance. A brief review of the history of such problems will be followed by a summary of the current research concerning these issues. Traditional figures in learning theory will be considered within the context of their positions on specific questions. Prerequisite: PSYC 211 and PSYC 309 or equivalent or graduate status.

409-3 History and Systems of Psychology. A review of the conceptual and empirical antecedents of modern psychology. Prerequisite: PSYC 211. Restricted to senior status, or graduate status.

411-3 Applied Learning. An in-depth coverage of practical problems concerned with training to which the principles of learning derived from pure laboratory investigations can be ap-

plied. Prerequisite: PSYC 211 and PSYC 309 or graduate status.

413-3 Individual Differences. Reviews the reliable and theoretically significant individual and group differences that have been revealed by research in the behavioral sciences. Examines differences in general intelligence, specific verbal and spatial abilities, stylistic and personality characteristics, as well as such group differences as sex, race, and socioeconomic status. Prerequisite: PSYC 211 and PSYC 305 or graduate status.

415-4 Psychopharmacology. A survey of the effects of drugs on the normal and abnormal behavior of humans and animals. A primary focus is upon understanding drug influences on behavior in relation to actions on the nervous and endocrine systems. Prerequisite: PSYC 211 and PSYC 302, or graduate status.

416-3 Recovery of Function Following Brain Damage. A survey of experimental animal and human clinical research as they relate to behavioral recovery following damage in the central nervous system. Recent theories and literature are stressed. Prerequisite: PSYC 211 and PSYC 302 or consent of instructor, or graduate status.

419-3 Behavioral Genetics. Provides an overview of the experimental and quantitative methods used in studying behavioral differences associated with genetic variables. Elementary aspects of genetics will be included in the course, which will examine several aspects of both human and nonhuman behavior. Prerequisite: PSYC 211 or consent of instructor, or graduate status.

420-3 Industrial/Organizational Psychology. Topics in industrial and organizational psychology; applications of psychology to human resource management, such as job analysis performance appraisal systems, personnel selection and training. Prerequisite: PSYC 211.

421-3 Psychological Tests and Measurements. Introduction to measurement theory and test development. Detailed coverage of selected tests from such areas as intelligence, aptitude and personality, and the use of psychological tests in various settings. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: PSYC 211 or graduate status.

425-3 Psychology of Positive Parenting. This course will provide a comprehensive overview of key concepts in parenting, the nature of parenting across the lifespan and specific challenges for parents with children in each of the developmental stages. We will discuss effective strategies for addressing these challenges in addition to programs and approaches that demonstrate a strong evidence base. Special focus will additionally be given to diversity issues, parenting in high risk families and in families with exceptional children. Prerequisites: PSYC 102, PSYC 301 with grades of C or better.

431-3 Advanced Psychopathology. An advanced presentation of theoretical and empirical issues in contemporary psychopathology research. Explores the role empirical research plays in understanding the features of major psychological disorders and their treatment. Provides a broad understanding of the many factors that contribute to the development and maintenance of abnormal behaviors. Prerequisite: PSYC 211, PSYC 331 or consent of instructor or graduate status.

432-3 Psychopathology of Childhood. An extensive review and systematic evaluation of theories and research pertaining

to the behavior disorders of childhood. Emphasis will be upon empirical data and the implications of these data for the classification and treatment of these disorders. Prerequisite: PSYC 211, PSYC 301, PSYC 311 or graduate status.

440-3 Advanced Personality. Advanced presentation of theoretical and research issues related to current issues in personality psychology. The overarching focus of the course is presentation and discussion of a scientific approach to understanding what personality is, how it can be measured, how it develops and how it relates to various aspects of individual functioning. Prerequisite: PSYC 211 or consent of instructor.

441-3 Helping Skills in Clinical and Counseling Psychology. (Same as COUN 493) Provides systematic training in helping skills for students considering clinical or counseling psychology as a career. Students learn to identify and demonstrate such skills as paraphrasing, reflection of feeling, interpretation, and confrontation, and will use them in practice situations. Prerequisite: PSYC 211 and PSYC 340. Restricted to senior standing in psychology.

443-3 Bilingualism. (Same as LING 443) Examines the linguistic, psycholinguistic, sociolinguistic and educational aspects of bilingualism, particularly as pertaining to the care and education of bilingual children. Useful for teachers, speech therapists, doctors, psychologists, counselors, and others working with bilinguals. Practical applications and data-based research. Prerequisite: PSYC 211.

445-3 Psycholinguistics. (Same as LING 445) A broad spectrum introduction to psycholinguistics. Topics to be covered include general methodology for the study of psycholinguistics, the nature of language, theories of human communication, language comprehension and production, first and second language acquisition, meaning and thought, natural animal communication systems and language of the brain. Prerequisite: PSYC 211.

451-3 Advanced Child Psychology. An assessment of concepts, methods, and research techniques within selected topic areas of developmental psychology. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: PSYC 211 and PSYC 301, or graduate status. Special approval needed from the instructor.

461-3 Advanced Social Psychology. Critical examination of contemporary theories and research in social psychology. Practice in application of scientific findings to real-life problems of individuals and groups. Issues treated in depth are chosen for relevance to student's personal needs and career interests. Prerequisite: PSYC 211 and PSYC 307 or graduate status.

464-3 Social Factors in Personality and Behavior. (Same as SOC 426) Advanced study of social psychology from both sociological and psychological perspectives. Analyzes the reciprocal influence of groups and individuals, including the development of self, social interaction, gender and ethnic relations, impression management, interpersonal attraction, and social influence. Prerequisite: PSYC 211 and PSYC 307.

465-3 Applied Social Science Research Methods. This course will introduce students to a variety of research methods and techniques that are used by social scientists in applied contexts. Students will learn the fundamentals of data collection in a variety of contexts, such as from archival data sources, survey research, interviews and focus groups. Students will also learn

how to use spreadsheets and statistical software (SPSS) to analyze data, and they will gain experience with report writing. Students will have opportunities to practice and demonstrate these skills through classroom exercises and projects. Prerequisite: PSYC 211. Restricted to senior standing in psychology major or graduate status or consent of instructor.

466-3 Intermediate Statistics in Psychology. Covers statistical techniques relevant to psychology and other social sciences and provides a bridge between introductory and graduate statistics courses. Topics include one-way and factorial analysis of variance, repeated measures analysis of variance, simple and multiple regression, and analysis of covariance. Prerequisite: PSYC 211. Special approval needed from the instructor.

470-3 Psychology of Race and Racism. (Same as AFR 472) This course reviews the history and evolution of the construct of race as a psychological phenomenon. While the course will be largely psychological in nature, the pervasiveness of race in practically every sphere of life necessitates a multidisciplinary approach. The course will emphasize a theoretical and conceptual approach toward understanding the psychology of racialized thinking. Prerequisite: PSYC 211.

471-3 Judgment and Decision Making. A survey of the academic field of judgment and decision making, its major methods, theories, results, and controversies. We will examine the generality of experimental results across various domains including gambling, clinical prediction, perception of randomness, and medical decision making. Prerequisite: PSYC 211 or graduate status.

480-3 Effective Correctional Practices. (Same as CCJ 480) Exploration and evaluation of correctional intervention strategies developed for the sentencing of adjudicated persons. Particular emphasis on examining empirical research literature on effective correctional practices, including programs currently implemented in institutional setting, alternatives to institutional corrections, and community based programs. Prerequisite: PSYC 211.

489-1 to 12 Seminar: Selected Topics. Varied content. Offered as need exists and as faculty interests and time permit. Prerequisite: PSYC 211. Special approval needed from the instructor.

499A-3 Senior Honors in Psychology. Intensive study in selective areas for students qualified for honors work in psychology. A research paper or equivalent will be required. Not for graduate credit. Prerequisite: PSYC 211. Special approval needed from the instructor.

499B-3 Senior Honors in Psychology. Intensive study in selective areas for students qualified for honors work in psychology. A research paper or equivalent will be required. Not for graduate credit. Prerequisite: PSYC 211. Special approval needed from the instructor.

Psychology Faculty

Campbell, Christina, Assistant Professor, Ph.D., Michigan State University, 2012.

Cashel, Mary Louise, Associate Professor, Ph.D., University of North Texas, 1997.

Chwalisz, Kathleen D., Professor, Ph.D., University of Iowa, 1992.

Clancy Dollinger, Stephanie M., Associate Professor, Ph.D.,

Syracuse University, 1989.

DiLalla, David Louis, Associate Professor and *Associate Provost*, Ph.D., University of Virginia, 1989.

DiLalla, Lisabeth F., Professor, Ph.D., University of Virginia, 1987.

Dillon, Ronna, Professor, *Emerita*, Ph.D., University of California, Riverside, 1978.

Dollinger, Stephen J., Professor, *Emeritus*, Ph.D., University of Missouri-Columbia, 1977.

Drake, Chad, Assistant Professor, Ph.D., University of Mississippi, 2008.

Etcheverry, Paul E., Associate Professor, Ph.D., Purdue University, 2004.

Fehr, Karla, Assistant Professor, Ph.D., Case Western Reserve University, 2014.

Gannon, Linda, Professor, *Emerita*, Ph.D., University of Wisconsin, 1975.

Gilbert, Brenda O., Associate Professor, *Emerita*, Ph.D., University of Florida, 1985.

Gilbert, David G., Professor, Ph.D., Florida State University, 1978.

Habib, Reza, Associate Professor Ph.D., University of Toronto, 2000.

Hoane, Michael R., Professor, Ph.D., Texas Christian University, 1996.

Hysin, Michael, Assistant Professor, Ph.D., Northern Illinois University, 2010.

Jacobs, Eric, Associate Professor, Ph.D., University of Florida, 1997.

Jensen, Robert A., Professor, *Emeritus*, Ph.D., Northern Illinois University, 1976.

Kertz, Sarah, Assistant Professor, Ph.D., University of Louisville, 2011.

Kibby, Michelle Y., Associate Professor, Ph.D., The University of Memphis, 1998.

Komarraju, Meera, Associate Professor and *Chair*, Ph.D., University of Cincinnati, 1987; Ph.D., Osmania University, 1983.

Lakshmanan, Usha, Professor, Ph.D., University of Michigan, Ann Arbor, 1989.

McHose, James H., Professor, *Emeritus*, Ph.D., University of Iowa, 1961.

McKillip, John A., Professor, *Emeritus*, Ph.D., Loyola University of Chicago, 1974.

O'Donnell, James P., Associate Professor, *Emeritus*, Ph.D., University of Pittsburgh, 1965.

Pitz, Gordon F., Professor, *Emeritus*, Ph.D., Carnegie Mellon University, 1963.

Radtke, Robert C., Associate Professor, *Emeritus*, Ph.D., State University of Iowa, 1963.

Ramanaiah, Nerella, Professor, *Emeritus*, Ph.D., University of Oregon, 1971.

Rodriguez II, Benjamin F., Associate Professor, Ph.D., The Catholic University of America, 2001.

Rottinghaus, Patrick J., Associate Professor, Ph.D., Iowa State University, 2004.

Schill, Thomas R., Professor, *Emeritus*, Ph.D., Oklahoma State University, 1963.

Schlesinger, Matthew, J., Associate Professor, Ph.D., University of California, Berkeley, 1995.

Schmeck, Ronald R., Professor, *Emeritus*, Ph.D., Ohio University-Athens, 1969.

Snyder, John F., Associate Professor, *Emeritus*, Ph.D., Loyola University, 1965.

Swanson, Jane L., Professor, Ph.D., University of Minnesota, 1986.

Tinsley, Howard E. A., Professor, *Emeritus*, Ph.D., University of Minnesota, 1971, 1973.

Vaux, Alan C., Professor, *Emeritus*, Ph.D., Trinity College Dublin, 1979; Ph.D., University of California at Irvine, 1981.

Wang, Yu-Wei, Associate Professor, Ph.D., University of Missouri-Columbia, 2004.

Yanico, Barbara, Associate Professor, *Emerita*, Ph.D., The Ohio State University, 1977.

Quantitative Methods

(Major, [Graduate only], Courses)

Courses (QUAN)

402-3 Basic Statistics. A master’s level terminal statistics course. Emphasis on descriptive statistics, graphical representation of data, correlation, and simple regression. Includes an introduction to hypothesis testing procedures and analysis of variance.

Quantitative Methods Faculty

Elmore, Patricia, Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1970; 1967.

Headrick, Todd Christopher, Professor and *Chair*, Ph.D., Wayne State University, 1997; 1999.

Koran, Jennifer, Assistant Professor, Ph.D., University of Maryland, 2009; 2009.

Kowalchuk, Rhonda K., Associate Professor, Ph.D., University of Manitoba, 2005; 2004.

Leitner, Dennis W., Associate Professor, *Emeritus*, Ph.D., University of Maryland, 1975; 1974.

Lewis, Ernest, Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1971; 1970.

Sheng, Yanyan, Associate Professor, Ph.D., University of Missouri-Columbia, 2005; 2005.

Radio, Television, & Digital Media

(Department, Major, Minor, Courses, Faculty)

The Department of Radio, Television, & Digital Media prepares students for positions in the communications sector. The program combines practical and analytical study in producing television, video, animation, audio and radio, together with electronic journalism, the global media industries, the music business, and research on traditional and emerging media.

All Radio, Television, & Digital Media students are required to maintain an overall 2.0 grade point average in the major. If a Radio, Television, & Digital Media student does not achieve a 2.0 grade point average in the major in any one semester, that student is subject to departmental warning. Students who are on departmental warning and do not earn an overall 2.0 grade point average in Radio, Television, & Digital Media courses in a subsequent semester will be placed in a status of departmen-

tal dismissal. A student who has been placed on collegiate dismissal will be transferred to undecided Mass Communication or may seek transfer to another University program if the student has an overall SIU grade point average of 2.0. A dismissed student may appeal to the Departmental Undergraduate Committee for reinstatement into the program.

Enrollment in Radio, Television, & Digital Media courses may be canceled for students who do not attend the initial class session of the semester. Fees will be assessed for supplies and materials in some courses. Students should inquire about fee amounts before registering.

Each student enrolled in the Radio, Television, & Digital Media program must declare a specialization in one of the areas described below before progressing to any Radio, Television, & Digital Media course beyond RTD 200 and 300.

1. Radio, Television, & Digital Media students must receive a grade of *B* or better in ENGL 101 (LING 101) and ENGL 102 (LING 102). If an RTD student does not receive a grade of *B* or better in these courses, they will need to take ENGL 290, ENGL 291, or ENGL 300 and receive a grade of *C* or better.
2. Students must receive a grade of *C* or better in both RTD 200 and RTD 300 before taking any other RTD courses. RTD 200 and RTD 300 can only be repeated one time;
3. Grades of *C* or better are required in all Radio, Television, & Digital Media courses in order to count towards the major or minor and to satisfy prerequisite requirements.

Transfer students must complete a minimum of 21 hours in Radio, Television, & Digital Media courses at the University to earn a degree.

Bachelor of Arts Degree in Radio, Television, & Digital Media, College of Mass Communication & Media Arts

<i>University Core Curriculum Requirements</i>	41
<i>Language Requirement</i>	6
Foreign language or approved substitute.	
<i>Requirements for Major in Radio, Television, & Digital Media</i>	39
RTD 200, 300, 308, 393, one RTD Media Studies Course, one JRNL or CP course beyond the core curriculum	18

Digital Media Arts and Animation Specialization

In Digital Media Arts and Animation, students choose courses centered on digital art creation, creative storytelling, and computer animation. Digital media artists and animators write, design, and create computer animation, games, digital audio, and video for delivery across an array of media platforms. Through digital methods and innovative forms, students in the Digital Media Arts and Animation specialization are able to creatively explore and critically comment on the arts, content, media theories, and technologies that are shaping the future of media.

Required writing course either: RTD 383 Writing for Media Arts or JRNL 201 Writing Across Platforms

Select three of the following courses:

- RTD 331 Digital Graphic Foundations
- RTD 361 Sound Mix in Popular Culture
- RTD 363 Radio/Audio Production
- RTD 461 Multimedia Production

- RTD 487 3D Animation I
- RTD 488 3D Animation II
- RTD 490 3D Animation III
- CP 454 Animated Film Production
- CP 470A (History of Animation)

Plus 9 hours of Radio, Television, & Digital Media Electives

Electronic Journalism Specialization

Classes are taught by industry professionals who incorporate history, ethics, legal issues and in depth reporting into the wide ranging curriculum. Students report, shoot, and edit their own stories using the latest equipment and software programs. Most students in Electronic Journalism work as “one man band” reporters. They produce a live half hour newscast on our PBS station, including weather and sports. Students also produce in depth and investigative reports which air on the news show. Stories also run on our online site which students also produce. Many students take advantage of the department’s excellent internship programs.

Required Courses:

- RTD 310 (3 hours) – News Writing for Electronic Media
- RTD 311 (3 hours) – Audio Journalism for Electronic Media (preq. RTD 310)
- RTD 370 (3 hours) -Television News Reporting (preq. RTD 310)
- RTD 470 (3 hours) – TV News Field Prod.(preq. RTD 370)
- RTD 477 (3 hours) – Investigative Reporting

Plus 6 hours of Radio, Television, & Digital Media Electives

Media Industries Specialization

Students in Media Industries work at the intersection of media creativity, technology and business and learn about the broad structures and specific practices of film, television, radio, music, gaming, Internet and mobile media. Classes prepare students for entry-level and executive-track positions at major studios, network and cable television outlets, in the music business, and at emerging media companies that create video games, Internet apps and mobile content.

Required Courses:

- RTD 3___ (3 hours) (approved 300 level)
- RTD 3___ (3 hours) (approved 300 level)
- RTD 3___ (3 hours) (approved 300 level)
- RTD 4___ (3 hours) (approved 400 level)

Plus 9 hours of Radio, Television, & Digital Media Electives

Radio/Audio Specialization

Students in Radio/Audio develop their creative talents inside learning environments that unify critical listening and recording fundamentals from a wide variety of professional, artistic and historical viewpoints. Courses in the Audio Arts range from the commercial audio industries, sound and moving image and special topics courses in sound art and documentary radio. With the aid of our talented faculty, students learn to create and exhibit their projects on today’s technology by using our professional studios and computer labs.

Required Courses:

- RTD 3___ (3 hours) (approved 300 level)
- RTD 3___ (3 hours) (approved 300 level)
- RTD 3___ (3 hours) (approved 300 level)
- RTD 4___ (3 hours) (approved 400 level)

Plus 9 hours of Radio, Television, & Digital Media Electives

Electronic Sports Media Specialization

Students in the Sports Media Specialization study in one of two tracks: Sports Production and Sports Journalism. In the Sports Production track students learn the fundamentals of live event video production including site surveys, planning producing and directing a variety of sporting events. The Sports Journalism track teaches the techniques of covering sporting events and issues, interviewing participants, and lives game coverage. Students in both tracks work together to produce sports oriented and game telecasts.

Required courses for Sports Production track:

- JRNL 201, Writing Across Platforms
 - RTD 365B, Multi-Camera Production
 - RTD 321, Sports, Media and Society
 - RTD 479, Multi-Camera Field Production
- Plus 9 hours of Radio, Television, & Digital Media Electives*

Required courses for Electronic Journalism track:

- JRNL 201, Writing Across Platforms
 - RTD 310, News Writing for Electronic Media
 - RTD 312, Electronic Sports Journalism
 - RTD 321, Sports, Media and Society
 - RTD 400-level Approved Course
- Plus 6 hours of Radio, Television, & Digital Media Electives*

Television/Video Production Specialization

Students who study Television/Video Production at SIU learn how to light, shoot and edit professionally, and how to tell compelling stories that make contact with audiences. Courses in field and studio use state-of-the-art equipment to prepare students to take positions in the industry, and students have the opportunity to gain professional experience by working with WSIU Public Broadcasting. Post-production facilities include a full complement of editing and multimedia software, allowing student producers to bring their imaginations to life.

Required Courses:

- RTD 383 (3 hours) – Writing for Media Arts
- RTD 365A (3 hours) – Single Camera Field Production
- RTD 365B (3 hours) – Multi-camera Production
- RTD 4___ (3 hours) – (approved 400 level)

Plus 9 hours of Radio, Television, & Digital Media Electives

Minor in Related Area 15
General Electives 17-19
Total 120

¹A Radio, Television, & Digital Media student has the option to create his/her own directed specialization with the guidance of a faculty member and the approval of the Undergraduate Curriculum Committee before taking any Radio, Television, & Digital Media classes beyond Radio, Television, & Digital Media 200 and 300.

Radio, Television, & Digital Media Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
RTD 200, RTD 300	3	3
ENGL 101, 102.....	3	3
UCOL 101.....	1	-
CMST 101.....	3	-
MATH	3	-

UCC	2	9
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
RTD specialization course	3	3
RTD 308.....	-	3
UCC	6	5
UCC	3	-
Foreign Language	4	4
<i>Total</i>	16	15
THIRD YEAR	FALL	SPRING
RTD Specialization Course.....	3	3
RTD elective course	-	3
Minor course.....	3	3
Electives	9	6
<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
RTD 393.....	3	-
RTD elective course	3	3
Minor course.....	6	3
Electives	3	9
<i>Total</i>	15	15

Three-Year Curriculum Plan

The Department of Radio, Television, and Digital Media offers a three-year graduation plan option for students entering the program as freshman. Students who attempt to pursue this plan will successfully complete 40 credit hours per academic year. For more information, please contact the Radio, Television, and Digital Media academic advisor.

Three-Year Plan Photography Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SUMMER
RTD 200, 300.....	3	3	-
ENGL 101,102.....	3	3	-
UCOL 101.....	1	-	-
CMST 101	3	-	-
MATH 101	3	-	-
Core Disciplinary Studies.....	2	9	9
<i>Total</i>	15	15	9
SECOND YEAR	FALL	SPRING	SUMMER
RTD Specialization course.....	3	3	-
RTD Elective course.....	3	-	-
RTD 308.....	-	3	-
Foreign Language	4	4	-
Core Disciplinary Studies	5	3	-
Minor course.....	3	3	-
Elective hours.....	-	2	9
<i>Total</i>	18	18	9
THIRD YEAR	FALL	SPRING	SUMMER
RTD Specialization course.....	3	3	-

RTD 393	-	3	-
RTD Elective	6	-	-
Minor course.....	3	6	-
Elective hours.....	6	6	-
<i>Total</i>	18	18	

Television Studies Minor

A total of 15 credits is required for the minor. The student must complete RTD 200: Understanding Media. The student must also complete at least nine credit hours in 300 or 400-level Radio, Television, & Digital Media courses in the areas of media studies and media industries, as well as one 300 or 400-level production course to obtain a minor. All courses for a minor in Television Studies must be completed with a grade of C or higher.

Courses (RTD)

200-3 Understanding Media. [IAI Course: MC 914] Basic overview of electronic media, history, current issues and future trends, programming content, technological and regulatory matters, media ethics, social effects and business practices. Critical viewing or listening and analysis of aesthetic techniques, formats, genres and content.

300-3 Introduction to Media Production. [IAI Course: MC 916] Introduction to the functions, theories, materials and techniques of writing and production of audio, video and television. Students write, perform and produce audio and video projects both in and out of the studio. Restricted to Radio-TV and Digital Media major. Lab fee: \$60.

305-3 Audience Research and Ratings Analysis. Media professionals rely heavily on research to make well-informed decisions. Students learn how audience research studies are designed, conducted, analyzed, and utilized within the media industries. Students also develop an understanding and an appreciation of the business and economic aspects of the media industries, therefore this course is suitable for students of all RTD specializations. Prerequisite: C or better in RTD 200. Lab fee: \$45.

308-3 Media, Law, Policy and Regulation. Explores the regulation of media industries, including how legal, political, cultural and economic conflicts affect media policy. Covers the 1st Amendment, libel, the FCC, intellectual property, invasion of privacy, regulation of advertising, and sex and violence in the media. Includes law and policy for global and emerging media. Prerequisite: C or better in RTD 200.

310-3 News Writing for Electronic Media. [IAI Course: MC 917] Designed to cover selecting, writing and editing news material for presentation on radio, television and online. Lab hours required. Prerequisite: C or better in RTD 200 and RTD 300 or consent of the department. Lab fee: \$45.

311-3 Audio Journalism for Electronic Media. The techniques of gathering, producing and presenting news for radio and other aural media. Skills in research, interviewing, news judgment, ethics, and audio recording are explored. New distribution channels are examined. Lab hours required. Prerequisite: C or better in RTD 310 or consent of instructor. Lab fee: \$45.

312-3 Electronic Sports Journalism. Explores the foundations of electronic sports reporting, including legal and ethical

considerations. Emphasis on responsible reporting practices while on deadline and enterprise reporting. Prerequisite: RTD 310.

321-3 Sports, Media and Society. Examines the roles sports play in contemporary society, as well as the ways in which media are used to present, and analyze, these roles. Issues of socialization, race, class, gender, sexuality, business and power as they relate to sport competition and to presentation in the media. Prerequisite: C or better in RTD 200 or equivalent.

325-3 Media Industries. Examines various media industries, including company structures, business practices, and current production and distribution methods. Attention to cross-industry synergies, emerging media, and the global market for media products. Prerequisite: C or better in RTD 200.

326-3,3 The Entertainment Corporation. This class focuses on the entertainment corporation in terms of its internal structure, external relationships, industrial operations, and media output. A different corporation may be selected as a case study for any particular semester.

331-3 Digital Graphics Foundations. Course covers skills essential to digital image creation and workflow management for all stages of video production by integrating aesthetics, design and visual literacy. Students build an understanding of graphic computing processes by creating still images with and for different applications, and move on to creating animations, titles and simple post-production effects. Projects advance creativity, critical thinking and design skills. Lab fee: \$55.

340-3 Television Studies. Discussion of research and debates concerning television institutions, genres, formats, texts and audiences. Analysis and evaluation of technique, content, and aesthetic effects of television. Prerequisite: C or better in RTD 200 and RTD 300.

341-3 Television in the USA. The purpose of the course is to develop an appreciation of the history of US television. This course will examine the political, cultural, ideological, social, technological, and economic factors that influenced the content and context of television.

351-3 Media Programming. The study of the social and economic purposes and methods of obtaining, developing, launching, scheduling, and evaluating programming content for public and commercial electronic media. Prerequisite: C or better in RTD 200 and RTD 305. Lab fee: \$45.

357-3 Media Promotion. The study of the principles and practices of marketing products and services of the electronic media to both consumers and advertisers. Includes analysis and evaluation of the planning, creative, and placement components of promotional activities. Prerequisite: C or better in RTD 200 and RTD 305.

360-3 Electronic Media Performance. [IAI Course: MC 918] The development of disciplines controlling vocal and visual mechanics and interpretative performances for announcers, newscasters, interviewers and narrators of various radio and television situations. Laboratory hours required. Prerequisite: C or better in RTD 310 or RTD 383 or concurrent enrollment or consent of instructor; Theatre 203 recommended. Lab fee: \$45.

361-3 Sound Mix in Popular Culture. A theoretical and design approach to sound in a digital environment within the context of popular culture. Projects include mash-ups, digital storytelling, soundscapes in virtual environments, live mixes,

and sound in image. Readings and creative practice using digital technologies. Lab fee: \$55.

362I-3 Sound Art and Practice. (University Core Curriculum) This course will provide students with a philosophical understanding of the concepts and practices used in sound art and practice today and historically; and, in a variety of careers and in society in general. This course will introduce students to audio technology and terminology as well as expose them to the many applications of sound, as art and function, in society, regardless of their desire to pursue sound as a career. Lab fee: \$55.

363-3 Radio and Audio Production. Planning and producing for radio. Study of different formats (documentary, drama, commercials, promotional announcements): Short form production in labs. Introduction to multitrack recording and editing. Examination of audio-production techniques in related fields. Prerequisite: C or better in RTD 200 and RTD 300. Lab fee: \$55.

365A-3 Single Camera Field Production. Designed to advance understanding of television production principles, student producers create work grounded in traditional and professional practices while learning the basic tools of television production. Focus is upon single-camera field production. Prerequisite: C or better in RTD 200 and RTD 300. Lab fee: \$55.

365B-3 Multi-Camera Production. Designed to advance understanding of television production principles, student producers create work grounded in traditional and professional practices while learning the basic tools of television production. Focus is upon multi-camera studio production. Prerequisite: C or better in RTD 200 and RTD 300. Lab fee: \$55.

369-3 Directing for Television. The applied study of directing theory and visual storytelling to the various genres associated with television. Lab exercises cover both multi-camera and single camera formats. Lab hours required. Prerequisite: C or better in RTD 365A and RTD 365B. Lab fee: \$55.

370-3 Television News Reporting. Reporting, writing, editing and producing television news. Students simulate the disciplines of daily television news gathering. Prerequisite: C or better in RTD 310 or consent of instructor. Lab fee: \$55.

373-3 Music Business Overview. A survey of the music business, examining the challenges facing the industry such as piracy, new media, and corporate consolidation. Explore how these issues affect what is produced and broadcast, the impact on the consumer, and emerging legal issues. Careers in the industry will be examined, with discussion of where the industry is headed, and what new business models are being forged. One class trip to Nashville will be included during the course. Lab fee: \$55.

374-3 The Entertainment Industry: Nashville. Examines the multi-dimensional entertainment industry in Nashville, including record labels, television, commercials, video, film, artist management, publishing, PROs, and radio. Five trips to Nashville with presentations from top industry professionals. Visits to recording studios and television networks. Explores career paths and necessary qualifications for success. Prerequisite: C in RTD 200 and RTD 300. Restricted to RTD Majors. Lab fee: \$175.

375-3 Introduction to Audio Engineering. (Same as MUS 375) Introduces basic principles of sound and how audio can be captured and manipulated utilizing current recording technolo-

gy. The course incorporates concepts of signal flow, microphone selection and placement, signal processing and mixing. The objective is for the student to render a multi-track recording, from concept to completion, employing all the above concepts to demonstrate a solid knowledge of recording fundamentals. Restricted to Radio/TV and Digital Media majors. Lab Fee: \$55.

376-3 Advanced Audio Engineering. (Same as MUS 376) This course further develops the skills introduced in RTD 375. Advanced methods will be practiced, including use of signal processing, routing, mixing and mastering. The objective is to have command of a larger format in-line console, and record/mix a multi-track session in Pro Tools, utilizing various microphone techniques, plug-ins, aux sends/returns, patchbay and automation. Prerequisite: C or better in RTD 375 or permission of instructor. Lab fee: \$55.

377-3 Media Sales. Students are introduced to the principles and practices of professional media salespeople by incorporating a marketing-oriented, client-focused, solutions-based selling approach. Students develop their personal presentation skills through the use of role-playing exercises and case studies. The ability to persuade others is an important element of everyday life, therefore this course is suitable for students of all RTD specializations. Prerequisite: C or better in RTD 200 and RTD 305. Lab fee: \$45.

383-3 Writing for Media Arts. Introduction to creative writing for media, including radio, television, Internet and other emerging media applications. Includes analysis of format, narrative structure and story in produced scripts and aired programs. Prerequisite: C or better in RTD 200 and RTD 300 or consent of the instructor. Lab fee: \$45.

384-3 (1,1,1) Campus Media Practicum. Practical experience in media operations on the campus. Instructor makes determination on student duties, based on needs of the Broadcast Service or the department and the desires of the student. A minimum of four hours per week. Students obtain an application form from academic adviser. Mandatory Pass/Fail. Special approval needed from the instructor.

385-1 to 3 Newsroom Leadership Practicum. Practical experience in newsroom leadership on the campus. Instructor makes determination on student duties, based on needs of the WSIU-TV, WSIU-FM, or the department and the desires of the student. Students work under direct supervision of newsroom professional staff. Mandatory Pass/Fail. Prerequisite: C or better in RTD 310. Special approval needed from the instructor.

389-2 to 9 Electronic Media Workshop. Specialized work in various areas electronic media. Topics will vary. Special approval needed from the instructor. Lab fee: \$55.

391-2 Independent Study. Area of study to be determined by student in consultation with Radio, Television and Digital Media faculty. No more than two students may work on the same project. Special approval needed from the instructor.

392-3 Electronic Media Studies Workshop. Specialized work in various areas of Media Studies. Topics will vary but could include Reality Television, Gender and the Media. Prerequisite: RTD 200 with a grade of C or better.

393-3 Electronic Media in Society. The interrelation of television with social patterns and economic and political systems. Major theories of broadcasting. Effects of these media on society. Required for the major. Prerequisite: C or better in RTD

200 and RTD 300. Restricted to senior standing or consent of instructor.

395-1 to 6 Internship Program. News, production, performance and/or marketing/management work experience with a non-university professional organization. The student will undertake a work experience beyond that available at the university. No retroactive credit for previous work experience. May be repeated up to six credits. Student may earn no more than 9 internship hours from RTD 395 and 396. Prerequisite: GPA of 2.50 or better. Restricted to junior standing. Pass/Fail.

396-1-6 Hollywood Studies/Internship. Supervised work and study experience in Los Angeles, California, in areas of production, program development, casting, distribution, etc. Students work closely with Hollywood professionals and attend seminars on various facets of the industry. Summer session only; fees include prearranged housing. Students may earn no more than 9 internship hours from RTD 395 and 396. Prerequisite: GPA of 2.50 or better. Restricted to junior standing. Pass/Fail.

403-3 Lighting for Television. Covers typical lighting situations encountered in the field of television. Practical exercises are used extensively. Prerequisite: C or better in RTD 365A or concurrent enrollment. Restricted to RTD majors. Lab fee: \$55.

405-3 Media Economics. Focus on economic and financial forces affecting the media industries. Study of the economic practices and impacts of corporate mergers and synergies, global integration of media firms, multi-stream revenue generation, barriers to entry and regulatory constraints. Prerequisite: C or better in RTD 200. Special approval needed from the instructor.

450-3 Television Documentary Production and Technique. An overview of the development of various types, styles, and schools of major documentary production including analysis of American and International documentaries. Students will also research, write, and produce several short-form documentaries. Prerequisite: C or better in RTD 365A or consent of instructor. Restricted to RTD majors and senior standing. Lab fee: \$55.

455-3 Oral History, Storytelling, and Media. (Same as HIST 498) This course will develop an appreciation of the field of oral history, methodological concerns and applications. Students will learn about the oral history process, including interview preparation and research, interview technique, the nature and character of evidence, transcribing, and legal and ethical concerns. Restricted to junior or senior standing.

457-3 Media Marketing. The core issues of marketing media products in a variety of contexts, such as launching a television program or series, opening a film, introducing an Internet website or application. Attention to branding and media planning, including developing an online marketing strategy. Prerequisite: C or better in RTD 200. Special approval needed from the instructor. Lab fee: \$45.

461-3 Multimedia Production. Students learn the fundamental concepts and skills necessary to produce simple interactive multimedia presentations using an assortment of media. RTD 331 recommended. Lab fee: \$50.

463-3 Sound Art and Practice II. This course allows students to explore sound as an art form. During the semester, students create original sound works and learn hands on approaches to technology, which include building low cost microphones. Ex-

perimental sound synthesis and original approaches to creative sound will be explored as well as methods of collaboration and exhibition. Special approval needed from the instructor. Lab fee: \$55.

464-3 Audio Documentary and Diversity. (Same as WGSS 464) This course focuses on the creation of short and long form audio documentaries by students, regardless of production background. Introduces students to basic production techniques and diversity considerations during the making of a documentary. This course uses qualitative methods to investigate an issue or to document an event, with an emphasis on observation and interview techniques. Topics will explore the role of gender, race, ethnicity and class during the planning, gathering and production stages of the documentary. Open to non-majors. Lab fee: \$55.

465-3 Advanced Television Production. Instruction and practical experience in the development of programming for television. Students will produce individual and/or small group projects for broadcast and follow the projects through from concept to completion. Prerequisite: C or better in RTD 365A or consent of instructor. Restricted to RTD majors and senior standing. Lab fee: \$55.

466-3 Motion Graphics. Using current motion graphics software, students build skills in visualization and messaging while creating animated graphics packages, titles, sequences and short animated videos. Recommended: RTD 331 or equivalent graphics experience. Lab fee: \$50.

467-3 Global Media. Global media history, main theories, and current developments. The significance of global trends for local and regional media and cultures. Prerequisite: C or better in RTD 200 and RTD 300. Restricted to senior standing, or consent of instructor.

469-3 Video for Non-Majors. Basic shooting and editing to students interested in using video for purposes other than professional television production, such as education, business, or Web page development. The course surveys video formats and applications. Students produce projects using editing and special effects. Credit not given to RTD majors. Special approval needed from the instructor. Lab fee: \$55.

470-3 Television News Field Production. Advanced field reporting for television. Students will work under the supervision of the instructor to develop, investigate and report news stories for television. This process will also study the development and production of the mini-documentary. Class will utilize professional grade video recorders, cameras and editing systems. Prerequisite: C or better in RTD 370 or consent. Lab fee: \$55.

473-3 Media Management. Preparation for the challenges of managing media companies in diverse sectors of a rapidly changing industry. Principles and practices applicable to a variety of management contexts; addresses traditional and open business models and strategic management; management of organizations, creativity, programming, financial data, marketing and sales. Not for graduate credit. Prerequisite: C or better in RTD 200. Special approval needed from the instructor. Lab fee: \$55.

475-3 MIDI Production Studio. Comprehensive study of sequencing techniques, editing, sampling and hardware and software based instruments will be applied with hands-on exercises and projects. Skills developed in this course will enable stu-

dents to creatively utilize the most current MIDI technology for use in writing, arranging, recording and manipulating music and audio for albums, jingles and film/television. Prerequisite: C or better in RTD 375 or consent of instructor. Lab fee: \$55.

476-3 Creative Audio Producing. This course puts the student in the role of recording producer, including responsibility for all decision-making during project development and production. Includes selection of material, budgeting, contracts, scheduling, performances, and all aspects of recording. Emphasis is placed on communication with clients, artists and engineers. Related elements include publishing, copyright and contracts. Prerequisite: MUS 375 or RTD 375, or consent of instructor. Lab fee: \$55.

477-3 Investigative Reporting for TV, Radio and Online. Each student will choose one topic and produce a story with multimedia elements. Students will do in-depth research, conduct interviews, and investigate issues and topics of their choice with approval of the instructor. The latest investigative techniques will be explored as well as legal and ethical issues. Stories can air on public television or radio or appear online. Prerequisite: C or better in RTD 300. Lab fee: \$55.

479-3 Multi-Camera Field Production. Concentration on the techniques, conventions and implementation of live-event, multi-camera production in the field, including concerts, awards shows, and sports. Prerequisite: C or better in RTD 365A and RTD 365B or consent of instructor. Lab Fee: \$55.

480-3 Emerging Media. Examination of developments in emerging media, including Internet applications, mobile media, and gaming, among others. Exploration of the impact of emerging media on traditional media cultures and economies. Restricted to senior standing or consent of instructor required.

483-3 Script to Screen I: Writing the Pilot. In sequence with RTD 484, Script to Screen II, this course concentrates on scriptwriting for serial fictional television-situation comedies and drama. Students analyze structure, form, style and content of TV shows and scripts. They will write the "bible" for an original series as well as the pilot episode for that series. Some scripts will be produced in RTD 484. Prerequisites: C or better in RTD 365A or consent of instructor. Lab fee: \$45.

484-3 Script to Screen II. In sequence with RTD 483, Script to Screen I. In this course, students produce a pilot for a sitcom or dramatic television program, from scripts written by students in RTD 483. Topics include casting, budgeting, scheduling, script analysis, location management, production design, staging, lighting, directing and acting for the camera. Restricted to senior standing. Prerequisite: C or better in RTD 365A and RTD 365B, or consent of the instructor. Lab fee: \$55.

485-3 Digital Post Production. Students will examine all aspects of the postproduction process. The course combines editing theory and practice with critiquing professional programs and practical editing exercises. Prerequisite: C or better in RTD 365 or consent of instructor. Lab fee: \$55.

487-3 3D Animation I: Modeling. In this course, students will gain a solid foundation in creating 3D computer graphics using industry standard computer software and hardware. Through analysis and practice, students will develop an understanding of the principles of 3D modeling, lighting, texturing and rendering. Conceptual design and professional practices will also be addressed. Skills learned in this course will prepare students

for the 3D Animation II class. Lab fee: \$55.

488-3 3D Animation II: Animation & Visual EFX. This intermediate course builds upon the skills learned in the 3D Animation I course, and will focus on narrative development, motion design and visual effects generation using industry standard practices. Topics include key frame animation, inverse kinematics, and visual effects using dynamics. A term project utilizes the creative and technical skills explored in class. Prerequisite: C or better in RTD 487 (3D Animation I). Lab fee: \$55.

489-2 to 9 Electronic Media Workshop. Advanced work in various areas of electronic media, such as Gender and Media, Children and Media, Blaxploitation, Television in the US. Special approval needed from the instructor. Lab fee: \$55.

490-3 3D Animation III: Production Studio. This advanced course builds upon the skills mastered in the 3D Animation I and II courses. Students walk through the 3D animation production cycle to produce a high-quality 3D animation suitable for portfolio exhibition. Class critiques and project analyses are used to direct students through the production process. This course advances students' knowledge of industry-standard practices. Prerequisites: C or better in RTD 487, or RTD 488, or MCMA 497. Lab fee: \$55.

491-3 Independent Study. Area of study to be determined by student in consultation with graduate faculty. No more than two students may work on same project. Students must complete an application form which is available from the departmental adviser. Not for graduate credit. Restricted to senior standing. Special approval needed from the instructor. Lab fee: \$45.

492-3 Advanced Electronic Media Studies Workshop. Advanced topics in Media Studies such as Children and Media, Gender and Media, Race and Media. Restricted to Junior and Senior standing or consent of instructor.

496-3 Sound and Moving Image. This course examines in detail the relationship of sound and moving images. It traces intertwined histories, revealing important collaborations and technological developments that set precedents for both film and video. While the primary focus of this course is the artistic creation of soundtracks, we will also explore musical scoring and orchestration as utilized by film and television composers. Students will learn about and create sound designs, Foley sound and mix to picture sessions. Special approval needed from the instructor. Lab Fee: \$55.

Radio, Television, and Digital Media Faculty

Brooten, Lisa, Associate Professor, Ph.D., Ohio University, 2003.

Burns, David, Associate Professor, M.F.A., Parsons School of Design, 2001.

Downing, John D. H., Professor, *Emeritus*, Ph.D., London School of Economics and Political Science, 1974.

Gher, Leo, Associate Professor, *Emeritus*, M.S., Southern Illinois University, 1980.

Helleny, Edward J., Senior Lecturer, M.S.Ed., Southern Illinois University Carbondale, 2004.

Herreman, Todd, Lecturer, MLS, Southern Illinois University Carbondale, 2009.

Hochheimer, John L., Professor, Ph.D., Stanford University, 1986.

Johnson, Phylis, Professor, Ph.D., Southern Illinois University Carbondale, 2003.

Keller, Kenneth R., Associate Professor, *Emeritus*, M.TV., University of Illinois, 1966.

Kreider, Wago, Associate Professor, M.F.A., Rutgers University, 2002.

Lawrence, William Novotny, Associate Professor and *Chair*, Ph.D., University of Kansas, 2004.

Lemish, Dafna, Professor and *Dean*, Ph.D., Ohio State University, 1982.

Lewison, Sarah, Associate Professor, MFA, University of California, San Diego, 2001.

Meehan, Eileen R., Professor, Ph.D., University of Illinois, 1983.

Motyl, Howard D., Associate Professor, M.F.A., Northwestern University, 1990.

Needham, Jay, Associate Professor, M.F.A., California Institute of the Arts, 1989.

Padovani, Cinzia, Associate Professor, Ph.D., University of Colorado at Boulder, 1999.

Podber, Jacob J., Associate Professor, Ph.D., Ohio University, 2001.

Romersa, Henry, Lecturer, M.M.Ed., Oberlin College, 1955.

Starr, Michael F., Associate Professor, *Emeritus*, J.D., Georgetown University, 1965.

Thompson, Janice, Professor, M.G.S., Roosevelt University, 1988.

Waldron, Eileen, Distinguished Broadcast Journalist, B.A., San Francisco State University, 1983.

Wall, James, Senior Lecturer, M.A., Southern Illinois University Carbondale, 2004.

Radiologic Sciences (Major, Courses)

These professionals function as first assistants to the physician in medical practice, utilizing radiant energy, ionizing radiation (X-Ray), other forms of electro-magnetic energy, and sound waves for the imaging, diagnosis, and treatment of disease. Each distinct specialty option has its own educational criteria, accreditation and clinical training requirements.

The program prepares technologists for entry-level positions and also prepares the technologist who wishes to gain additional expertise. The radiologic technology curriculum and all program options are designed to meet the guidelines for accreditation and/or recognition by the American Registry of Radiologic Technologists, the Joint Review Committee on Education in Radiation Therapy Technology and the American Registry of Diagnostic Medical Sonography.

The Radiologic Sciences program offers a Bachelor of Science Degree with options in: diagnostic medical sonography, magnetic resonance imaging/computed tomography, radiation therapy technology, and radiology education/management.

To be considered for enrollment into the Radiologic Sciences program, prospective students must first obtain admission to the University. To be approved for entry into the major and professional sequences, applicants must submit additional application materials. This program admits a limited number of students based on specific selection criteria. Students may be

selected for admission to the Radiologic Sciences program either as freshmen or sophomores. Freshmen will be evaluated on the basis of ACT scores and high school grade point average. Sophomores will be evaluated on the number of hours of college credit, college grade point average as calculated by SIUC, college mathematics and science grades and the grade in anatomy. Anatomy, math and science course must be completed prior to the selection date (February 1) for the applicant to be considered for program entry to the following Fall semester.

Accreditation guidelines place limits on the enrollment in this program. Students begin the professional sequence each fall only. This degree program requires the successful completion of clinical internships. In accordance with Federal and State guidelines, the clinical sites will require proof of the following: vaccination for measles, mumps, rubella, tetanus, TB, varicella (chicken pox), Hepatitis B, and influenza; current CPR card; and proof of completion of HIPAA and blood-borne pathogens training. Affiliation sites will also require students to undergo a criminal background check and drug screening.

Associate of Applied Science Degree, College of Applied Sciences and Arts

The A.A.S. Degree in the Radiologic Sciences' curriculum is designed to prepare students to become registered radiologic technologists (medical radiographers). Completion of the program provides graduates with the educational requirements necessary to take the national certification examination administered by the American Registry of Radiologic Technologists. Students in the radiation therapy technology, and magnetic resonance imaging/computed tomography, and radiology education, and radiology management specialization will receive the A.A.S. Degree upon successful completion of their junior year.

The following general education and radiologic sciences courses totaling 70 credit hours are required to receive the A.A.S. degree in Radiologic Sciences.

<i>University Core Requirement</i>	18
General Education Courses: ENGL 101; MATH 108 OR 101; UCOL 101R; CMST 101; University Core Science, University Core Social Science.	
<i>A.A.S. Radiologic Sciences Requirements</i>	48
Radiologic Sciences Courses: RAD 122, 102, 112L, 202, 212, 222, 232, 232L, 312, 322, 332, 342, 352	
<i>Additional Required Course: AH 241 or Anatomy Equivalent</i> ...4	
<i>Total</i>	70

Bachelor of Science Degree, College of Applied Sciences and Arts

The Bachelor of Science degree in Radiologic Sciences is a 120-semester hour program consisting of forty-one semester hours of University Core Curriculum requirements, and 79 semester hours of combined radiography and professional option courses. All coursework required for the A.A.S. degree in Radiologic Sciences counts toward this degree.

DIAGNOSTIC MEDICAL SONOGRAPHY (ULTRASOUND)
OPTION

Sonography is a diagnostic medical procedure that uses high frequency sound waves (ultrasound) to produce dynamic visual

images of organs, tissues, or blood flow inside the body. This type of procedure is called a sonogram. There are several areas of specialization in the field of Sonography. While most Sonographers work in hospitals, many will also find employment in clinics, private practice physician offices, public health facilities, laboratories, and other medical settings performing examinations in their areas of specialization. Career advancement opportunities exist in education, administration, research, and in commercial sales and education/application specialists.

The sonography option is a direct entry program for students with the anticipated graduation year of 2018 or later as students are not required to go through the Diagnostic Radiography portion of the program. If an AAS Radiology graduate wants to pursue Sonography education, they will have to complete the third and fourth year Sonography coursework as well as all general education courses listed in the curricular guide.

<i>University Core Requirement</i>	41
To include: UCOL 101, MATH 101 or 108, PHYS 101	
<i>Sonography Requirements</i>	62
RAD 349, 359A, 359B, 369, 379A, 379B, 389A, 389B, 399A, 399B, 409A, 409B, 409C, 459, 469, 479, 489, 499	
<i>Additional Requirements</i>	17
RAD 122	2
AH 105	2
CS 105	3
AH 241	4
HCM 365, EPSY 402, or MATH 282 (requires MATH 108 prerequisite)	3
HED 334	3
<i>Total</i>	120

**Diagnostic Medical Sonography (Ultrasound)
Suggested Curricular Guide**

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
MATH 108/101, UCC Multicultural	3	3
UCC Human Health, PHYS 101	2	3
UCC Group 2 Science, CMST 101.....	3	3
UCOL 101R, RAD 122	3	2
<i>Total</i>	14	14

SECOND YEAR	FALL	SPRING
UCC Humanities, CS 105.....	3	3
UCC Social Sciences	3	3
UCC Humanities, AH 241	3	4
AH 105, UCC Fine Arts	2	3
STATS (HCM 365/QUAN 402/MATH 282). 3		-
<i>Total</i>	14	13

THIRD YEAR	FALL	SPRING
RAD 349, HED 334	3	3
RAD 359A, 359B	3	3
RAD 379A, 369	3	3
RAD 389A, 389B	3	3
RAD 399A, 399B	3	3
<i>Total</i>	15	15

THIRD YEAR	SUMMER
RAD 409A	4
RAD 379B	2
<i>Total</i>	6

FOURTH YEAR	FALL	SPRING
RAD 409B, 409C	8	8
RAD 479, 489	2	3
RAD 469, 499	3	3
RAD 459	2	-
<i>Total</i>	15	14

MAGNETIC RESONANCE IMAGING AND COMPUTED TOMOGRAPHY OPTION

This option is designed to prepare technologists in the advanced areas of magnetic resonance imaging (MRI) and computed tomography (CT). The MRI and CT components will emphasize physics, technology, instrumentation, sectional anatomy, and pathology. Technologists employed in these capacities will be supervised by a board certified radiologist, but will be afforded a greater amount of responsibility and independence in the performance of their duties.

<i>University Core Requirement</i>	41
To include: UCOL 101R, AH 241 or Anatomy Equivalent	
<i>Professional Core Requirements</i>	48
Including: RAD 102, 112, 112L, 122, 202, 212, 222, 232, 232L, 312, 322, 332, 342, 352	
<i>MRI and CT</i>	31
Including: RAD 364, 374, 384, 394, 404, 414, 424, 434	
<i>Total</i>	120

MRI/CT Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
MATH 108/101, UCC Fine Arts	3	3
UCC Human Health, CMST 101	2	3
UCC Science Group 1, Group 2	3	3
UCC Social Science	-	3
UCOL 101R, RAD 122	3	2
<i>Total</i>	14	17

SECOND YEAR	FALL	SPRING
RAD 102, RAD 222.....	3	9
RAD 112	3	-
RAD 112L	1	-
RAD 202.....	3	-
UCC Social Science	-	3
UCC Humanities.....	3	-
<i>Total</i>	13	12

SECOND YEAR	SUMMER
RAD 212	2
RAD 232	3
RAD 232L	1
<i>Total</i>	6

THIRD YEAR	FALL	SPRING
RAD 332.....	9	-
RAD 312	-	3
RAD 352	-	3
RAD 322	-	3
RAD 342	-	3
UCC Humanities, UCC Multicultural ..	3	3
<i>Total</i>	12	15

FOURTH YEAR	FALL	SPRING
RAD 364, RAD 404.....	3	10
RAD 374, RAD 414	3	2
RAD 384	4	-
RAD 394	3	-
<i>Total</i>	13	12

FOURTH YEAR	SUMMER
RAD 424.....	4
RAD 434.....	2
<i>Total</i>	6

RADIATION THERAPY OPTION

Radiation therapy technologists assist radiation oncologists in all aspects of the administration of radiation therapy treatment; their primary responsibility consists of exposing specific areas of the patient's body to prescribed doses of ionizing radiation. Radiation therapy technologists also provide appropriate patient care; this includes exercising judgment when administering treatment and adhering to the principle of radiation protection for the patient, self and others.

<i>University Core Requirement</i>	41
To include: UCOL 101R, AH 241 or Anatomy Equivalent	
<i>Radiation Therapy Core Requirements</i>	48
Including: RAD 102, 112, 112L, 122, 202, 212, 222, 232, 232L, 312, 322, 332, 342, 352	
<i>Radiation Therapy</i>	31
Including: RAD 360, 370, 380, 390, 400, 410, 420, 430, 440	
<i>Total</i>	120

Radiation Therapy Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
MATH 108/101, UCC Fine Arts	3	3
UCC Human Health, CMST 101	2	3
UCC Science Group 1, Group 2	3	3
UCC Social Science	-	3
UCOL 101, RAD 122.....	3	2
<i>Total</i>	14	17

SECOND YEAR	FALL	SPRING
RAD 102, RAD 222.....	3	9
RAD 112	3	-
RAD 112L	1	-
RAD 202.....	3	-
UCC Humanities, UCC Social Science ..	3	3
<i>Total</i>	13	12

SECOND YEAR	SUMMER
RAD 212	2
RAD 232	3
RAD 232L	1
<i>Total</i>	6

THIRD YEAR	FALL	SPRING
RAD 332.....	9	-
RAD 312	-	3
RAD 352	-	3
RAD 322	-	3
RAD 342	-	3
UCC Humanities, UCC Multicultural ..	3	3
<i>Total</i>	12	15

FOURTH YEAR	FALL	SPRING
RAD 360, RAD 410.....	2	10
RAD 370, RAD 420	3	2
RAD 380	3	-
RAD 390	2	-
RAD 400.....	3	-
<i>Total</i>	13	12

FOURTH YEAR	SUMMER
RAD 430.....	4
RAD 440.....	2
<i>Total</i>	6

EDUCATION AND MANAGEMENT OPTION

This option is designed to allow entry level radiographers the opportunity to study educational theories, philosophies, styles, and techniques. Additionally, the student will be introduced to management concepts as they related to medical imaging departments. The primary focus of the education and management option is to allow students who wish to enter either radiography education or radiography management the opportunity to learn and develop the skills necessary for success in these two environments. Students will be required to complete an internship in their chosen area of emphasis (if state licensure is feasible) or an undergraduate research project related to radiology education or management.

<i>University Core Requirement</i>	41
To include: UCOL 101, AH 241 or Anatomy Equivalent	
<i>Educational/Management Core Requirements</i>	48
Including: RAD 102, 112, 112L, 122, 202, 212, 222, 232, 232L, 312, 322, 332, 342, 352	
<i>Education and Management</i>	31
<i>Select Nine Courses</i> :.....	27
RAD 345, 355, 415, 425A, 425B, 435, 480, 481, 482	
<i>Select One Course</i> :	4
RAD 475 or 476	
<i>Total</i>	120

Education and Management Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
MATH 108/101, UCC Fine Arts	3	3
UCC Human Health, CMST 101	2	3
UCC Science Group 1, Group 2	3	3
UCC Social Science	-	3
UCOL 101, RAD 122.....	3	2
<i>Total</i>	14	17

SECOND YEAR	FALL	SPRING
RAD 102, RAD 222.....	3	9
RAD 112	3	-
RAD 112L	1	-
RAD 202.....	3	-
UCC Humanities, UCC Social Science ..	3	3
<i>Total</i>	13	12

SECOND YEAR	SUMMER
RAD 212	2
RAD 232	3
RAD 232L	1
<i>Total</i>	6

THIRD YEAR	FALL	SPRING
RAD 332.....	9	-
RAD 312	-	3
RAD 352	-	3
RAD 322	-	3
RAD 342	-	3
UCC Humanities, UCC Multicultural ..	3	3
<i>Total</i>	12	15

FOURTH YEAR-OFFERED VIA DISTANCE EDUCATION

<i>Nine Courses</i> :.....	27
RAD 345, 355, 415, 425A, 425B, 435, 480, 481, 482	
<i>Select One Course</i> :	4
RAD 475 or 476	
<i>Total Fourth Year</i>	31

Courses (RAD)

102-3 Introduction to Radiologic Technology and Radiographic Technique. This course is designed to introduce the student to the medical radiography profession. Students will begin their study of medical terminology, professional behavior, ethics, theory of radiographic exposure and its application to computed radiography and digital radiography. Included is an introduction to the principles of radiation protection. Restricted to RADS majors.

112-3 Radiographic Anatomy and Positioning. Designed to provide the student radiographer with didactic instruction leading to the development of clinical competencies. It serves as a foundation for the progression towards advanced clinical knowledge. Radiographic anatomy and positioning of the ex-

tremities, chest, abdomen, vertebral column, and routine fluoroscopic procedures will be stressed. Also, emphasis is placed on the soft-tissue structures demonstrated by radiographs of these areas. The principles of radiation protection for the patient and for the radiographer are stressed. Routine radiographic positioning common to most health facilities will be described. Must be taken concurrently with RAD 112L. If RAD 112L is dropped, then RAD 112 must be dropped. Prerequisites: AH 241 with a grade of C or better. Co-requisites: RAD 112L, RAD 102, and RAD 202. Restricted to RADS majors.

112L-1 Radiographic Anatomy and Positioning Laboratory. This course is the laboratory to accompany RAD 112. Designed to provide the student radiographer with didactic instruction leading to the development of clinical competencies. It serves as a foundation for the progression towards advanced clinical skills. Radiographic anatomy and positioning of the extremities, chest, abdomen, vertebral column, and routine fluoroscopic procedures will be stressed. The principles of radiation protection for the patient and for the radiographer are practiced as well. Routine radiographic positioning common to most health facilities will be described, demonstrated and practices on phantoms in the energized X-ray labs. Two laboratory sessions per week. Must be taken concurrently with RAD 112. If RAD 112 is dropped, then RAD 112L must be dropped. Prerequisite: AH 241 with a grade of C or better. Co-requisites: RAD 112, RAD 102, and RAD 202. Restricted to RADS majors. Lab fee: \$75.00.

122-2 Seminar in Radiologic Sciences. Study will focus on developing a professional identity, an understanding of the integrated health care team, an understanding of the language of medicine in general and radiology in particular, and development of basic patient care techniques and skills. Restricted to admission to major or consent of school.

132-3 Anatomy and Positioning II. A continuation of 112 designed to further develop clinical skills and competencies through continued didactic and laboratory experience. Positioning competencies developed in this course include radiography of the pelvic girdle, spine and digestive system. Eight weeks. Prerequisite: RAD 112.

199-1 to 10 Individual Study. Provide first year radiologic sciences students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of the radiologic sciences facilities. Each student will work under the supervision of a sponsoring program faculty member. Restricted to RADS majors.

202-3 Radiographic Physics. This course will concentrate on general theories of physics as they relate to matter, mechanics and electricity. It also involves the study of the nature and production of radiation and understanding of the complexity of radiographic equipment and x-ray circuitry. Co-requisite: RAD 102, RAD 112, and RAD 112L. Restricted to RADS majors and acceptance into the Radiologic Sciences Program.

212-2 Special Radiographic Procedures. Includes the study of contrast producing agents which are used to visualize specific parts of the body. Radiographic technique employed in this type of imaging is highly specialized and will be studied in depth. Prerequisite: RAD 222 with a minimum grade of C. Co-requisites: RAD 232 and RAD 232L.

222-9 Radiography Clinic I. The student is assigned to a selected clinical education center for the entire semester. During this semester, the student radiographer is expected to practice and perfect the professional skills developed the previous semester on campus. The student will participate in specific experiences and film critique assignments designed to meet objectives for the semester. Prerequisites: "C" or better in RAD 102, RAD 112, RAD 112L, & RAD 202. Restricted to RADS majors.

232-3 Selected Radiography Systems. This course is designed to instruct the student in the anatomy of the skull, facial bones, paranasal sinuses, mandible, digestive system, urinary system, biliary system, and human reproductive systems. Routine imaging protocols common to most health facilities will be described. Particular emphasis will be placed on radiographic imaging of the trauma patient. This course must be taken concurrently with RAD 232L. If RAD 232 is dropped then RAD 232L must be dropped. Prerequisite: C or better in RAD 222. Co-requisites: RAD 232L and RAD 212. Restricted to RADS majors.

232L-1 Selected Radiography Systems Laboratory. This is the laboratory component associated with RAD 232. Designed to instruct the student in the anatomy and positioning of the skull, facial bones, paranasal sinuses, digestive, urinary, biliary and human reproductive systems. Routine imaging projections common to most health facilities will be practiced on a phantom in the energized laboratory. Particular emphasis is placed on radiography of the trauma patient. Principles of radiation protection for the patient and the radiographer are practiced as well. One laboratory session per week. Must be taken concurrently with RAD 232. If RAD 232 is dropped then RAD 232L must be dropped. Prerequisite: RAD 222 with a minimum grade of C. Co-requisites: RAD 232 and RAD 212. Restricted to RADS majors. Lab fee: \$75.

299-1 to 16 Individual Study. Provides students with opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access for advanced radiologic sciences students to the resources of the radiologic sciences facilities. Each student will work under the supervision of a sponsoring program faculty member. Restricted to RADS majors.

312-3 Radiographic Pathology. Deals with the etiology and processes of trauma and disease. Emphasis will be placed on radiographic pathology of the body systems and the manifestation of this pathology. Prerequisite: RAD 332 with a minimum grade of C. Co-requisites: RAD 322, RAD 342, and RAD 352.

322-3 Radiographic Contrast and Sectional Anatomy. An introduction into the use of radiopharmaceuticals for enhancement of various anatomical structures within the human body. Includes coverage of common types of contrast agents, their administration, their physiological effects on various organ systems, and emergent treatment. Sectional anatomy includes the study of body structures in the coronal, sagittal and transverse planes, used in computed tomography (CT) and magnetic resonance imaging (MRI). Emphasis will be placed on (1) identifying the imaging plane; (2) identifying the anatomy visualized in a given plane; and, (3) differentiating between images produced by CT and MRI. Prerequisite: RAD 332 with a minimum grade of C. Co-requisites: RAD 312, RAD 342, and RAD 352.

332-9 Radiography Clinic II. The student returns to a clinical

cal education center for the entire semester. The student radiographer will practice and perfect the advanced professional skills developed in the previous semester on campus. The student will participate in specific experiences and film critique assignments designed to meet objectives for the semester, including advanced modalities. Prerequisites: C or better in RAD 212, RAD 232, and RAD 232L. Restricted to RADS majors.

341-1 Fundamentals of Sonography. This course is designed to introduce the profession of Diagnostic Medical Ultrasonography. Topics of study include historical perspectives, patient care and communication, medical ethics and terminology. Restricted to RADS majors.

342-3 Radiation Biology. Designed to instruct the student radiographer in the principles and terminology of radiobiology. Emphasis will be placed on how these principles relate to radiation protection for both the patient and radiographer. Also included are introductions to nuclear medicine and radiation therapy technology. Prerequisite: RAD 332 with a minimum grade of C. Co-requisites: RAD 312, RAD 322, and RAD 352.

345-3 Introduction to Radiology and Diagnostic Imaging Management. This course focuses on the unique management issues involved in diagnostic imaging. These problems include accreditation, federal law unique to radiology, and medical-legal issues of patient care. Additionally, state and local licensure laws pertinent to ionizing radiation and radiation safety will be explored. Restricted to the major or consent of school.

349-3 Fundamentals of Sonography. This course is designed to introduce the profession of Diagnostic Medical Ultrasonography. Topics of study include historical perspectives; medical ethics and law; patient care and communication; exam related documentation; work related musculoskeletal disorders, and terminology. Restricted to major or consent of school.

351-3 Obstetric and Gynecology Sonography. This course is an in-depth study of gynecologic and obstetric/fetal anatomy, physiology and pathology. Emphasis will be placed on related clinical signs and symptoms, laboratory tests, and normal and abnormal sonographic patterns. This course includes a laboratory component. Not for graduate credit. Restricted to RADS majors.

352-3 Special Imaging Modalities. This course provides the student with the knowledge and understanding relevant to the function, operation and application of the various techniques used in image production. This course also includes a complete review of the radiography curriculum in preparation for the American Registry of Radiologic Technologies National certification examination. Prerequisite: RAD 332 with a minimum grade of C. Co-requisites: RAD 312, RAD 322, and RAD 342.

355-3 Teaching Strategies in Radiology. This course is designed to introduce the prospective radiology educator to philosophies and strategies required to successfully instruct students in the various fields of allied health, including radiography. Restricted to the major or consent of school.

359A-3 Obstetric & Gynecology Sonography I. A study of gynecologic and obstetric/fetal anatomy; physiology; patient care; and imaging/interventional techniques. Emphasis will be placed on normal and abnormal gynecologic anatomy, physiology, sonographic patterns, clinical history, physical assessment, and appropriate exam protocol. Restricted to major or consent of school.

359B-3 Obstetric & Gynecology Sonography II. A study of gynecologic and obstetric/fetal anatomy; physiology; patient care; and imaging/interventional techniques. Emphasis will be placed on normal and abnormal obstetric and fetal anatomy, physiology, sonographic patterns, clinical history, physical assessment, and appropriate exam protocol. Prerequisite: RAD 359A with a minimum grade of C.

360-2 Fundamentals of Radiation Therapy. The rationale for and methods employed in the treatment of cancer by radiotherapy. The role of radiotherapy and its relationship to other modalities utilized in the treatment of cancer are explored and defined. Also, an introduction to the principles and concepts of radiobiology. Restricted to RADS majors.

362-4 Radiography Clinic III. Last clinical course of the program. Students are expected to demonstrate knowledge and competency of radiographic examinations listed in categories one through nine. Image evaluations will be performed on a weekly basis by the clinical instructor as well as behaviors/attitudinal ratings. Prerequisite: RAD 312, RAD 322, RAD 342 and RAD 352.

364-3 Computed Tomography Technology. This course will focus on the physical principles of computed tomography. Topics of discussion will include the history of computed tomography, its instrumentation, data acquisition, image reconstruction, contrast agents, patient care/safety, and quality assurance. Special imaging application for interventional, trauma, and oncology will be discussed. Restricted to major, completion of ARRT in radiography, or consent of school.

369-3 Vascular Sonography. A study of vascular anatomy, physiology, hemodynamics, wave form analysis, and treatment of vascular disease. Emphasis will be placed on carotid duplex/color flow imaging, upper and lower extremity arterial and venous duplex/color flow imaging, and ankle brachial indices, including the clinical history, physical assessment, and appropriate scanning protocol. Restricted to major or consent of school.

370-3 Techniques and Applications of Radiation Therapy. The technical aspects of radiotherapy including dosimetry, shielding, radioactive sources and methodology. Lecture and laboratory format. Restricted to RADS majors. Lab fee: \$100.

371-3 Abdominal Sonography. This course is an in-depth anatomy, physiology and pathology study of abdominal, retroperitoneal and superficial structures. Emphasis will be placed on related clinical signs and symptoms, laboratory tests, and normal and abnormal sonographic patterns. Restricted to RADS majors.

372A-1 Radiographic Film Critique. Concurrent with clinical study, the student will participate in the technical review of the films taken fulfilling introductory objectives set for this course. This course is writing intensive and reflects the College's Communication-Across-the-Curriculum initiative. Prerequisite: RAD 102, 112, 132, 202, ENGL 101 and 102.

372B-1 Radiographic Film Critique. The student will continue to develop abilities to review an examination from a technical standpoint utilizing more advanced knowledge to fulfill course objectives. Prerequisite: RAD 212 and 232.

372C-2 Radiographic Film Critique. Final competencies in the technical production and review of the finished radiograph are determined and evaluated. Also included is a review of the knowledge learned in the program. Prerequisite: RAD 312, 322,

342, 352. Lab fee: \$25.

374-3 Sectional Anatomy and Imaging Applications. This course focuses on identifying anatomical structures produced by Magnetic Resonance Imaging (MRI) and Computed Tomography (CT) scanners in the transverse, sagittal, coronal, and orthogonal planes. The MRI and CT images place emphasis on the head, neck, spine, chest, abdomen, pelvis, musculoskeletal (joints), and vascular system. Restricted to major.

379A-3 Abdominal Sonography I. A study of abdominal anatomy; physiology; patient care; and imaging/interventional techniques. Emphasis will be placed on normal and abnormal vascular, hepatic, biliary, splenic, and renal systems and associated sonographic patterns. Restricted to major or consent of school.

379B-2 Abdominal Sonography II. A continuation in the study of abdominal anatomy; physiology; patient care; and imaging/interventional techniques. Emphasis will be placed on normal and abnormal peritoneal, retroperitoneal, gastrointestinal, superficial structures and associated sonographic patterns. Prerequisite: RAD 379A with a minimum grade of C.

380-3 Physics of Radiation Therapy. Includes a study of the physical principles and applications of radiation in therapy. Defines the nature of radiation, radioactivity, interactions with matter and different radiation therapy instrumentation. Review of basic radiation therapy principles for use in later courses.

381-3 Ultrasound Physics and Instrumentation. A study of diagnostic medical ultrasound physics. Topics include ultrasound wave generation and propagation; transducers; pulse echo instruments; pulse echo imaging; image storage and display; Doppler; artifacts; quality assurance; bioeffects and safety. Restricted to major.

384-4 Magnetic Resonance Imaging Technology. This course will focus on the physical principles of magnetic resonance imaging. Topics of discussion will include the history of magnetic resonance imaging, its physical principles, instrumentation, imaging techniques, contrast agents, patient care/safety, and quality assurance. Prerequisite: completion of ARRT in radiography, or consent of school. Limited to major.

379A-3 Ultrasound Physics and Instrumentation. A study of diagnostic medical ultrasound physics. Topics include ultrasound wave generation and propagation; transducers and sound beams; pulse echo instruments; pulse echo imaging; Doppler; artifacts; and image storage & display. Restricted to major or consent of school.

389B-3 Advanced Ultrasound Physics and Instrumentation. A continuation of diagnostic medical ultrasound physics to include Doppler instrumentation; artifacts; quality assurance; bioeffects and safety; and emerging technologies. Prerequisite: RAD 389A with a minimum grade of C.

390-2 Oncologic Nursing. This course will include nursing techniques on patients with cancer, anatomy, staging of disease and radiobiologic effects of radiation on the patient.

391-2 Sectional Anatomy-Sonography. A study of sectional anatomy in the transverse, longitudinal, and coronal planes, with emphasis on the organs of sonographic interest within the abdomino-pelvic cavity. This is the laboratory component of RAD 391 and includes a \$100 laboratory fee. Must be taken concurrently with RAD 391L. If RAD 391L is dropped then

RAD 391 must be dropped. Restricted to RADS majors.

391L-1 Sectional Anatomy-Sonography. A study of sectional anatomy in the transverse, longitudinal and coronal planes, with emphasis on the organs of sonographic interest with the abdomino-pelvic cavity. This is the laboratory component of RAD 391 and includes a \$100 laboratory fee. Must be taken concurrently with RAD 391. If RAD 391 is dropped then RAD 391L must be dropped. Restricted to RADS majors.

394-3 MRI and CT Pathology. This course is designed as an overview of pathologies commonly seen in magnetic resonance imaging and computed tomography. Along with distinguishing various types and pathologies as seen on MRI and CT scan, emphasis will be placed on a general understanding of the description, etiology, epidemiology, signs and symptoms, imaging characteristics, treatment, and prognosis of those pathologies. Restricted to major.

399A-3 Clinical Practicum I. Supervised clinical and laboratory experience with sonographic imaging. Emphasis will be placed on abdominal and gynecologic procedures and protocols. Restricted to major or consent of school.

399B-3 Clinical Practicum II. Supervised clinical and laboratory experience with sonographic imaging. Emphasis will be placed on vascular and obstetric procedures and protocols. Prerequisite: RAD 399A with a minimum grade of C.

400-3 Radiation Dosimetry. Includes a study of the principles of radiation dosimetry and related calculations. Topics include calibration, protection, dose determination to points of interest, and basic treatment planning.

401-12 Sonography Clinical Internship I. The student is assigned to a clinical education center to practice and perfect sonography skills. The student will be supervised by qualified sonographers and directed in specific experiences designed to meet the objectives for the semester. Not for graduate credit. Prerequisite: "C" or better in RAD 341, 351, 371, 381, 391. Restricted to RADS major.

404-10 MRI and CT Clinical Internship I. This is first clinical internship in a two-course sequence. During the first clinical internship, the student will be assigned to a selected clinical education center for the entire semester. During this semester, the student is expected to practice and perfect the professional skills developed the previous semester on campus. Not for graduate credit. Co-requisite: RAD 414. Prerequisite: "C" or better in RAD 364, 374, 384, 394.

409A-4 Clinical Practicum III. The student is assigned to a clinical education center(s) to practice and perfect sonography skills. The student will be supervised by qualified sonographers and directed in specific experiences designed to meet course objectives. Prerequisites: RAD 359B, 369, 379A, 389B, 399B with minimum grades of C."

409B-8 Clinical Practicum IV. The student is assigned to a clinical education center(s) to practice and perfect sonography skills. The student will be supervised by qualified sonographers and directed in specific experiences designed to meet course objectives. Prerequisite: RAD 409A with a minimum grade of C.

409C-8 Clinical Practicum V. The student is assigned to a clinical education center(s) to practice and perfect sonography skills. The student will be supervised by qualified sonographers and directed in specific experiences designed to meet course objectives. Prerequisite: RAD 409B with a minimum grade of "C".

410-10 Radiation Therapy Clinical Internship I. This is the first clinical internship of a two-course sequence. A practicum at a selected clinical education center in which the student functions under direct supervision and applies the knowledge gained in the classroom. The student will function in the clinical setting to interpret and execute the radiation oncologist's orders and operate the ionizing radiation equipment during actual patient treatments and simulations. Construction of treatment aids will also be performed. Not for graduate credit. Prerequisite: A grade of C or better in RAD 360, 370, 380, 390, and 400.

414-2 Special Studies in MRI and CT. Individual projects in MRI and CT will be selected by the student with approval of the instructor and culminate in case study reviews. In addition, the student will prepare to challenge The American Registry of Radiologic Technologists professional examinations in either MRI or CT. A portion of this course is on-campus. Not for graduate credit. Prerequisite: "C" or better in RAD 364, 374, 384, and 394.

415-3 Research Methods. This course will introduce the student to the various mechanisms by which scholarly and professional research are conducted. These include quantitative and qualitative methodologies, historiographical, and a mixed methods approach. Restricted to the major or consent of school.

420-2 Special Problems in Radiation Therapy. A review of the many types of cancer to include discussion of clinical symptoms, treatment patterns, technical pitfalls, survival statistics and patient/family interactions. Quality assurance procedures for a Radiation Therapy Department will also be reviewed to include the different QA tests, tolerances, and frequencies. Both written and oral seminar responses will be included in this course. Not for graduate credit. Prerequisite: RAD 360, 370, 380, 390, 400.

424-4 MRI and CT Clinical Internship II. This is the second clinical internship in a two-course sequence. The student will be assigned to a selected clinical education center. During this semester, the student will continue to perfect his/her professional skills developed during the previous clinical internship. In addition, the student will focus on developing hands-on skills in radiation therapy treatment simulation, interventional techniques, stereotactic procedure and trauma. Not for graduate credit. Prerequisite: "C" or better in RAD 404 and RAD 414. Concurrent enrollment in RAD 434.

425A-3 Readings in Radiology Education. Supervised readings of the student's primary area of interest will be conducted under the direction of a faculty member. This is a writing intensive, independent study course. Restricted to the major or consent of school.

425B-3 Readings in Radiology Management. Supervised readings of the student's primary area of interest will be conducted under the direction of a faculty member. This is a writing intensive, independent study course. Restricted to the major or consent of school.

430-4 Radiation Therapy Clinical Internship II. This is the second clinical internship of a two-course sequence. A clinical practicum at a selected clinical education center in which the student functions under direct and remote supervision and applies the knowledge gained in the classroom and Clinical Internship I. The student will practice and improve the profes-

sional skills developed the previous semester to include radiation therapy treatment, simulation and medical dosimetry. Not for graduate credit. Prerequisite: A grade of B or better in RAD 410 and RAD 420.

434-2 Seminar in MRI and CT. This course is designed to prepare the student to challenge The American Registry of Radiologic Technologists professional examinations in either MRI or CT. During the course the student will take mock registry exams in either MRI or CT and review pertinent material. Career development activities will include interviewing techniques, resume and cover letter preparation, and the application process. Not for graduate credit. Prerequisite: "C" or better in RAD 404 and RAD 414. Concurrent enrollment in RAD 424.

435-3 Problems in Radiology Management and Education. The purpose of this course is to identify problems/issues within Radiology Management and Education and to present viable solutions to those problems/issues. Utilizing scholarly research and correlative research from other fields, the student will engage in integrated problem solving. This is an independent study course, conducted under the direction of a faculty member, and is a writing intensive course.

440-2 Seminar in Radiation Therapy. This course is designed to prepare the student to challenge the American Registry of Radiologic Technologists Radiation Therapy exam. During this course the student will take mock registry exams in the specialty of radiation therapy and go through review materials. A portion of this course is on-campus. Professional development is addressed. Not for graduate credit. Prerequisite: RAD 420. Co-requisite: RAD 430.

441-4 Sonography Clinical Internship II. Clinical practicum at a selected clinical education center. The student will function under direct and remote supervision to perfect professional skills developed the previous semester to include Doppler/color flow, special procedures, and complicated cases. Not for graduate credit. Prerequisite: "C" or better in RAD 401. Concurrent enrollment in RAD 451.

444-3 Central Nervous System Imaging in Magnetic Resonance Imaging. Lecture includes discussion of imaging applications of the central nervous system. Review of related anatomy and common pathologies. Special approval needed from the instructor.

451-2 Seminar in Sonography. This course is designed to prepare the student for the American Registry of Diagnostic Medical Sonography (ARDMS) Sonography Principles & Instrumentation; Abdomen; and Obstetrics and Gynecology examinations. Professional development is addressed. A portion of this course is on campus. Not for graduate credit. Prerequisite: "C" or better in RAD 401. Concurrent enrollment in RAD 441.

454-3 Body Imaging in Magnetic Resonance Imaging. Lecture includes discussion of the imaging applications of the gastrointestinal, genitourinary, hepatobiliary and musculoskeletal systems. Review of related anatomy and common pathologies. Special approval needed from the instructor.

459-2 Advanced Obstetric & Gynecology Sonography. A continuation in the study of obstetric & gynecology sonography to include pathologic, embryologic, and structural complications, clinical history, physical assessment, and the appropriate exam protocol. Prerequisite: RAD 359B with a minimum grade of C.

461-3 Vascular Sonography. This course is a study of vascular hemodynamics, anatomy, pathology, and patho-physiology. Clinical signs and symptoms, diagnostic testing, validation, and treatment are discussed. A mock examination session is offered to guide the student in national board exam preparation. Not for graduate credit. Prerequisite: Graduate of a general sonography or related allied health program, RAD 381, and clinical mentor approval.

464-3 Cardiovascular Imaging in Magnetic Resonance Imaging. Lecture includes discussion of the imaging applications of the heart and coronary arteries. Review of related anatomy and common pathologies. Special approval needed from the instructor.

469-3 Advanced Vascular Sonography. A continuation in the study of vascular anatomy, physiology, hemodynamics, wave form analysis, and treatment of vascular disease. Emphasis will be placed on renal, intracranial, vein mapping, hemodialysis graft, plethysmography, and venous insufficiency duplex/color flow testing, including clinical history, physical assessment, and appropriate exam protocol. Prerequisite: RAD 369 with a minimum grade of C.

474-6 Advanced MRI Internship. During this clinical internship, the student will be assigned to a selected clinical education center for the entire semester. During this semester, while performing routine MRI procedures, the student will perform MRI procedures of the heart, body, and extremities. Special approval needed from the instructor.

475-4 Internship. This course is designed to give real-world experience to future radiologic technology managers and educators by exposing them to classroom or departmental management styles and real-life situations. This is accomplished through an integrated internship at either an educational program or a diagnostic imaging related facility. 40 clock hours shall equal 1 credit hour. Prerequisite: RAD 481 or RAD 355.

476-4 Research Project. This course requires the selection and investigation of a research topic culminating in a paper to satisfy the research requirement for the MGT/Ed option. Prerequisite: RAD 415.

479-2 Advanced Abdominal Sonography. A continuation in the study of abdominal sonography to include interventional, organ transplant, musculoskeletal, pediatric topics, clinical history, physical assessment, and appropriate exam protocol. Prerequisite: RAD 379B with a minimum grade of C.

480-3 The U.S. Health Care System. (Same as HCM 360) A study of the major components which comprise the U.S. health care system. This course will focus primarily on basic terminology, history, settings, personnel, utilization of services, and managerial epidemiology. Restricted to the major or consent of school.

481-3 Organizational Behavior and Management in Healthcare Organizations. (Same as HCM 364) An evaluation of relationships in healthcare organizations. Study of the motivational factors of those focused on patient care vs. those focused on profits and how to modify behaviors to achieve proper balance. Environmental factors to the healthcare field are evaluated for their impact on the behavior and employee-management relations of healthcare professionals and patient care providers. Promotes effective planning and organizing within the complex and highly regulated healthcare industry and as-

ures alignment of organizational goals with the missions/visions/values as related to quality of patient life and organizational success. Restricted to SAH major/minor or with consent of SAH Academic Advisor.

482-3 Legal Aspects and Current Issues in Health Care. (Same as HCM 388) Principles of law and the U.S. legal system are applied, in part through case study and an exploration of current events, in the areas of health care management. Legal issues include malpractice, contracts, corporate liability of health care organizations, liability by health care professionals, and patient rights, along with a specific focus on legal aspects of managed care. Restricted to the major or consent of school.

484-3 Special Topics in MRI/MRA. Supervised readings of selected topics in MRI. Special approval needed from the instructor.

489-3 Neurosonography. A study of fetal/pediatric brain and spinal cord anatomy, physiology, and pathophysiology. Topics will include patient care, integration of data, and imaging protocol. Prerequisites: RAD 409B, 459, 469, 479 with minimum grades of C.

494-1 to 6 Independent Study in Magnetic Resonance Imaging. The selection and investigation of a topic related to MRI. Special approval needed from the instructor.

499-3 Sonography Seminar. This course is designed to prepare the student to challenge the national sonography certification examination(s). Professional development and career readiness topics are also addressed. Prerequisites: RAD 409B, 459, 469, 479 with minimum grades of C.

Recreation (Major, Courses, Faculty)

The Recreation major prepares students for positions and careers in the leisure services management, outdoor recreation, and therapeutic recreation field. The curriculum, built on a broad core, offers professional courses within the department and draws from many related majors for competencies and skills in the preparation of professionals for the recreation field. The curriculum emphasizes the practical and theoretical aspects of recreation by offering supervised field experience and internships in various recreational settings throughout Illinois and the nation.

In order to be admitted to practicum courses, students must have a grade point average of 2.25 and the consent of the instructor. Students who do not meet the College of Education and Human Services requirements must be screened and approved by the department undergraduate faculty.

Students majoring in recreation are required to complete 41 hours of University Core Curriculum courses, 35 hours of professional core courses and 42 hours of professional courses in at least one area of specialization. Electives for their chosen area of specialization must have advisor approval. A total of 79 hours beyond the University Core Curriculum is required. A grade of C or better is required in all Recreation prefix required courses. Students may not enroll in Recreation 300, 301, 303 and 305 more than two times.

Recreation offers courses leading to specializations in therapeutic recreation, leisure services management, and outdoor recreation leadership and management.

Students majoring in recreation should meet early in their

college careers with a faculty member in the department to identify their area of interest and recommended electives. Within the field of recreation, certifications may be required for employment in different interest areas and faculty will discuss these with interested students. All students are encouraged to obtain First Aid and/or Wilderness First Responder Certification. Students focusing on a therapeutic orientation should attempt to acquire either academic or practical experience related to physiological, psychological and sociological functioning and the concomitant effect of disability. As soon as possible, recreation majors will decide on one of the three specializations and elect courses for their area of specialization.

Bachelor of Science Degree in Recreation, College of Education and Human Services

University Core Curriculum Requirements	41
Requirements for Major in Recreation	79
English 290	3
Recreation 300, 301, 302, 303, 305, 367, 380, 490A,B,C ...	34
One of the specializations listed below	42
Total	120

LEISURE SERVICES MANAGEMENT

Recreation 365, 375 or 445, 425, 465	12
Accounting 210 or 220	3
Health Education 334	3
Curriculum and Instruction 483A	3
Six hours selected from Psychology 301, 303, 304, 305, 307, 323, 333	6
Electives (May be subject to certification requirements)	15
Total	42

Leisure Services Management Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
Fine Arts, Human Health.....	3	2
MATH, CMST 101	3	3
Science	3	3
UCOL 101, Humanities	3	3
Total	15	14

SECOND YEAR	FALL	SPRING
ENGL 290, PSYC 102	3	3
Humanities.....	3	-
Multicultural, Social Science.....	3	3
REC 300, 302.....	3	3
REC 301, 303.....	3	3
REC 305.....	-	1
Electives	-	2
Total	15	15

THIRD YEAR	FALL	SPRING
CS 200B/ISAT 229, ACCT 210/220	3	3
REC 365, HED 334	3	3
REC 367, 375/445.....	3	3
REC 380.....	3	3

PSYC.....	3	3
Electives	-	3
Total	15	18

FOURTH YEAR	FALL	SPRING
REC 425.....	3	-
REC 465.....	3	-
REC 490A	-	12
Electives	10	-
Total	16	12

OUTDOOR RECREATION LEADERSHIP AND MANAGEMENT SPECIALIZATION

Psychology 323 or one of the following: Psychology 301, 303, 304, 305, 307, 333.....	3
Recreation 365, 429, 430, 431/432, 434, 445, 465	21
One of the following: Kinesiology 416 or Recreation 433...2-3	3
One of the following: Recreation 426, 427, 428	3
Electives	15-16
Total	42

Outdoor Recreation Leadership and Management Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
Fine Arts, Human Health.....	3	2
MATH, CMST 101	3	3
Science	3	3
UCOL 101, Humanities	3	3
Total	15	14

SECOND YEAR	FALL	SPRING
ENGL 290, PSYC 102	3	3
Humanities.....	3	-
Multicultural, Social Science.....	3	3
REC 300, 302.....	3	3
REC 301, 303.....	3	3
REC 305.....	-	1
Total	15	13

THIRD YEAR/FOURTH YEAR	FALL	SPRING
REC 365.....	3	-
REC 367.....	3	-
REC 380.....	3	3
REC 429, 430.....	3	3
REC 433/KIN 416.....	3 or	2
REC 465, 434.....	3	3
PSYC, REC 445.....	3	3
REC 490B.....	-	12
Electives	6	4
Total	27	30

FIELD COURSES	SUMMER
REC 431 or 432	3
Elective	3
Total	6

THERAPEUTIC RECREATION SPECIALIZATION

Recreation 404, 425, 460, 461, 462	15
Six hours selected from Recreation 440A, 440B, 440C, 440D, 440E, 440F	6
Psychology 331 and 340	6
Allied Health 241	4
Allied Health 105	2
Health Education 311	3
Electives (in accordance with certification requirements)	6
Total	42

Therapeutic Recreation Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
Fine Arts, Human Health.....	3	2
MATH, CMST 101	3	3
Science	3	3
UCOL 101, Humanities	3	3
Total	15	14

SECOND YEAR	FALL	SPRING
ENGL 290, PSYC 102	3	3
Humanities.....	3	-
Multicultural, Social Science.....	3	3
REC 300, 302.....	3	3
REC 301, 303.....	3	3
REC 305.....	-	1
Total	15	13

THIRD YEAR	FALL	SPRING
AH 105, 241.....	3	3
HED 311	3	-
REC 404, 460.....	3	3
REC 367, 462.....	3	3
REC 380.....	3	3
PSYC 331, 340.....	3	3
Total	18	15

FOURTH YEAR	FALL	SPRING
REC 425.....	3	-
REC 461.....	3	-
REC 490C	-	12
Electives	6	-
Total	12	12

SUMMER COURSES	SUMMER
REC 440A,B,C,D,E,F	6
Total	6

Courses (REC)

- 200-1 Backpacking.** This course provides an introduction to the fundamental skills and knowledge in backpacking. Field trip required.
- 210-1 Leave No Trace Outdoor Ethics.** This course provides

an introduction to the fundamental skills and knowledge of Leave No Trace Outdoor Ethics. Field trip required.

220-1 Canoeing. This course provides an introduction to the fundamental skills and knowledge in canoeing. Field trips required.

230-1 Land Navigation. This course provides an introduction to the fundamental skills and knowledge in land navigation. Field trips required.

240-1 Rock Climbing. This course provides an introduction to the fundamental skills and knowledge in rock climbing. Field trips required.

300-3 Introduction to Recreation and Leisure Services. An introduction to the professional field of recreation. A study of the historical, philosophical, sociological, psychological, and economic development of leisure and recreation. Insight into the fundamental concepts, values, and functions of leisure and recreation as an individual emotional experience as well as a necessary part of community life.

301-3 Leadership in Recreation. An examination of leadership theories and styles appropriate for activity leaders in recreation. Emphasis will be placed on leadership process and methodology as applicable to leisure service settings.

302-3 Program Design and Group Dynamics. A study of essential elements and basic principles involved with the organization and administration of various types of recreation programs and services.

303-3 Recreation for Individuals with Disabilities. Philosophy and principles of recreation for individuals with disabilities as well as an investigation of programming/activity alternatives. General physiological, psychological and social characteristics of various disabilities and societal and personal attitudes are explored.

305-1 Recreation Pre-Practicum. An introduction to the responsibilities and opportunities of field experience within the field of recreation. The course includes field experience identification and selection, resume preparation, letters of applications, interviewing, portfolio development, professional behavior and professional associations.

330-3 Outdoor Recreation. This course provides an overview of outdoor recreation philosophy and principles while exposing students to outdoor pursuits, such as backpacking, land navigation, paddling, and rock climbing. Topics include outdoor pursuit techniques, safety procedures, and equipment management. Expenses for required field trip not to exceed \$20.

365-3 Administration of Recreation and Leisure Services. Administrative procedures for parks and recreation. Topics include: organization, finance, personnel, facilities, program, public relations, and other areas.

366-3 Workshop in Administrative Issues in Recreation. Designed to examine current administrative issues in recreation, such as practices and trends in budget and finance, legal aspects, grant writing, personnel practices and policies, and others. Prerequisite: REC 365.

367-3 Research and Evaluation in Recreation. An introduction to methodological approaches to the scientific study of phenomena inherent to recreation and leisure. The course includes basic research and evaluation designs, research and evaluation report writing, analysis of current leisure research, and use of computers in leisure research and evaluation.

375-3 Commercial Recreation and Tourism. Problems of commercial recreation and tourism will be addressed in this class. Topics include: free enterprise, marketing, transportation industry, attractions, food and lodging industry and government's role in tourism.

377-3 Overview of Campus Recreation. Focuses on the administration, organization, planning, implementation, and evaluation of programs and facilities in the campus recreation field. Specific topics addressed include historical and philosophical aspects, administrative practices, competitive and non-competitive programming, future trends and issues, budgeting, public relations, professional associations, and examination of individual characteristics of a variety of campus recreation.

380-3 Recreation Fieldwork. Supervised leadership experiences in a public or private recreation setting. Only one fieldwork experience may be completed per semester. Students must complete fieldwork at two different sites. A minimum of 100 contact hours must be completed at the approved sites. In addition, students will complete an approved project. Prerequisite: REC 300, 301, 302, 303, 305. Special approval needed from the instructor and 2.25 grade point average.

385-1 to 2 Readings in Recreation. Selected readings in professional publications for the purpose of becoming acquainted with the types of research current in community, park, special populations, outdoor recreation, outdoor education, and related fields. Prerequisite: 15 hours in recreation. Restricted to REC majors.

386-1 to 2 Problems in Recreation. Designed to enable students to effectively request funds, request personnel, initiate new programs, or support recreation leisure services. Prerequisite: 15 hours in recreation.

401-3 Fundamentals of Environmental Education. (Same as AGRI 401 and FOR 401) An experiential course designed to help students interested in conservation education understand and apply teaching principles for both inside and outside the classroom. The class includes certification in a nationally recognized environmental education program, and is suitable for students in natural resource, agriculture, recreation and education fields. Requires field trip transportation fee and supplemental expenditures not to exceed \$25 per course registration. Offered alternate (odd) years.

404-3 Principles and Practices of Therapeutic Recreation. An introductory course for therapeutic recreation (TR) students. Concepts, history, and growth of TR as a healthcare profession, theories, treatment approaches to TR, an overview of the APIE process, and other professional issues will be introduced.

423-3 Environmental Interpretation. (Same as AGRI 423 and FOR 423) Principles and technique of natural and cultural interpretation. Two hours lecture, three hours laboratory. Prerequisite: ten hours biological science or ten hours of recreation. Requires field trip transportation fee not to exceed \$40 per course registration.

425-3 Planning and Design of Recreational Facilities. An examination of major design considerations for a variety of recreation facilities such as recreation centers, recreation sport complexes, parks, visitors centers, and natatoriums. Special attention will be given to long range facility planning. Prerequisite: REC 300, REC 301, REC 303. Restricted to senior or

graduate standing.

426-3 Outdoor Adventure Land Based Pursuits. This course provides a combination of theoretical background and technical aspects of outdoor adventure based pursuits in a vertical environment and will emphasize hands-on skill development such as movement on rock, rope systems, anchors, rappelling and belaying, protection placement, and lead climbing philosophy. Taught biennially. Course fee and field trips required. Fee: \$100.

427-3 Outdoor Adventure Water Based Pursuits. This course provides a combination of theoretical background and technical aspects of outdoor adventure based pursuits in a water environment and will emphasize hands-on skill development such as equipment nomenclature, strokes, rescues, and reading/recognizing water features. Taught biennially. Course fee and field trips required. Fee: \$100.

428-3 Outdoor Adventure Challenge Based Pursuits. This course provides a combination of theoretical background and technical aspects of outdoor adventure based pursuits in a challenge environment and will emphasize hands-on skill development-spotting/belaying, equipment management, program design/sequencing, facilitation strategies, and course design and maintenance. Taught biennially. Course fee and field trips required. Fee: \$100.

429-3 Planning, Logistics, & Risk Management in Outdoor Recreation. This course provides an experiential approach in addressing the planning, logistics, and safety and risk management needed to design, implement, and prepare outdoor adventure based expeditions. Fulfills portions of the Wilderness Education Association's Planning and Logistics/Safety and Risk Management core competencies. Taught Biennially.

430-3 Outdoor Living Skills. This course provides a foundation to basic outdoor living skills in backcountry environments. Topics include basic camping skills, equipment and clothing selection and use, weather, health and sanitation, travel techniques, navigation, and decision making/problem solving. Fulfills the Wilderness Education Association's Outdoor Living core competency. Taught Biennially. Course fees and field trips required. REC 429 recommended before taking REC 430. Trip fee not to exceed \$350.

431-3 Expedition Leadership. This course focuses on professional leadership of highly adventurous wilderness trips. Emphasis is on development of leadership through sound judgment, decision-making, and teaching in a backcountry/wilderness environment on an extended expedition. Fulfills the Wilderness Education Association's Education and Leadership core competency. Taught biennially. REC 429 & REC 430 recommended before taking REC 431. Course fee and field trips required. Trip fees not to exceed \$750.

432-3 Environmental Issues and Ethics in Outdoor Recreation. This course will address the management and issues related to outdoor recreation and the importance of developing a land ethic that will ensure future use of outdoor resources. The history, background, and development of the recreation ecology movement will be addressed. Fulfills the WEA's Environmental Integration core competency and LNT's Master Educator curriculum. Taught Biennially. Course fee and field trip required. Fee: \$35.

433-3 Adventure Education. This course provides a practi-

cal and theoretical background of adventure education. Topics that will be addressed and applied include the use of challenge and adventure in various situations, experiential education, activity sequencing, utilizing peak experiences, leadership styles and development, debriefing, and framing. Taught Biennially. Field trips required.

434-3 Wilderness First Responder. This course addresses the practice of advanced medical techniques in a wilderness environment. The Wilderness First Responder is recognized as the industry standard for those who work in the backcountry or remote environments. Wilderness First Responder certification offered with successful completion. Course fee and field trips required. Fee: \$30.

435-3 Advanced Outdoor Leadership. This course focuses on advanced leadership techniques for outdoor leaders. Emphasis is on evaluation and assessment of leaders in backcountry/wilderness environments. Utilizes the Wilderness Education Association's assessment and evaluation curriculum. Field trip required. Special approval needed from the instructor.

440A-3 Therapeutic Recreation for Specific Populations. Students will examine problems and characteristics of individuals with various disabilities. Emphasis is upon the role of therapeutic recreation with these specific populations in institutional and community settings-therapeutic recreation for individuals with psychological disorders. Prerequisite: REC 300, REC 301, REC 302, REC 304 or consent of instructor.

440B-3 Therapeutic Recreation for Specific Populations. Students will examine problems and characteristics of individuals with various disabilities. Emphasis is upon the role of therapeutic recreation with these specific populations in institutional and community settings: therapeutic recreation for individuals with developmental disabilities. Prerequisite: REC 300, REC 301, REC 302, REC 304 or consent of instructor.

440C-3 Therapeutic Recreation for Older Adults-Therapeutic Recreation for the Aged. (Same as GRON 440C) Students will examine problems and characteristics of individuals with various disabilities. Emphasis is upon the role of therapeutic recreation with these specific populations in institutional and community settings. Prerequisites: REC 300, REC 301, REC 302, REC 304 or consent of instructor.

440D-3 Therapeutic Recreation for Specific Populations. Students will examine problems and characteristics of individuals with various disabilities. Emphasis is upon the role of therapeutic recreation with these specific populations in institutional and community settings: therapeutic recreation for those in the criminal justice system. Prerequisite: REC 300, REC 301, REC 302, REC 304 or consent of instructor.

440E-3 Therapeutic Recreation for Specific Populations. Students will examine problems and characteristics of individuals with various disabilities. Emphasis is upon the role of therapeutic recreation with these specific populations in institutional and community settings: therapeutic recreation for individuals with physical disabilities. Prerequisite: REC 300, REC 301, REC 302, REC 304 or consent of instructor.

440F-3 Therapeutic Recreation for Specific Populations. Students will examine problems and characteristics of individuals with various disabilities. Emphasis is upon the role of therapeutic recreation with these specific populations in institutional and community settings: therapeutic recreation in sub-

stance abuse treatment. Prerequisite: REC 300, REC 301, REC 302, REC 304 or consent of instructor.

445-3 Outdoor Recreation Management. This course addresses the philosophies and principles underlying the growth and development of outdoor recreation management. Outdoor recreation is examined in terms of historical values, long range planning, site design, visitor needs, and environment impact. Course fee and field trip required. A fee of up to \$14 may be required.

446-3 Backcountry and Wilderness Trail Stewardship. This course provides a hands-on approach to aspects of volunteer trail stewardship in planning, implementing, and evaluating basic and advanced trail features and building projects. Rules, regulations, and potential hazards associated with working, traveling, and camping in the backcountry will be addressed. Students will be exposed to trail building tools and their proper usage and care. Field trips required. Special approval needed from the instructor.

460-3 Therapeutic Recreation Management. Management of therapeutic recreation programs in healthcare systems and other related human services areas. This course will cover a variety of issues such as U.S. healthcare systems and settings, organizational planning, financial and personnel management legal foundations, and advocacy and advancement of therapeutic recreation profession. Prerequisite: REC 300, REC 301, REC 302, REC 303, REC 304 or consent of department.

461-3 Program Design and Evaluation in Therapeutic Recreation. To equip the student with skills necessary to systematically design and evaluate programs. Philosophy and nature of systems, system analysis, assessment, individual treatment planning, implementation and evaluation of treatment programs. Prerequisite: REC 300, REC 301, REC 302, REC 303, REC 304, one section of REC 440, or consent of department.

462-3 Facilitation Techniques in Therapeutic Recreation. This course is designed to provide an understanding of the basic processes and techniques of therapeutic recreation and to develop technical competencies necessary for the provision of quality therapeutic recreation services. Emphasis is on the skillful application of various processes and techniques to facilitate therapeutic changes in the client and the client's environment. Prerequisite: REC 304 or concurrent enrollment.

465-3 Advanced Administrative Techniques in Recreation. Designed to examine current administrative topics in recreation such as practices and trends in budget and finance, legal aspects, grant writing, personnel and policies and others.

475A-3 to 39 Recreation Workshop-Budget and Finance. Critical examination and analysis of innovative programs and practices.

475B-3 to 39 Recreation Workshop-Campus Recreation Services. Critical examination and analysis of innovative programs and practices.

475C-3 to 39 Recreation Workshop-Commercial. Critical examination and analysis of innovative programs and practices.

475D-3 to 39 Recreation Workshop-Maintenance of Areas and Facilities. Critical examination and analysis of innovative programs and practices.

475E-3 to 39 Recreation Workshop-Outdoor Recreation. Critical examination and analysis of innovative programs and practices. Field Trip fee: \$100.

475F-3 to 39 Recreation Workshop-Personnel. Critical examination and analysis of innovative programs and practices.

475G-3 to 39 Recreation Workshop-Technological Advances. Critical examination and analysis of innovative programs and practices.

475H-3 to 39 Recreation Workshop-Therapeutic Recreation-Aging. Critical examination and analysis of innovative programs and practices.

475I-3 to 39 Recreation Workshop-Therapeutic Recreation-Developmental Disability. Critical examination and analysis of innovative programs and practices.

475J-3 to 39 Recreation Workshop-Therapeutic Recreation-Emotional Illness. Critical examination and analysis of innovative programs and practices.

475K-3 to 39 Recreation Workshop-Therapeutic Recreation-Physical Disability. Critical examination and analysis of innovative programs and practices.

475L-3 to 39 Recreation Workshop-Therapeutic Recreation-Prisons and Detention Centers. Critical examination and analysis of innovative programs and practices.

475M-3 to 39 Recreation Workshop-Tourism. Critical examination and analysis of innovative programs and practices.

485-2 to 12 Practicum in Outdoor Education. A supervised experience in a professional setting. Emphasis on administrative, supervisory, teaching, and program leadership in outdoor, conservation, or environmental education setting. Costs for travel are the responsibility of the student. Special approval needed from the instructor.

490A-12 Internship in Leisure Services Management. Supervised practicum experience in a professional recreation setting. For undergraduate credit only. Must be taken during student's senior year. Prerequisite: completion of all requirements for major in recreation or consent of course coordinator; 2.25 grade point average. Special approval needed from the instructor.

490B-12 Internship in Outdoor Recreation. Supervised practicum experience in a professional recreation setting. For undergraduate credit only. Must be taken during student's senior year. Prerequisite: completion of all requirements for major in recreation or consent of course coordinator; 2.25 grade point average. Special approval needed from the instructor.

490C-12 Internship in Therapeutic Recreation. Supervised practicum experience in a professional recreation setting. For undergraduate credit only. Must be taken during student's senior year. Prerequisite: completion of all requirements for major in recreation or consent of course coordinator; 2.25 grade point average. Special approval needed from the instructor.

Recreation Faculty

Belsley, Mitchell, Instructor, M.S., Southern Illinois University Carbondale, 2014.

Colson, Tina, Senior Lecturer, M.S., Southern Illinois University, 2004.

Glover, James, Associate Professor, *Emeritus*, Ph.D., University of Maryland, 1980.

Glover, Regina, Associate Professor, *Emerita*, Ph.D., University of Maryland, 1983.

Kim, Jun, Assistant Professor, Ph.D., University of Utah, 2013.

Malkin, Marjorie J., Professor, *Emerita*, Ed.D., University of Georgia, 1986.

McEwen, Douglas, Professor, *Emeritus*, Ph.D., Michigan State University, 1973.

Weaks, Steven E., Senior Lecturer, Rh.D., Southern Illinois University Carbondale, 2003.

Yang, Heewon, Professor and *Chair*, Ph.D., Indiana University, 2002.

Recreation Therapy

(SEE RECREATION)

Rehabilitation Services

(Major, Courses, Faculty)

The major in Rehabilitation Services is part of the Rehabilitation Institute. The mission of the baccalaureate program in Rehabilitation Services is to prepare students to work with people with disabilities in a variety of settings in a wide range of positions. Students will learn the knowledge and skills necessary to assist individuals with disabilities to obtain and maintain meaningful employment, to live as independently as possible, to participate to the fullest extent possible in their communities, and to assume control of their lives. Students who graduate from the program will be prepared to fill various roles including developmental training coordinator, independent living specialist, employment specialist, habilitation program coordinator, rehabilitation coordinator, addictions professional, community-based training instructor, case manager, job placement specialist, work adjustment specialist, residential service director, and job coach supervisor. They will be employed in settings such as vocational training programs, residential and day treatment programs, independent living centers, community rehabilitation programs and addiction treatment programs. Students also will be well prepared to enter a master's degree program in rehabilitation or a related field.

Students majoring in Rehabilitation Services are required to complete 41 hours of University Core Curriculum courses, 48 hours in the major, and 31 hours of electives which are chosen by the student in conjunction with the advisor.

Students must maintain a 2.25 on a 4.0 scale overall and a 2.5 in major coursework to remain in the program and to graduate with a degree in Rehabilitation Services. Additionally, students must earn a C or better in all required rehabilitation services prefix courses.

The Capstone Option is available to students and is described in Chapter 3.

Bachelor of Science Degree in Rehabilitation Services, College of Education and Human Services

<i>University Core Curriculum Requirements</i>	41
From within the Disciplinary Studies courses, students are encouraged to take Psychology 102	
<i>Requirements for Major in Rehabilitation Services</i>	48
Rehabilitation 205 ¹ , 312, 400, 401, 405, 406, 407, 445B, 445H, 452, 461, 474, 493, 495	48
<i>Electives by Advisement</i>	31
Suggestions include: Communication Disorders and Sciences	

301, 385; Health Education 311, 410; Psychology 222, 301, 303, 304, 431; Recreation 303; Rehabilitation 419, 445F, 446, 471; Sociology 303, 321; Special Education 430

Total 120

¹REHB 205 is available for credit in the Human Health area of the University Core Curriculum.

Rehabilitation Services Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102.....	3	3
MATH, CMST 101	3	3
Fine Arts, Humanities	3	3
REHB 205, Biology	3	3
UCOL 101, Social Science	3	3
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
Humanities, Social Science	3	3
Physical Science, REHB 406	3	3
Multicultural, Elective.....	3	3
REHB 312, 445H.....	3	3
REHB 400, 493.....	3	3
<i>Total</i>	15	15

THIRD YEAR	FALL	SPRING
REHB 401, 461.....	3	3
REHB 405, Elective	3	3
REHB 407, Elective	3	3
REHB 445B, Elective.....	3	3
Elective, Elective	3	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
REHB 452, 426 (or approved sub).....	3	3
REHB 474, 495.....	3	9
Elective	3	-
Elective	3	-
Elective	3	-
Elective	3	-
<i>Total</i>	18	12

Rehabilitation Services Minor

A minor in rehabilitation services consists of 5 courses (15 hours). Three of those courses are required. They include REHB 205¹, REHB 401, and REHB 312. Additionally, students must take two of the following courses: REHB 405, REHB 406, REHB 445B, REHB 445H, or REHB 461. A GPA of at least 2.5 must be achieved in the rehabilitation courses required of the minor.

¹REHB 205 is available for credit in the Human Health area of the University Core Curriculum.

Courses (REHB)

205-3 Disability and Chronic Disorders. (University Core Curriculum) This course focuses upon the common characteristics of physical, sensory, developmental, medical, and psychiatric disabilities. The course will discuss the definition and classi-

fication of each particular type of disability. Emphasized will be the diagnostic criteria and the biological, cognitive, behavioral, and social aspects of each particular disorder as they occur over the lifespan.

312-3 Behavior and Society. This course will provide students with an introduction to the principles of the science of behavior known as behavior analysis. The philosophical system known as behaviorism that underlies this area of study will be explored, as will the application of behavioral principles to a number of areas of social life.

400-3 Introduction to Rehabilitation. An introduction to the broad field of rehabilitation, to include the processes (services), facilities and personnel involved.

401-3 Disability, Diversity and Society. This course will address the relationship between prevailing societal attitudes and environmental designs and the opportunity of persons with disabilities to participate fully in society. It will examine the physical, mental, gender and cultural characteristics of persons with disabilities as determinants of their needs, values, aspiration and opportunities. How public policies can promote or limit inclusion and equal opportunities for persons with disabilities will also be addressed.

403-3 Independent Living Rehabilitation. Survey of principles and methods of independent living for persons with disabilities with attention to client assessment for rehabilitation, effective techniques for specific individuals with disabilities, and the variety of types and organization of independent living programs.

405-3 Introduction to Aging and Rehabilitation. (Same as GRON 405) Introduction to the field of aging, including social, political, economic and legal issues pertinent to an aging society and rehabilitation.

406-3 Introduction to Behavior Analysis and Therapy. A survey of the principles and procedures in behavior analysis and therapy and the scope of its application to human needs and problems. Prerequisite: REHB 312.

407-3 Basic Practices in Rehabilitation. Provides students with the basic pragmatic knowledge and skill base necessary for effective day-to-day practice in entry-level rehabilitation positions. The material will include but is not limited to: the team process and being an effective team-member; clinical interviewing and relationship building skills; active communication; rights and advocacy, ethics and ethical decision-making; intervention and psychotherapy models; psychopharmacology; and record-keeping and information management. Not for graduate credit.

419-1 to 3 Cross-Cultural Rehabilitation. Major focus on the relationship/comparison of basic cultural, economic, and psychosocial processes relative to the rehabilitation of people in contemporary societies. Special approval needed from the instructor.

445A-3 Rehabilitation Services with Special Populations-Alcohol and Drug Abuse. Procedures and programs pertinent to the care and treatment of special populations. Three semester credits will ordinarily be granted for each unit. Special approval needed from the instructor.

445B-3 Psychiatric Rehabilitation. This course will explore the history, philosophy, practice, current trends, and issues of psychiatric rehabilitation. Rehabilitation services that (A) de-

velop an individual's skills and (B) provide environmental support for people with chronic mental illness will be examined. Emphasis will be placed on reaching vocational goals and optimal independent functioning for people with psychiatric disabilities. Special approval needed from the instructor.

445C-3 Rehabilitation Services with Special Populations-Juvenile Offender. Procedures and programs pertinent to the care and treatment of special populations. Three semester credits will ordinarily be granted for each unit. Special approval needed from the instructor.

445D-3 Rehabilitation Services with Special Populations-Mental Retardation. Procedures and programs pertinent to the care and treatment of special populations. Three semester credits will ordinarily be granted for each unit. Special approval needed from the instructor.

445E-3 Rehabilitation Services with Special Populations-Physically Disabled. Procedures and programs pertinent to the care and treatment of special populations. Three semester credits will ordinarily be granted for each unit. Special approval needed from the instructor.

445F-3 Rehabilitation Services with Special Populations-Public Offender. Procedures and programs pertinent to the care and treatment of special populations. Three semester credits will ordinarily be granted for each unit. Special approval needed from the instructor.

445G-3 Rehabilitation Services with Special Populations-Sensory Disabled. Procedures and programs pertinent to the care and treatment of special populations. Three semester credits will ordinarily be granted for each unit. Special approval needed from the instructor.

445H-3 Rehabilitation Services with Special Populations-Developmental Disabilities. Procedures and programs pertinent to the care and treatment of special populations. Three semester credits will ordinarily be granted for each unit. Special approval needed from the instructor.

446-3 Psychosocial Aspects of Aging. (Same as GRON 446) Selected theories of psychosocial aspects of aging will be presented and the psychological and sociological processes of aging with the ensuing changes will be related to these conceptual frameworks. Included for discussion and related to field experience will be such concerns as stress reactions to retirement, physical disabilities, impact of reduced economic resources, and other personal-social changes in aging. Topics will address the knowledge base needed by students concerned with rehabilitation of aging clients in institutional, community and home settings. Therapeutic techniques to ameliorate these stresses will be an integral part of the course.

447-3 Biomedical Aspects of Aging. The aging process in a life-span developmental perspective; biological theories of aging, physiological changes in middle and old age and their effects on behavior, performance potential, and psychosocial functioning; senility and other age-related disabilities, their prevention and management; geriatric health maintenance and rehabilitation; institutionalization; death and dying.

452-3 Individual Service Planning. This course provides students with the skills to develop individual service plans for individuals being served in community rehabilitation programs. Topics covered include person-centered assessment, functional community based training, and written treatment

plans. Prerequisite: REHB 312, REHB 406, REHB 445H or consent of instructor.

453-1 to 4 Personal and Family Life Styling. The academic and personal competencies that are characteristic of fully functioning, integrated persons within the context of our twentieth century environment will be systematically reviewed for adoption in everyday living as well as in professional functions. Participants will focus on and experience life styling theories, models, and skills for their own growth and development and learn to assess basic risk-factors in their rehabilitation clients and families prior to helping them program a more balanced, synergistic, and holistic approach to living. Special approval needed from the instructor.

461-3 Introduction to Substance Use Disorders and Behavioral Addictions. Introduction to the field of substance use and behavioral addictions counseling with an overview of foundation topics underlying professional practice. This course will focus primarily on substance use and behavioral addiction models, medical and psychological consequences, drug classification systems, legislation, and other clinical and public policy issues that may be relevant to the field.

468-3 Sexuality and Disability. Research and rehabilitation practices pertaining to the unique psychosexual aspects of various chronically disabling conditions will be examined.

471-3 Treatment, Recovery, and Relapse Prevention. A comprehensive examination of assessment, diagnosis, referral, and treatment processes for substance use disorders and behavioral addictions. The course will cover treatment provided in a variety of settings. Students will acquire skills to provide person-centered treatment, recovery and relapse prevention services, using evidence based practices. The ASAM and the DSM V will be featured as treatment tools. Students will utilize case formulations to gain experience in the treatment plan development and implementation process. Ethical practices will be emphasized. Prerequisite: REHB 461 with a minimum grade of B.

474-3 Introduction to Staff Supervision. This course provides an introduction to the skills necessary to supervise staff in rehabilitation settings. Students will receive training and practice in using management styles, time management, delegation, disciplining, coaching, behavioral supervision, goal-setting, performance evaluation, giving feedback, keeping documentation, listening, conflict resolution and facilitating meetings. Not for graduate credit. Prerequisite: REHB 400.

479-3 Technical Writing in Rehabilitation. Fundamentals of writing skills for rehabilitation specialists, including preparation and drafting of program/grant proposals, vocational evaluation/work adjustment reports, news releases and other publicity materials. Special approval needed from the instructor.

490-1 to 6 (1 to 3 per semester) Readings in Rehabilitation. Supervised readings in selected areas. Special approval needed from the instructor.

493-3 Clinical Evaluation. This course will provide students with the skills necessary to act as critical consumers of rehabilitation-related research. It will also provide students with the analytical skills necessary to apply the logic of research methodology to their work with consumers. The relationship between the scientific process and rehabilitation services will be emphasized throughout the course, including an introduction to research on program evaluation. Also emphasized will be the

critique and interpretation of published research, as well as the writing competencies required for the student to successfully prepare a literature review paper. Prerequisite: REHB 312 and simultaneous enrollment in or prior completion of REHB 406.

494-1 to 12 Work Experience in Rehabilitation. Credit granted for work experience in rehabilitation. Rehabilitation 494 and 594 both cannot be counted for graduate degree; only one or the other can satisfy requirements toward a master's degree. Graded P/F only. Special approval needed from the department.

495-3 to 12 Internship in Rehabilitation. Supervised field experience in an agency or organization providing rehabilitation services. Not for graduate credit. Prerequisite: satisfactory completion of all other required undergraduate Rehabilitation courses, and minimum GPA of 2.5 in required Rehabilitation courses. P/F grading.

498-3 Special Topics in Rehabilitation Research and Practice. The topics in this course will be variable and will focus on current challenges in the rehabilitation field. Students will explore current research, evidence based practice and public policy as they pertain to the topic. Specific attention will be directed to how these topics may pose potential ethics/professional challenges and/or challenges for consumer advocacy or how the topic may represent new, innovative opportunities for the field.

Rehabilitation Services Honors Program

The Rehabilitation Services Honors Program is a program within the major that is intended to reward SIU's best Rehabilitation Services students for their high academic achievement. Participation in the Rehabilitation Services Honors Program is contingent upon admission to the University Honors Program (UHP). Admission to the University Honors Program is by special application only after the student has been admitted to the university.

Continuing SIU students qualify for admission to the UHP on the basis of a cumulative SIU grade point average of 3.5 or higher, with at least 12 semester hours completed. Transfer students with at least 12 semester hours of transfer credit qualify for admission to the UHP on the basis of a cumulative grade point average of 3.5 or higher on all non-SIU college-level work. Staying in the UHP requires continuous enrollment in a UHP course each semester, subject to exceptions as determined by the program director. Students must also maintain a cumulative 3.5 grade point average on all SIU course work and have no failing grades in UHP courses.

Students who complete the Rehabilitation Services Honors Program will be awarded an Honors degree. For this distinction to appear on official transcripts and diplomas, all entering, transfer, and continuing students must:

1. Complete 24 hours of UHP-approved course work. This work may include up to 9 hours of AP and high school honors courses, certified by appropriate examinations for college credit, or up to 9 hours of honors courses taken at other post-secondary institutions. The total number of hours must also include at least ENGL 120 (or a UHP-approved equivalent), two UHON seminars, and a senior UHP project or thesis under the direction of a faculty member. All UHP projects and theses must be approved in advance by the program director

one full year in advance; and

2. Have a cumulative 3.5 grade point average or higher on all SIU course work at graduation.

Included in the 24 hours of UHP-approved course work are four required Rehabilitation Services courses with specialized, advanced learning opportunities for Honors students, and an Honors thesis.

Honors Courses (REHB)

205H-3 Disability and Chronic Disorders. (University Honors Program) Open to undergraduates. Available for Honors credit by special arrangement.

401H-3 Disability, Diversity and Society. (University Honors Program) Open to undergraduates. Available for Honors credit by special arrangement.

406H-3 Introduction to Behavior Analysis and Therapy. (University Honors Program) Open to undergraduates. Available for Honors credit by special arrangement.

493H-3 Clinical Evaluation. (University Honors Program) Open to undergraduates. Available for Honors credit by special arrangement.

499H-3 to 6 Senior Hours in Rehabilitation Services. Intensive study in selective areas for students qualified for honors work in Rehabilitation Services. A research paper or equivalent will be required. Not for graduate credit. Prerequisites: REHB 205H, 401H, 406H, 493H. Special approval needed from the department.

Rehabilitation Institute Faculty

Austin, Gary, Professor, *Emeritus*, Ph.D., Northwestern University, 1973.

Baker, Jonathan C., Associate Professor, Ph.D., Western Michigan University, 2009.

Bass-Ringdahl, Sandie M., Assistant Professor, Ph.D., The University of Iowa, 2002.

Beck, Richard J., Associate Professor, *Emeritus*, University of Wisconsin, 1990.

Benshoff, John J., Professor, *Emeritus*, Ph.D., University of Northern Colorado, 1988.

Blache, Stephen E., Professor, *Emeritus*, Ph.D., The Ohio University, 1970.

Bordieri, James E., Professor, Ph.D., Illinois Institute of Technology, 1980.

Boyer, Valerie E., Assistant Professor, Ph.D., Southern Illinois University Carbondale, 2006.

Bryson, Seymour L., Professor, *Emeritus*, Ph.D., Southern Illinois University, 1972.

Crimando, William, Professor, Ph.D., Michigan State University, 1980.

Cuvo, Anthony J., Professor, *Emeritus*, Ph.D., University of Connecticut, 1973.

Davis, Paula K., Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1989.

Dixon, Mark R., Professor, Ph.D., University of Nevada, 1998.

Falvo, Donna R., Professor, *Emerita*, Ph.D., Southern Illinois University, 1978.

Flowers, Carl R., Professor and *Director*, Rh.D., Southern Illinois University Carbondale, 1993.

Franca, Maria Claudia, Assistant Professor, Ph.D., Southern Illinois University Carbondale, 2006.

Greene, Brandon F., Professor, *Emeritus*, Ph.D., Florida State University, 1979.

Grenfell, John E., Professor, *Emeritus*, Ed.D., Oregon State University, 1966.

Hoshiko, Michael S., Professor, *Emeritus*, Ph.D., Purdue University, 1957.

Koch, D. Shane, Professor, Rh.D., Southern Illinois University Carbondale, 1999.

Lehr, Robert P., Jr., Professor, *Emeritus*, Ph.D., Baylor University, 1971.

Nichols, Jane L., Assistant Professor, Ph.D., Michigan State University 2007.

Poppen, Roger L., Professor, *Emeritus*, Ph.D., Stanford University, 1968.

Rehfeldt, Ruth Anne, Professor, Ph.D., University of Nevada, 1998.

Ringdahl, Joel E., Assistant Professor, Ph.D., Louisiana State University, 1999.

Robertson, Stacia L., Associate Professor, Ph.D., The Pennsylvania State University, 2003.

Rubin, Stanford E., Professor, *Emeritus*, Ed.D., University of Illinois, 1968.

Schultz, Martin C., Professor, *Emeritus*, Ph.D., University of Iowa, 1955.

Simpson, Kenneth O., Associate Professor, *Emeritus*, Ph.D., University of Nebraska-Lincoln, 1995.

Smith, Linda McCabe, Associate Professor and *Associate Chancellor*, Ph.D., Southern Illinois University Carbondale, 1994.

Taylor, Darrell, Associate Professor, *Emeritus*, Ph.D., University of South Florida, 1992.

Upton, Thomas D., Professor, Ph.D., The University of Iowa, 2000.

Vieceli, Louis, Associate Professor, *Emeritus*, M.S.Ed., Southern Illinois University, 1959.

Wright, W. Russell, Associate Professor, *Emeritus*, Ph.D., Southern Illinois University, 1974.

Restaurant Management

(SEE HOSPITALITY AND TOURISM ADMINISTRATION)

Rural Appraisal

(SEE AGRIBUSINESS ECONOMICS)

Rural Development

(SEE AGRIBUSINESS ECONOMICS)

Science (College, Courses)

Courses (SCI)

123-3 Foundations of Scientific Inquiry. This seminar-style course is designed to promote an understanding of the value and expectations of higher education and to explore the resources available to science majors. Students will learn study skills, time management, and explore strategies for success in classes. The nature and process of scientific investigation will be presented by SIUC and regional scientists who solved local and global problems and contribute to the science knowledge-base.

Students will be exposed to the excitement of inquiry-based discovery and will explore the methods by which practicing scientists guide their work. Classroom activities will enhance communication skills and assist students in networking and integrating into the scientific community at SIUC.

201-1 Career Preparation Seminar for Health Professions. Preprofessional information and experience for preparation to enter schools of medicine, dentistry, osteopathy, podiatry, optometry and veterinary medicine. Classroom and off-campus experience. Graded Pass/Fail. Prerequisite: MATH 108 and 109, or 111, BIOL 200 A,B and CHEM 200, 201. Minimum 3.0 overall GPA.

210A-3 Integrated Science I. (Advanced University Core Curriculum course) An integrated, inquiry-based science course based on topics delineated in national and state science education standards. This course is designed to help prepare teachers to teach science. Content focus is on physics, earth/space sciences, and science inquiry. Satisfies University Core Curriculum Science Group I requirement. Prerequisite: MATH 120 or CI 120. Restricted to elementary education, child and family services and preschool-primary only. Lab fee: \$10.

210B-3 Integrated Science II. (Advanced University Core Curriculum course) An integrated, inquiry-based science course based on topics delineated in national and state science education standards. This course is designed to help prepare teachers to teach science. Contents focus is on chemistry, biological sciences, and science inquiry. Satisfies University Core Curriculum Science Group II requirement. Prerequisite: MATH 120 or CI 120. Restricted to elementary education, child and family services and preschool-primary majors only. Lab fee: \$10.

257-2 to 8 Concurrent Work Experience Credit. Practical experience in a laboratory or other work directly related to course work in a College of Science program and to the student's educational objectives might be used as a basis for granting credit in the College of Science. Credit is given when specific program credit cannot be granted and is usable for elective credit only. Credit for ongoing work experience is sought by petition and must be approved by the dean and the executive officer of the student's major program before registration. Mandatory Pass/Fail.

258-2 to 8 Work Experience Credit. Practical experience in a laboratory or other work directly related to course work in a College of Science program and to the student's educational objectives might be used as a basis for granting credit in the College of Science. Credit is given when specific program credit cannot be granted and is usable for elective credit only. Credit for past work experience is sought by petition and must be approved by the dean and the executive officer of the student's major program. No grade for past work experience.

259-2 to 24 Vocational Education Credit. Formal, post-secondary, educational credit earned in a military service or other vocational, technical, or occupational program and directly related to the student's educational objectives may be used as a basis for granting credit in the College of Science. Credit is given when specific program credit cannot be granted and is usable for elective credit only. Credit is sought by petition and must be approved by the dean and the executive officer of the student's major program.

300-1 to 12 Internship. Supervised training in a formalized

internship program of a scientific nature. May not be used for credit in a science major. Mandatory Pass/Fail. Restricted to science major. Special approval needed from the sponsoring agency and the department.

388-1 to 36 Study Abroad. Provides credit toward the undergraduate degree for study at accredited foreign institutions or approved overseas programs. Final determination of credit is made on the student's completion of the work. Zero to eighteen credits per semester, zero to nine for summer session. Prerequisite: one year of residence at Southern Illinois University Carbondale, good academic standing, and prior approval of the course of study by the major department and the College of Science.

Social Studies

(SEE CURRICULUM AND INSTRUCTION)

Social Work (Major, Courses, Faculty)

The course of study consists of three major components: (1) required University Core Curriculum course work; (2) required social work major course work; (3) general university electives. The University's core curriculum program, required of all students pursuing a bachelor's degree, is a carefully balanced series of courses of inquiry in the sciences, social sciences, humanities, fine arts, English and communication skills, mathematics, health, and multicultural studies. The university core curriculum courses in sociology, political science, economics, human biology and psychology are particularly relevant to the social work major.

The social work requirements in the curriculum include courses that define the role of the profession as it relates to society, politics, and the economy; that provide the conceptual framework to address problems and changed circumstances for individuals, families, groups, and communities; and that examine the structure, functions, policies, programs, and strategies of the social welfare system. Methods courses cover interviewing and interpersonal helping skills, problem solving, group theory, community organization, community development, and social research. This core of courses is designed to give students a solid foundation in understanding, creating and applying research that will help the students become effective professionals and to give the students the potential to add to the body of knowledge that will guide their daily decisions and behavior. The field practicum provides an opportunity to integrate theoretical knowledge and helping skills learned in the classroom with the real world settings of southern Illinois social service agencies. A concurrent weekly seminar supports this integration of theory and practice. The practicum is taken in the second semester of the senior year.

General university electives may be chosen from any university courses which are relevant to personal interests and/or social work. Students may use university electives to pursue a minor in a field of study related to social work major, for example: Africana Studies, Women, Gender and Sexuality Studies, Child and Family Services, Criminology and Criminal Justice, etc.

Social work majors must maintain a minimum overall grade point average of 2.25 (on a 4.0 scale). Students admitted into

the program must achieve at least a grade of C in Social Work 275 & 383 courses and maintain at least a 2.25 overall grade point average (on a 4.0 scale) in each semester to remain in the program.

Students must have an overall grade point average of 2.50 (on a 4.0 scale) in Core Social Work Courses (Social Work 275, 383, 400A, 400B, 401, 402, 411 and 421) to enroll in field practicum (441 & 442).

The School of Social Work is accredited by the Council on Social Work Education (CSWE), 1725 Duke St. Suite 500, Alexandria, VA 22314-3457, Phone: (703) 683-8080.

Bachelor of Science Degree in Social Work, College of Education and Human Services

<i>University Core Curriculum Requirements</i>	41
<i>Requirements for Major in Social Work</i>	60
Anthropology 240A, Plant Biology 115 or Zoology 115, Sociology 108, Political Science 114, Psychology 102 and Economics 113 or Economics 114	(9) + 6
Foundations of Social Work: Social Work 275, 400A, 400B, 411, 421	15
Social Work Practice: Social Work 383, 401, 402, 441, and 442	21
Social Work Policy, Practice, and Issues: A total of 6 hours selected from Social Work 350, 361, 366 or other approved university courses	6
Social Work 291	3
At least two Liberal Arts electives at the 300- or 400-level selected from: anthropology, philosophy, history, political science, psychology, sociology	6
An introduction to statistics course	3
Electives	19
<i>Total</i>	120

Social Work Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101, SOC 108 ¹	3	3
ENGL 101, ENGL 102	3	3
MATH 101, Core Humanities ²	3	3
CMST 101, Fine Arts	3	3
Core Health, G1: Science	2	3
<i>Total</i>	14	15
SECOND YEAR	FALL	SPRING
PSYC 102, ECON 114 ¹	3	3
PLB 115, POLS 114 ¹	3	3
Humanities, Electives	3	9
Core Multicultural	3	-
Elective	4	-
<i>Total</i>	16	15
THIRD YEAR	FALL	SPRING
SOCW 275, 400A	3	3
SOCW 291, 401	3	3
SOCW 383, 421	3	3
SOCW Elective, Statistics ³	3	3

Lib.Arts Elective, SOCW Elective.....	3	3
<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
SOCW 400B, 441 ⁴	3	9
SOCW 402, 442	3	3
SOCW 411, Elective	3	3
Lib.Arts Elective	3	-
Elective	3	-
<i>Total</i>	15	15

¹Required for Social Work major.

²The school recommends that electives in the humanities include Philosophy 104 or 105.

³Required to enroll for Social Work 411.

⁴Students must have a GPA of 2.5 (on a 4.0 scale) in Core Social Work Courses (Social Work 275, 291, 383, 400A,B, 401, 402, 411 and 421) to enroll in Field Practicum.

Courses (SOCW)

275-3 Social Welfare as a Social Institution. Explores the interdependence of social, cultural, political and economic factors in the history and practice of social welfare with special reference to development of the social work profession. Focus on service integration and coordination in community-based delivery systems in rural areas, especially for poor and oppressed populations.

291-3 Social Services and Minority Groups. Exploration of the needs, experiences and attitudes of minority populations pertaining to delivery of social services in rural settings. Emphasis on relationship of cultural diversity to practice, policy and research content.

295-1 to 6 Field Service Practicum in Southern Illinois. This course is designed for freshman and sophomores who are volunteering service to community, social service, or health agencies in southern Illinois. Credit based upon time spent in direct service. Mandatory Pass/Fail.

350A-1 (1 credit per topic) Social Work Special Issues-Practice. May be repeated up to 2 semester hours. Topics will be selected. Limit to no more than one credit hour per semester.

350B-1 (1 credit per topic) Social Work Special Issues-Policy and Planning. May be repeated up to 2 semester hours. Topics will be selected. Limit to no more than one credit hour per semester.

350C-1 (1 credit per topic) Social Work Special Issues-Public Welfare Services. May be repeated up to 2 semester hours. Topics will be selected. Limit to no more than one credit hour per semester.

361-3 Child and Family Services. Problems of child-parent relationships and difficulties in social functioning of children and adolescents. Adoptions, foster home and institutional placements, protective services. Focus on services in rural areas.

363-3 Social Work with the Aged. Basic concepts of social work methods applied to the older adult group. Characteristics of the aged group, its needs and potentials. Social trends and institutions involved in services to the aged.

366-3 Public Policies and Programs for the Aged. An introduction to public policy, program and planning for the aged. A framework is utilized for analyzing policy issues, programs

and research in such areas as income maintenance, long term care, transportation, leisure time, housing and social services in order to aid present and future practitioners who work with the aged.

383-3 Interviewing and Interpersonal Helping Skills in Social Work. This is an introductory course in interpersonal skills in the social services in a systems context. Intake, interviewing and recording are emphasized. Focus on practice in multi-service settings. Prerequisite: PSYC 102.

396-1 to 3 Readings in Social Work. Varying topics not ordinarily covered in depth in regular courses and of specific interest to advanced students. Special approval needed from the instructor and School Director.

397-3 Statistics for Measuring Outcomes in Social Work Practice. Statistical methods as applied to social work, focusing on basic descriptive and inferential statistics and their relationship to social work research. Students are provided with statistical methods and models that are applicable to social work research. Lastly, students are prepared to critically analyze published research and apply statistical principles in their own research. Restricted to social work majors only.

400A-3 Human Behavior and the Social Environment for Social Work Practice I. The first of two courses that examine the normal and dysfunctional life span development from a systems theory perspective. This course focuses on the behavior of individuals and families. It also explores the impact of the environment and the implications for generalist practice with rural populations. Not for graduate credit. Prerequisite: PLB 115 or ZOOL 115 or ANTH 240A and SOC 108.

400B-3 Human Behavior and Social Environment for Social Work Practice II. Continuation of 400A. A systems perspective is used to examine the theoretical and practice implications of the life cycle as they relate to the development of groups, organizations and communities in rural settings. The course links content to generalist practice skills taught in 401 and 402. Not for graduate credit. Prerequisite: SOCW 400A.

401-3 Generalist Practice in Social Work I. The first of two courses, which prepares for generalist practice. Focuses on intervention skills with individuals and families at a beginning level of proficiency. Emphasis on assessment and treatment in multi-service agencies in rural settings. Not for graduate credit. Prerequisite: SOCW 275 and SOCW 383.

402-3 Generalist Practice in Social Work II. Continuation of 401. Generalist practice skills and knowledge with groups, organizations and communities at beginning level of proficiency. Emphasis on assessment and treatment in multi-service agencies in rural settings. Not for graduate credit. Prerequisite: SOCW 401.

411-3 Designing Performance Outcomes in Social Work Practice. Social work research in generalist practice. Examines the principles, concepts and methods of scientific investigation in terms of its application to social work research and practices. Provides basic skills for self-assessment research in field practicum in spring semester. Not for graduate credit. Prerequisite: an introduction to statistics course.

421-3 Social Welfare Policy. In-depth examination of current social welfare policy and program issues in the context of social welfare history in the United States. Utilizes a systematic

analytical framework for critical study of multiple causal factors (socio-economic, cultural, governmental structure). Prerequisites: ECON 113; POLS 114, SOCW 275. Not for graduate credit.

441-9 Field Practicum. Students are expected to complete 420 hours in an approved social service agency during the course of the semester. Utilizes learning contracts with goals, objectives and evaluation to integrate course content into practice, including practice self-assessment. Not for graduate credit. Mandatory Pass/Fail. Restricted to senior standing with GPA of 2.50 in core social work courses. Prerequisites: SOCW 275, 291, 383, 400A, 400B, 401, 402, 411, 421. Must be taken concurrently with weekly practicum seminar, SOCW 442.

442-3 Field Practicum Seminar. The seminar assists the student who is in field practicum to systematically conceptualize and integrate the field experience with generalist systems theory, skills and knowledge. The seminar builds on and re-emphasizes content provided in previous social work courses. Seminar discussion focuses on shared fieldwork experiences: practice issues related to social work principles, ethics and professionalism, and intervention strategies. Not for graduate credit. To be taken concurrently with SOCW 441.

446A-3 Selected Topics-Social Work Counseling With Individuals. (Same as SOCW 546A) (May be repeated with different sections).

446B-3 Selected Topics Social Work Practice With Groups. (Same as SOCW 546B) (May be repeated with different sections).

446C-3 Selected Topics-Social Work Intervention With Traumatic Stress Events. (Same as SOCW 546C) (May be repeated with different sections).

446D-3 Selected Topics-Medical Social Work. (Same as SOCW 546D) (May be repeated with different sections).

446E-3 Selected Topics-Substance Abuse and Mental Health. (Same as SOCW 546E) (May be repeated with different sections).

446F-3 Selected Topics-Social Work Family Therapy. (Same as SOCW 546F) (May be repeated with different sections).

446G-3 Selected Topics-Administration and Grant Writing. (Same as SOCW 546G) (May be repeated with different sections).

446H-3 Selected Topics-Child Welfare. (Same as SOCW 546H) (May be repeated with different sections).

446I-3 Selected Topics-Spirituality. (Same as SOCW 546I) (May be repeated with different sections).

446J-3 Selected Topics-Psychosocial Disorders. (Same as SOCW 531) (May be repeated with different sections).

446K-3 Selected Topics-Adoption. May be repeated with different sections.

446L-3 Selected Topics-Other. May be repeated with different sections.

478A-1 to 6 International Social Work: Generalist Policy and Practice-Germany. Provides an international perspective for the study of social work groups, organizations and communities. Focuses on the examination of assessment and problem solving interventions and cross-cultural comparisons of policy and practice.

478B-1 to 6 International Social Work: Generalist Policy

and Practice-Mexico. Provides an international perspective for the study of social work groups, organizations and communities. Focuses on the examination of assessment and problem solving interventions and cross-cultural comparisons of policy and practice.

478C-1 to 6 International Social Work: Generalist Policy and Practice-India. Provides an international perspective for the study of social work groups, organizations and communities. Focuses on the examination of assessment and problem solving interventions and cross-cultural comparisons of policy and practice.

478D-1 to 6 International Social Work: Generalist Policy and Practice-Bangladesh. Provides an international perspective for the study of social work groups, organizations and communities. Focuses on the examination of assessment and problem solving interventions and cross-cultural comparisons of policy and practice.

478E-1 to 6 International Social Work: Generalist Policy and Practice-Canada. Provides an international perspective for the study of social work groups, organizations and communities. Focuses on the examination of assessment and problem solving interventions and cross-cultural comparisons of policy and practice.

478F-1 to 6 International Social Work: Generalist Policy and Practice-South America. Provides an international perspective for the study of social work groups, organizations and communities. Focuses on the examination of assessment and problem solving interventions and cross-cultural comparisons of policy and practice.

478G-1 to 6 International Social Work: Generalist Policy and Practice-Asia. Provides an international perspective for the study of social work groups, organizations and communities. Focuses on the examination of assessment and problem solving interventions and cross-cultural comparisons of policy and practice.

478H-1 to 6 International Social Work: Generalist Policy and Practice-Africa. Provides an international perspective for the study of social work groups, organizations and communities. Focuses on the examination of assessment and problem solving interventions and cross-cultural comparisons of policy and practice.

478I-1 to 6 International Social Work: Generalist Policy and Practice-Classroom Based. Provides an international perspective for the study of social work groups, organizations and communities. Focuses on the examination of assessment and problem solving interventions and cross-cultural comparisons of policy and practice.

478J-1 to 6 International Social Work: Generalist Policy and Practice-Other. Provides an international perspective for the study of social work groups, organizations and communities. Focuses on the examination of assessment and problem solving interventions and cross-cultural comparisons of policy and practice.

496-1 to 3 Independent Research in Social Work. Provides opportunity for students to conduct independent research with the guidance of a faculty member. Topics of research are identified by the student and faculty member. Special approval needed from the instructor and School Director.

Social Work Faculty

- Brinker, Paul W.**, Lecturer, M.S.W. Southern Illinois University Carbondale, 1996.
- Buila, Sarah**, Associate Professor and Graduate Program Director, Ph.D., University of Illinois at Urbana-Champaign, 2005.
- Dreuth Zeman, Laura**, Professor, Ph.D., Vanderbilt University at Nashville, 1996.
- Horton, Karla**, Assistant Professor, Ph.D., University of Texas at Arlington, 2010.
- Jurkowski, Elaine T.**, Professor, Ph.D., University of Illinois at Chicago, 1997.
- Kawewe, Saliwe**, Professor and *Acting Director*, Ph.D., St. Louis University, 1985.
- Mukherjee, Dhrubodhi**, Associate Professor, Ph.D., University of South Carolina, 2005.
- Reese, Dona**, Associate Professor, Ph.D., University of Maryland at Baltimore, 1994.
- Reichert, Elisabeth**, Professor, Ph.D., University of Tennessee at Knoxville, 1989.
- Saleeby, Patricia**, Assistant Professor, Ph.D., Washington University, 2005.
- Soliman, Hussein**, Professor, Ph.D., University of Tennessee, 1993.

Sociology (Department, Major, Minor, Courses, Faculty)

Sociology is the science of society. It explains how human groups, institutions, and social movements shape our lives. Sociology develops students' insights into theoretical and practical aspects of life. Sociology students study such topics as deviance, sex and gender roles, social movements, social problems, large-scale business and government organizations, international development, and social change.

Training in sociology is basic both to creative living and to such practical tasks as the development and effective working of businesses, families, community service agencies, political movements and parties, churches, social clubs, government, industry, and schools.

Those with degrees in sociology find meaningful and rewarding employment as consultants to business and government, social change agents (e.g., community organizers), politicians, educators, and diplomats. Like other liberal arts students, sociology majors also enter the business world, particularly in the sales or personnel divisions of major corporations.

An undergraduate major in sociology is excellent preparation for those anticipating graduate study in law, social welfare, business administration, journalism, and many of the technical and scientific fields. In addition, many students have enjoyed the benefits of double majors or major-minor combinations between sociology and one of these related fields. Sociology and paralegal studies is an example of double majors involving two programs that are both in the College of Liberal Arts, while sociology and journalism are double majors involving programs in the College of Liberal Arts and the College of Mass Communication and Media Arts.

The Sociology Major. The major is for students seeking a broad academic background in sociology. Those who want a general liberal arts education in the social sciences or those anticipat-

ing graduate study in one of the social sciences usually choose it.

Academic Advisement. A student planning to major or minor in sociology should consult the College of Liberal Arts advising office as early as possible. Subsequently the student will visit a college advisor each semester until all major requirements have been completed.

To graduate with a major in sociology the student must meet all the University Core Curriculum requirements and the requirements of the College of Liberal Arts. The major requires thirty-six hours of course work. Four courses are required: Sociology 108, 301, 308 and 312. A capstone course during the senior year, Sociology 497 or 498, which requires prior consent of instructor, is also required. Each student must also take two additional 400-level courses in sociology. These requirements are summarized below.

Transfer Students. Credits for some sociology courses taken at community colleges are transferable. Students should have their sociology credits evaluated by the department's director of undergraduate studies at the earliest opportunity. At least 20 hours of sociology credit must be earned at Southern Illinois University Carbondale. The two 400-level courses must be taken at a senior level institution and Sociology 497 or 498 must be taken at Southern Illinois University Carbondale.

Bachelor of Arts Degree in Sociology, College of Liberal Arts

- University Core Curriculum Requirements* 41
- College of Liberal Arts Academic Requirements*
(See Chapter 4) 11
- Requirements for Major in Sociology* 36
 - 1) Sociology Requirements: Sociology 108, 301, 308
and 312 14
 - 2) Senior Year Work: Sociology 497 (or 498) 4
 - 3) At least two additional sociology 400-level courses 6
 - 4) Sociology course electives 12
- Electives* 32
- Total* 120

No more than nine hours of Sociology Core Curriculum courses, including Sociology 108, can count toward both the University Core Curriculum requirements and the Sociology major.

Sociology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101.....	3	-
Core Science ¹	3	3
MATH ¹ , SOC 108 ^{1,2}	3	3
Human Health ¹ , Core Humanities ¹	2	3
ENGL 101,102.....	3	3
Fine Arts ¹	-	3
<i>Total</i>	14	15
SECOND YEAR	FALL	SPRING
Elective, Social Science ¹	3	3
Humanities ¹	3	-
CMST 101.....	3	-

Foreign Language ³	4	4
300 or 300-level SOC Electives ²	3	3
Electives ⁴	-	6
<i>Total</i>	16	16

THIRD YEAR	FALL	SPRING
SOC 301 ² , Elective	3	3
SOC 308 ² , 312 ^{2,5}	4	4
SOC Electives ²	3	3
Integrative Studies	3	-
Electives ⁴	3	6
<i>Total</i>	16	16

FOURTH YEAR	FALL	SPRING
SOC 497/498 ^{2,5}	-	4
400-level Sociology courses ²	3	3
Electives ⁴	11	6
<i>Total</i>	14	13

¹See University Core Curriculum.

²Required for the sociology major.

³Two semesters (usually 8 semester hours) of a foreign language are required for all liberal arts students.

⁴Electives hours should be used to explore areas of interest and to enhance career opportunities; courses may be selected to satisfy liberal arts requirements.

⁵CoLA requires a writing intensive course beyond the English composition requirements of the Core Curriculum. Information on courses that will fulfill this requirement is available from the academic advisor.

Sociology Minor

A minor in sociology consists of a minimum of 15 hours, including Sociology 108 and at least three more 300- or 400-level sociology courses at SIU Carbondale. An average GPA of 2.0 or higher must be achieved in sociology courses. No more than six hours of Sociology Core Curriculum courses, including Sociology 108, may count toward both the University Core Curriculum requirements and the sociology minor.

Honors Program

The department offers an honors program for academically outstanding sociology majors. Qualifications for acceptance into this program are: (1) an overall grade point average of at least 3.00; and (2) completion of 8 hours in sociology courses with a grade point average of at least 3.25 in all sociology courses taken at Southern Illinois University Carbondale, and the completion of no fewer than six, nor more than fourteen, semester hours in research or independent study which are counted toward the major. Successful completion of the department's honors program is noted on the academic record at the time the degree is recorded and on the diploma, i.e., Departmental Honors in Sociology. For details, qualified students interested in this program should consult the department's director of undergraduate studies. Concurrent participation in the University Honors Program is encouraged.

Courses (SOC)

108-3 Introduction to Sociology. (University Core Curriculum) [IAI Course: S7 900] An introduction to the sociological

perspective on human behavior, the structure and processes involved in social relationships, social stratification and inequality, social institutions, and social change. A survey of major areas of interest in sociology. Required of majors and minors in Sociology.

215-3 Race and Ethnic Relations in the United States. (University Core Curriculum) [IAI Course: S7 903D] Current theory, research and events in race-ethnic relations in the United States, including the intersection of class, gender and sexuality. Topics include the European colonization of North America, dynamics of immigration, identity formation among ethno-racial groups and political economy of racism.

223-3 Women and Men in Contemporary Society. (University Core Curriculum)(Same as WGSS 223) [IAI Course: S7 904D] Examines theories of women's and men's roles in society. Surveys contemporary gender inequalities in the U.S. and developing countries. Special attention given to employment, race, sexual assault, feminist movements, alternative family/lifestyles and childrearing.

233-3 Sport and Modern Society. (Same as KIN 245) An examination of the social, cultural, political and economic aspects of contemporary sport. Special attention given to gender, race, and social class issues related to sport.

298-1 Multicultural Applied Experience. (Multicultural Applied Experience Course) An applied experience, service-oriented credit in American diversity involving a group different from the student's own. Difference can be manifested by age, gender, ethnicity, nationality, political affiliation, race, or class. Students can sign up for the one-credit experience in the same semester they fulfill the multicultural requirement for the University Core Curriculum or coordinate the credit with a particular core course on American diversity, although neither is required. Students should consult the department for course specifications regarding grading, work requirements and supervision. Graded Pass/Fail only.

301-3 Theory and Society. Sociological theories explain concrete social phenomena by modeling them abstractly. This course exposes students to exemplary theories, either classical or contemporary, and analyzes the general strategies sociologists used to develop them. Required of majors in sociology.

302-3 Contemporary Social Problems. Examines how social phenomena come to be defined as social problems and the outcomes of these processes for specific cases. How is it that a social phenomenon comes to be seen as a social issue? Analysis of selected social problems and critical assessment of claims-making about these problems.

303-3 Sociology of Deviance. Review of sociological perspectives used in the study of deviance and deviants. Does deviance have functions in society? How is it that a group of individuals comes to be defined as deviant? Examines societal reactions to deviance and consequences for people defined as deviant. Analysis of selected forms of deviance, such as mental illness, "punk" subcultures, eating disorders, drug and alcohol abuse and sex workers.

304I-3 Global Perspectives on the Family. (University Core Curriculum) People around the world experience family life under different circumstances and from different perspectives. This course will focus on these differences and how societ-

ies have evolved to meet the needs of family units within their different social settings. Other key topics that affect families around the world will be discussed: global economy and families, gender inequality, familial violence, and environment concerns.

306I-3 Popular Culture in Society. (University Core Curriculum) Examines the social organization of popular culture, treating popular culture objects as products that are created, manufactured, distributed and consumed. The focus is on the people, activities, organizations and institutions that are involved in popular culture.

307-3 Global Perspectives on Sexual Diversity. (Same as WGSS 315) This course explores sexual diversity within different hegemonic heterosexual cultures, worldwide. Using insight from historical and sociological analysis, the contemporary development of social movements for lesbians, gays, and bisexuals and their oppositional forces is analyzed, and consequent cultural changes that have resulted from the confrontation of these forces are examined.

308-4 Statistics for Social Science. Methods and application of statistics in the social sciences. Measures to describe distribution, measures of relationship, statistical inference.

310-2 Science, Technology and Society. This course introduces students to a variety of research traditions and debates within the field of science, technology, and society. We will explore the ways in which historical and contemporary patterns of human evolution have created technological problems; why we are dependent and vulnerable to technology; and how access to science and technology and the effects of science and technology have an unequal impact. In addressing these topics, the course will make linkages among local, national, and global processes. We will focus on a variety of areas including: technology and environmental issues, science, technology, and gender, and the effects of technological change on our daily lives.

312-4 Elements of Sociological Research. The student is introduced to a variety of research methods in the social sciences including use of the library, techniques of observation, and elementary steps in quantitative measurements and analysis. Satisfies the CoLA Writing-Across-the-Curriculum requirement.

321-3 Society and the Individual. Introduction to basic concepts in sociological and social psychology (microsociology). Examines how individuals create and shape the social world that simultaneously shapes and creates individuals. Emphasizes face-to-face interaction, socialization, social location and identity.

322-3 Community Organization. This course applies basic sociological concepts and perspectives to issues of community organization. The course is designed to provide insights into how communities meet (or why they fail to meet) residents' needs. Communities are arenas of social interaction where most important relationships are structured by the presence of informal groups and formal organizations. Informal groups provide the building blocks of any community and play important roles in setting the norms and standards of accepted social behavior. Formal organizations (businesses, schools, government agencies) control significant human and financial resources which give them influence and power to shape the direction of change within a community.

340-3 Family. The family in historic and contemporary society;

evolution of the modern family; changes in family functions, structure, roles; and an examination of variation and change in family systems.

350-3 Sociology of Leisure. This course examines leisure, broadly defined, in a sociological context. What can we learn about ourselves, and about society, by examining leisure involvement? How do various social institutions influence leisure behavior, and how do individuals respond to those influences? Using leisure as an organizing principle, this course reinforces understanding of sociological concepts, theories, and methods.

351-3 Sociology of Religion. Examines the dynamics of religious institutions in society, and of religious beliefs and attachments among individuals, including the connections between religion and family, health, education, and politics.

371-3 Population Problems. Characteristics and problems of population growth, composition, distribution, mortality, birth control and fertility, international and internal migration, and government policies.

372-3 Criminology. An examination of the socially constructed nature of crime, and historical and contemporary theories of criminality. Additional topics of interest include types of offenses, methods of studying crime, and the correlates of crime.

386-3 Environmental Sociology. Focus on social structural conditions and institutions that have changed the natural environment as a social problem. Responses to these problems will be addressed on the individual, group (race, class and gender) and institutional levels.

396-1 to 6 Readings in Sociology. Instructor and student select reading topics which are not covered in depth in regular course offerings. Special approval needed from the department and instructor.

397-3 to 12 Special Topics in Sociology. Varying sociological topics selected by the instructor for study in depth and breadth. Topics will be announced in advance of registration for the course. May be repeated 4 times.

399-2 to 8 Internship in Sociology. Designed to provide students majoring in sociology the opportunity to engage in applied sociology and gain valuable work experience. Classroom meetings are required. Restricted to minimum of junior standing. Special approval needed from the instructor. No more than three hours of 399 to count toward the major.

406-3 Social Change. Theories and problems of social change; their application, with emphasis on the modern industrial period.

407-3 Sociology of Sexuality. Examines a range of social issues related to human sexuality and the interaction between sexuality and other social processes. Emphasis is on the relevant concepts, theories, and methods in the field of sexual studies, the social and historical construction of sexuality and the ways in which social characteristics shape sexual behaviors and desires, sexual variation, including its causes and consequences, how basic social institutions affect the rules governing sexuality, the major moral and political controversies that surround sexuality, and the "dark side" of sexual life.

415-3 Logic of the Social Sciences. (Same as PHIL 415) An examination of the theoretical structure and nature of the social sciences and their epistemological foundations. The relationship of social theory to social criticism; theory and praxis. Historical experience and social objectivity. Social theory as practical

knowledge.

423-3 Sociology of Gender. (Same as WGSS 442) Examines social science theory and research on gender issues and contemporary roles of men and women. The impact of gender on social life is examined on the micro level, in work and family roles, in social institutions, and at the global, cross-cultural level.

424-3 Social Movements and Collective Behavior. An analysis of social behavior in non-institutional settings such as crowds, disasters, riots, mass panics, crazes, cults, and social movements. Emphasis is on the cultural and structural factors leading to collective action and its impact on social change.

426-3 Social Factors in Personality and Behavior. (Same as PSYC 464) Advanced study of social psychology from both sociological and psychological perspectives. Analyzes the reciprocal influence of groups and individuals, including the development of self, social interaction, gender and ethnic relations, impression management, interpersonal attraction, and social influence.

435-3 Social Inequality. Discussion of theories and evidence pertaining to the socio-structural causes and consequences of inequality based on social class, prestige, power, gender, wealth and income.

437-3 Sociology of Globalization and Development. Survey of sociological theories and research on globalization and development: modernization, dependency, world-system, and global economy. Problem areas include population growth and control, economic growth and underdevelopment, role of state, transnational corporations, financial institutions, and organizations, non-government organizations, work, population, migration, social movements and resistance, gender, race-ethnic, class, and sexuality issues.

438-3 Sociology of Ethnic Relations in World Perspective. Examines theories, concepts and research on the structure of ethnic relations and ethnic problems in contemporary societies in major world regions. Assimilationist, pluralist, secessionist, and militant types of ethnic and racial group relations are covered in selected societies. Designed for students with advanced interest in comparative ethnic relations. SOC 215 is recommended.

455-3 Racial Inequality. This course is an introductory survey on the sociology of Racial Inequality. As such, the basic objective of this course is to give students a broad understanding of race and inequality issues in society. This course will require students to become familiar with the critical frameworks and concepts through which social scientists make sense of racial inequality; to come to terms with the ideological, political, and economic mechanisms that perpetuate racist structures; to study the past and present historical contexts within which racial inequality is given shape; and to explore potential venues for change.

460-3 Sociology of Medicine. Analyzes the social structures and issues involved in health, illness, and health-care delivery systems in the United States. Explores the economic and political influences on the role of medicine in society, as well as the organization of medical care and health institutions. Critically examines the social processes and factors that influence health and illness behavior.

461-3 Women, Crime and Justice. (Same as CCJ 460 and WGSS 476) A study of women as offenders, as victims and as

workers in the criminal justice system.

462-3 Victims of Crime. (Same as CCJ 462) An examination of the extent and nature of victimization, theories about the causes of victimization, the effects of crime on victims and services available to deal with those effects, victims' experiences in the criminal justice system, the victims' rights movement, and alternative ways of defining and responding to victimization.

465-3 Sociology of Aging. The adult life cycle from a sociological perspective, with emphasis on the later stages of adulthood. Special topics on aging include demographic aspects, family interaction, ethnicity, and cross-cultural trends.

471-3 Introduction to Social Demography. Survey of concepts, theories, and techniques of population analysis; contemporary trends and patterns in composition, growth, fertility, mortality, and migration. Emphasis is on relationship between population and social, economic, and political factors.

473-3 Juvenile Delinquency. (Same as CCJ 473) An in-depth study of theories of delinquency, analytical skills in studying delinquent offenders, systematic assessment of efforts at prevention, and control and rehabilitation in light of theoretical perspectives. Six hours of social/behavioral science recommended.

474-3 Sociology of Education. Methods, principles, and data of sociology applied to the educational situation; relation of education to other institutions and groups.

475-3 Political Sociology. (Same as POLS 419) An examination of the social bases of power and politics, including attention to global and societal political relations, as well as individual-level political beliefs and commitments primary focus on American politics.

476-3 Religion and Politics. (Same as POLS 476) Examines the connection between religious beliefs and institutions and political beliefs and institutions. Comparative studies will focus on religious political movements in the United States and throughout the world.

490-3 Special Topics in Sociology. Varying advanced sociological topics selected by the instructor for study in depth. May be repeated for a maximum of twelve semester hours provided registrations cover different topics. Topics announced in advance.

497-4 Senior Seminar. Contemporary issues in sociology and the analysis of these issues. Restricted to senior standing with 20 hours in sociology (including 301), or consent of instructor. Not for graduate credit. Satisfies the CoLA Writing-Across-the-Curriculum requirement.

498-1 to 8 Independent Research. Students who wish to pursue specific topics in depth, or who have developed specific research projects, may submit proposals to faculty members who can serve as mentors. Independent research normally results in a significant paper or research report that serves as a demonstration of scholarly competence and concludes the major. May substitute for 497 only when student demonstrates substantial preparation or need. Satisfies the CoLA Writing-Across-the-Curriculum requirement. Not for graduate credit. Restricted to senior standing with 20 hours in sociology (including 301). Special approval needed from the instructor.

Sociology Faculty

Alix, Ernest K., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University, 1966.

- Barber, Kristen M.**, Assistant Professor, Ph.D., University of Southern California, 2011.
- Burger, Thomas**, Associate Professor, *Emeritus*, Ph.D., Duke University, 1972.
- Calhoun, Thomas C.**, Professor, *Emeritus*, Ph.D., University of Kentucky, 1988.
- Crowe, Jessica A.**, Assistant Professor, Ph.D., Washington State University, 2008.
- Danaher, William.**, Professor, Ph.D., North Carolina State University, 1994.
- Hawkes, Roland K.**, Associate Professor, *Emeritus*, Ph.D., John Hopkins, 1967.
- Hendrix, Lewellyn**, Professor, *Emeritus*, Ph.D., Princeton University, 1974.
- Kretschmer, Kelsy N.**, Assistant Professor, Ph.D., University of California, Irvine, 2010.
- Nall, Frank C., II**, Associate Professor, *Emeritus*, Ph.D., Michigan State University, 1959.
- Patterson, Edgar I.**, Assistant Professor, *Emeritus*, M.A., University of Kansas, 1961.
- Reed, Jean-Pierre**, Assistant Professor, Ph.D., California-Santa Barbara, 2000.
- Schneider, Mark A.**, Associate Professor, *Emeritus*, Ph.D., Yale University, 1985.
- Sherkat, Darren**, Professor, Ph.D., Duke University, 1991.
- Ward, Kathryn B.**, Professor, *Emerita*, Ph.D., University of Iowa, 1982.
- Whaley, Rachel B.**, Associate Professor, Ph.D., University at Albany, State University of New York (SUNY), 1999.
- Wienke, Chris**, Associate Professor, Ph.D., University of Pittsburgh, 2003.

Spanish

(See Languages, Cultures, and International Studies)

Special Education (Major, Courses, Faculty)

The Department of Counseling, Quantitative Methods, and Special Education offers an undergraduate major in special education, which entitles the student to qualify for the State of Illinois Professional Educator License with the Learning Behavior Specialist I endorsement. The special education major prepares teachers to teach students with disabilities, elementary and secondary levels of education receiving services along the full continuum of service delivery options. This program is fully approved by the Illinois State Board of Education and National Council for the Accreditation of Teacher Education (NCATE).

Admission: To be considered a Special Education major students must meet the following requirements:

1. Meet the criteria for admission into the College of Education and Human Services Teacher Education Program.
2. Completion of a minimum of 30 semester hours in University Core Curriculum courses with an overall grade point average of 2.75 (4.0).
3. Submit documentation that the applicant has had at least 100 hours of direct contact and experience with individuals

with disabilities. Satisfactory documentation of the experience will include a letter on company; agency or organization letter-head stating the number of hours of direct contact the applicant has been engaged in with persons with disabilities. The letter should state the name, address and phone number of an individual who can verify the experience of the applicant.

4. Illinois Test of Academic Proficiency or ACT + writing, composite score of 22 or higher with a minimum of 19 in Combined English/Writing.

Transfer students must meet University admission requirements to be a Special Education major. Students who are currently enrolled or previously attended SIU in a major other than Special Education may request admission to the Special Education program.

Retention Criteria.

There are specific and sequential criteria for a student to be retained as a special education major. All program courses must be completed with a grade of C or better. Other retention criteria include: (a) attainment of an overall grade point average of 2.75, and (b) a favorable endorsement of the special education faculty.

To be eligible for the professional semester (Education 401A: Student Teaching) the student must have attained a minimum 2.75 GPA in the major.

Bachelor of Science Degree in Special Education, College of Education and Human Services

<i>University Core Curriculum Requirements</i>	41 ¹
To include Psychology 102, Education 311, 314, and Mathematics 220 or Curriculum and Instruction 220 (Mathematics 120 or Curriculum and Instruction 120 is an additional 3 hour prerequisite that is not counted in the core) ¹ .	
<i>Requirements for Major in Special Education</i>	51
Special Education 300, 410, 411, 417, 418, 419, 421, 422, 423, 425, 430; additional requirements Curriculum and Instruction 407F, Mathematics 388 or Curriculum and Instruction 388, Communication Disorders and Sciences 328, 460, Computer Science 200B	
<i>Professional Education Requirements</i>	26
Education 301, 302, 313, 319, 400, 401A	
<i>Additional Content Specific Requirements</i>	6
<i>Total</i>	124

¹Check with your advisor to complete non-western civilization/third world culture requirement.

Special Education Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101H, Fine Arts	3	3
ENGL 101, 102.....	3	3
CMST 101, Humanities	3	3
CI/MATH 120, 220	3	3
PSYC 102, GR I Science	3	3
HED 101, SPED 300	2	3
<i>Total</i>	17	18
SECOND YEAR	FALL	SPRING
Humanities, CDS 328	3	3

GR II Science.....	3	-
EDUC 311, 314.....	3	3
SPED 410, 411.....	3	3
CI 433, SPED 423.....	3	3
EDUC 313.....	-	3
CS 200B, EDUC 301.....	3	1

<i>Total</i>	18	16
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THIRD YEAR	FALL	SPRING
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Content Spec, EDUC 319.....	3	3
EDUC 302.....	-	1
CDS 460, CI 432.....	3	3
CI 388, Content Spec.....	3	3
SPED 430, 418.....	3	3
SPED 425, CI 434.....	3	3

<i>Total</i>	16	16
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FOURTH YEAR	FALL	SPRING
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SPED 417, EDUC 401A.....	3	12
SPED 419.....	3	-
EDUC 400.....	6	-

<i>Total</i>	12	12
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Courses (SPED)

300-3 Introduction to Special Education. An overview of characteristics of all types of exceptional children and youth including physical, mental, emotional and social traits. The course also covers the effects of disabling conditions in learning situations, and an overview of the history of special education including legislation and litigation.

315-3 Teaching Mathematics in the Elementary School. Objectives of mathematics education, learning theory as it is related to mathematics, major concepts to be taught, modern approaches to instruction with emphasis on the use of concrete learning aids. Four class hours and two laboratory hours per week. Prerequisite: An overall GPA of 2.5 or consent of instructor. Restricted to junior standing.

403-3 Characteristics of Children and Youth Labeled Gifted. Designed to help teachers in the identification of and programming for children labeled gifted and talented. Prerequisite: SPED 300 or concurrent enrollment or consent of the department chair.

405-3 Introduction to Early Childhood Special Education Methods: Infants, Toddlers, and Preschoolers with Special Needs. This course focuses on effective methods, materials and programs for infants, toddlers, and preschoolers with special needs, including IEPs, IFSPs, working with families, service delivery, case-management, transition planning, and curriculum methods and procedures. Prerequisite: SPED 412 or consent of instructor.

408-3 Characteristics and Methods for Teaching Exceptional Children. (Same as EDUC 308) For pre-service teachers who serve children and youth with disabilities. The course focuses on essential disability characteristics, data-based decision-making, scientifically-based academic and behavioral interventions and strategies to differentiate instruction and accommodate learners with disabilities in general education

classrooms. Prerequisites: EDUC 313, EDUC 314.

409-1 to 6 Cross-Cultural Studies. Seminar and/or directed independent study concerned with socio-cultural variables affecting the educational needs of children and youth with a disability. Prerequisite: SPED 300 or consent of instructor and department chair.

410-3 Characteristics of Students with Learning Disabilities, Emotional/Behavioral Disorders, and Mental Retardation. This course presents the behavioral, emotional, physical and learning characteristics of children and youth labeled learning disabilities, emotional/behavior disorders or mental retardation. Screening, identification, placement, instructional practices, classroom management and use of related services will be examined. Prerequisite: SPED 300 or 420 or concurrent enrollment.

411-3 Assessment in Special Education. Course covers general assessment information, norm reference testing, curriculum based assessment, adaptive behavior scales and issues relating to cultural diversity. Prerequisite: SPED 300 or 420, 410, or concurrent enrollment. Laboratory fee: \$15.

412-3 Introduction to Assessment and Curriculum Methods in Early Childhood Special Education. This course presents an introduction to child and family assessment and the development of child and family goals in Early Childhood Special Education. Topics will include types of assessment commonly used, rationale for assessment, methods of assessment, reporting assessment results, writing child and family goals. A fee for testing materials is required. Prerequisite: SPED 300/420 or concurrent enrollment or consent of instructor. Fee: \$15.

417-3 Behavior Management for Children and Youth with Disabilities. This course focuses on the implementation of behavior management strategies and tactics to be used with students with disabilities in a variety of educational environments. Prerequisite: SPED 300 or 420, 410, 411, 423, and must be admitted to the TEP as a special education major, or consent of instructor.

418-3 Methods and Materials for Teaching a Functional Curriculum. This course covers the principles of curriculum construction, program development and evaluation, classroom organization, instructional approaches, strategies and materials for teaching a functional curriculum. Prerequisite: SPED 300 or 420, 410, and 423, and must be admitted to the TEP as a special education major, or consent of instructor.

419-3 Academic Methods and Materials for Student with Disabilities. This course covers the academic methods, materials and strategies used with students with disabilities receiving special education services in school and community settings. Prerequisite: SPED 300 or 420, 410, 411, 423 and must be admitted to the Teacher Education Program as a special education major.

420-3 Advanced Theories and Practices in Special Education. The course is an advanced survey of exceptional populations and addresses educational, social, legal, cultural and community practices associated with individuals with disabilities, ages 0 - 21 years old.

421-3 Reading in the Content Areas for Students with Disabilities. This course prepares pre-service special edu-

cators to deliver effective content area reading instruction to struggling readers with disabilities mainly in middle and secondary schools. Specifically, students will develop a knowledge base of research and best practices for developing academic vocabulary, reading comprehension, and background knowledge in science and social studies. In addition, students will develop a repertoire of teaching skills to provide instruction to struggling middle and secondary school readers. The course content will include: (a) designing and implementing individualized education programs in accordance with Illinois Professional Teaching Standards, LBS I Standards and CEC Common Core Standards; (b) developing and utilizing assessment tools to design and implement reading instruction in content areas; (c) identifying and utilizing evidence-based instructional strategies in academic content areas; (d) developing and integrating reading elements, writing and study skills instruction into content areas; (e) developing and implementing adaptations to assessment and instructional activities; and (f) identifying and using technology applications to design individualized instructional lessons, monitor instructional effectiveness, and to report results of student outcomes. Prerequisites: SPED 300, 410, 411, 422 and 423 with grades of C or better.

422-3 Teaching Reading in the Elementary School. (Same as CI 422) Examination of the reading process with emphasis on the factors and conditions that affect reading. Emphasis on the formulation of a philosophy of reading in relation to methods, materials, procedures, and evaluation. Prerequisite: Dual Special Education-Elementary Education majors-grade of C or better in CI 321 and CI 435 and EDUC 313; Special Education majors; EDUC 313.

423-3 General Procedures in Special Education. Presents key provisions of Public Law 94-142 and subsequent amendments, including Individualized Education Programs (IEPs). Course content also includes principles of applied behavior analysis and effective instruction of students with disabilities. Prerequisite: SPED 300 or 420, 410, 411 or concurrent enrollment.

425-3 Home-School Coordination in Special Education. The course covers techniques used in parent interviews, conferences and referrals by school personnel; due process and procedural safeguards for parents and youth with disabilities. Restricted to admittance to the TEP as a special education major, or consent of instructor.

430-3 Secondary Programming for Students with Disabilities. Deals with modifications of and additions to school programs to ensure that they are appropriate to the needs of adolescents with disabilities. Content includes coverage of remedial and compensatory program models, transition programming, career and vocational education. Prerequisite: SPED 300 or 420, 410, 411 and must be admitted to the Teacher Education Program as a special education major or consent of instructor.

431-2 Work-Study Programs for Adolescents Labeled Severely Disabled. This course is designed to prepare educators and other human service professionals to assist adolescents and young adults with severe disabilities for community integrated employment options. Content will include community-referenced curriculum objectives, community-based instruction for employment and functional skill development.

490-1 to 4 Readings in Special Education. Study of a highly specific problem area in the education of exceptional children.

Open only to selected seniors. Not for graduate credit. Prerequisite: SPED 300. Special approval needed.

494A-1 Practicum in Special Education-Assessment. This course includes experiences in public school and community settings in the selection, administration and interpretation of norm-referencing and curriculum-based assessments, adaptive behavior scales, behavior rating scales and checklists and issues relating to cultural diversity. Prerequisite: SPED 300 or 420 and 410 with a grade of C or better.

494B-1 Practicum in Special Education-Functional Curriculum. This course includes clinical experiences in public school and community settings in planning, implementing and instructing a functional curriculum. Prerequisite: SPED 300 or 420, 410, 411, 423 and must be admitted to Teacher Education Program.

495-1 to 6 Internship in Special Education. An applied experience for students seeking certification in special education through alternative or subsequent certificate routes. Students will be required to complete a set of activities and prepare a number of products appropriate for the special education program and/or students with disabilities being served in the internship placement. Students will be expected to complete a portfolio of products to demonstrate professional competence. Special approval needed from the Program Coordinator.

Special Education Faculty

Anastasiou, Dimitris, Assistant Professor, Ph.D., National and Kapodistrian University of Athens, 2004.

Bates, Paul, Professor, Emeritus, Ph.D., University of Wisconsin, 1978.

Bruns, Deborah, Associate Professor, Ph.D., University of Illinois at Urbana-Champaign, 2000.

Crowner, James, Professor, *Emeritus*, Ph.D., Michigan State University, 1960.

Ewing, Norma J., Associate Professor, *Emerita*, Ph.D., Southern Illinois University, 1974.

Hisama, Toshiaki, Associate Professor, *Emeritus*, Ph.D., University of Oregon, 1971.

Juul, Kristen D., Professor, *Emeritus*, Ed.D., Wayne State University, 1953.

May, Michael E., Associate Professor, Ph.D., Vanderbilt University, 2007.

Miller, Sidney R., Professor, *Emeritus*, Ph.D., Pennsylvania State University, 1974.

Mundschenk, Nancy, Associate Professor, Ph.D., University of Iowa, 1992.

Speech Communication

(SEE COMMUNICATION STUDIES FOR DEPARTMENT, MAJOR, MINOR, COURSES, AND FACULTY)

Speech Pathology and Audiology

(SEE COMMUNICATION DISORDERS AND SCIENCES)

Sustainability (Minor)

(SEE GEOGRAPHY AND ENVIRONMENTAL RESOURCES)

Teacher Education Program

It is advised that students seeking teacher licensure complete University Core Curriculum requirements and general education requirements (Education Core Courses) prior to beginning courses involving specialization. For more information about IBSE certification and licensure requirements, please consult <http://www.isbe.net/licensure/>.

In addition to general University and College of Education and Human Services requirements, students must meet all requirements prerequisite to student teaching.

SIU students seeking Illinois teacher licensure must apply for licensure through the College of Education and Human Services Office of Teacher Education and must meet licensure requirements in effect at the time of their graduation. Licensure requirements are determined by the Illinois State Board of Education and are subject to change. Teacher licensure candidates are urged to consult the current SIU Carbondale Undergraduate Catalog and materials published by the SIU College of Education and Human Services Office of Teacher Education for updates to Illinois teacher licensure requirements.

Course Fees

Some courses have fees attached to their registration. These fees cover such items as laboratory fees, field trips, printing of materials, and supplies. These fees are published in the class schedule but are subject to change. For the correct fee, contact the department that offers the class or the Registrar's Office.

Teacher Education Program Curriculum

The Teacher Education Program (TEP) at Southern Illinois University Carbondale is fully accredited by the National Council for Accreditation of Teacher Education (NCATE) and by the Illinois State Board of Education. Spanning the entire University, the Teacher Education Program is administered through the College of Education and Human Services and includes majors from the College of Education and Human Services, the College of Science, the College of Liberal Arts, and the College of Agricultural Sciences. Teacher education programs approved by the Illinois State Educator Preparation and Licensure Board are offered at the undergraduate level in early childhood education, elementary education, special education, secondary education, and in majors that lead to the special license to teach K-12 art, music, physical education, and foreign languages. The Unit Accrediting Coordinating Council (UACC), composed of program coordinators for all campus-wide undergraduate and graduate majors with teacher licensure, and the Advisory Board for Teacher Education (ABTE), composed of faculty, area teachers, administrators, Regional Office of Education and a member of the Illinois Board of Education, each serve in an advisory capacity on policy matters related to teacher education.

Only those teacher candidates who complete an approved Teacher Education Program earn entitlement for teacher licensure. State licensure laws are in the process of changing; teacher candidates need to contact an SIU academic advisor in education for updated information.

ADMISSION POLICY

The College of Education and Human Services admission policy shall be the same as that of the University. All qualified new students are admitted to the College of Education and Human Services with a specific major or as an undecided student. The same policy applies for reentering students and for teacher candidates enrolled in Teacher Education Program majors in other colleges in the University. Admission to the College of Education and Human Services does not guarantee admission to the Teacher Education Program. ALL teacher candidates seeking state teacher licensure must first be admitted to the Teacher Education Program. Specific requirements for admission are listed below. Application packets and information are available in Wham 135 or online at: ehs.siu.edu/tep/_common/documents/pdfs/applications/tep-application.pdf.

Teacher candidates are admitted two times a year to the Teacher Education Program. Deadlines for completed applications are January 10 or previous business day for spring semester admission, and August 15 or previous business day for fall admission into the TEP. Completed applications will be accepted in the Office of Teacher Education, Wham Education Building, Room 135 after the following criteria are met:

1. A minimum of 30 semester hours of completed college work;
2. An overall grade point average of at least 2.75 (4.0 scale);
3. Submission of an unofficial transcript documenting completion of ENGL 101, ENGL 102 with a grade of "C" or better;
4. Submission of a copy of the official score sheet showing a passing score on the Illinois Test of Academic Proficiency; or a 22 or higher composite score on the ACT Plus Writing with a 19 or higher in Combined English/Writing; or a 1030 or higher (critical reading + mathematics) on the SAT with a minimum of 450 in writing;
5. Approval by major department if required (see application packet);
6. Special education majors must provide documentation of at least 100 clock hours of experience, paid or unpaid, working with individuals with disabilities;
7. Students are encouraged to investigate the feasibility of applying for a particular teaching field early in their undergraduate careers by contacting their advisor or the department in which they wish to specialize. Transfer students are encouraged to contact academic advisors in the College of Education and Human Services, at least one semester prior to enrolling at Southern Illinois University Carbondale.

RETENTION POLICY FOR TEACHER EDUCATION PROGRAM

This retention policy applies to all students enrolled at Southern Illinois University Carbondale after June 15, 2001.

Provisions for enrollment in Education 301 (*first clinical practice in the schools*):

1. Teacher candidates who wish to change majors after being admitted to the Teacher Education Program and prior to taking EDUC 301, must reapply under the new major and be admitted in the new major before they can enroll in EDUC 301.

Teacher candidates who change their major after enrolling in EDUC 301 may be required to take additional hours of clinical practice to meet the required clinical hours in their major.

2. Teacher candidates may not enroll in EDUC 301 more than two times. After two failures, teacher candidates must demonstrate through external experiences with children/youth of the age they plan to teach that they have the potential for a successful third placement. This will require at least one semester of external experience and written documentation from the administrator of the school and from the person who provided direct supervision.

In order to remain in the program and complete the requirements for graduation and for licensure, teacher candidates must maintain a 2.75 grade point average in the major and receive departmental approval. This requirement must be met before final clearance can be given for student teaching. All teacher candidates must pass their Illinois content area test prior to beginning their student teaching, internship or practicum.

Dispositions in Teacher Education

Admission to the Teacher Education Program does not guarantee continued acceptance unless the teacher candidate maintains satisfactory grades and other qualifications. A candidate must have good character, sound mental and physical health, and must demonstrate the skills, dispositions and behaviors necessary for working with children and /or adolescents, as applicable.

Dispositions adopted by the College of Education and Human Services' Teacher Education Program are:

- **Professionalism:** dependability and reliability; honesty, trustworthiness, ethics; enthusiasm, love of learning and commitment to the profession.
- **Valuing human diversity:** showing respect and sensitivity to the learning needs and abilities of all individuals, and to their diverse cultures, languages, races, and family compositions; striving for best practices to address the diverse learning needs and abilities of all individuals and to address their diverse cultures, languages, races, and family compositions; and collaboration with diverse peers, professional colleagues, staff and families.
- **Professional development:** ongoing acquisition of knowledge; development of research-based practices; assessment of one's own performance and reflection on needed improvements.

Upon admission to the Teacher Education Program, candidates are informed of the dispositions expected of SIU's teacher education candidates in a group session. The teacher candidates are then formally assessed regarding their professional dispositions as part of all clinical practice in the schools and at the conclusion of teacher candidate teaching. In addition, at any time during the program, a faculty member or cooperating teacher may identify a teacher candidate who is experiencing difficulty regarding the development of desired dispositions and complete a unit dispositions form that is forwarded to the coordinator of that teacher candidate's program major. The program reviews any difficulties and develops an action plan with the candidate to address them. A candidate who does not make

progress toward ameliorating the difficulties in professional dispositions discusses a remediation plan with benchmarks for improvement with their program coordinator. Teacher candidates who do not make adequate progress in the remediation plan may be dropped from the program.

Collegiate Warning and Dismissal from the Teacher Education Program.

The Teacher Education Program expects and requires adequate progress of all its teacher candidates, throughout the program. Once admitted, candidates will be monitored for applications of learning in their clinical practice. The Teacher Education Program defines performance in each clinical practice aligned to the Illinois Professional Teaching Standards, in a rubric with defined behaviors and skills. The rubric is specific and detailed, designed to guide candidates and clinical supervisors in fair, consistent assessment of performance. This rubric is presented to candidates at the beginning of their clinical practice.

At any time during their Professional Education Sequence, field supervisors (Cooperating Teacher, Clinical Supervisor, or School Administrator) may determine that the teacher candidate is at risk of not meeting the defined performance standards. The supervisor will forward evidence of "Inadequate Progress" to the Director of Teacher Education, who will, in turn, forward the evidence to the Program Coordinator. Each Program has on file in the Dean's Office a formal plan of remediation for its candidates. The Program Faculty, in consultation with the Office of Teacher Education, may decide what level of consequence to implement.

The ultimate responsibility for retention of a candidate in the Teacher Education Professional Education Sequence belongs to the Director of Teacher Education.

Teacher candidates who are on collegiate warning and do not earn a 2.75 grade point average in courses required by their major in a subsequent semester will be placed in a status of collegiate dismissal. Teacher candidates registered in other colleges who are in the Teacher Education Program who do not meet this requirement may be dismissed from the Teacher Education Program. A teacher candidate who has been placed on collegiate dismissal may seek transfer to another program if the teacher candidate has an overall grade point average of 2.00 at Southern Illinois University Carbondale. Teacher candidates who are placed on collegiate dismissal and have less than an overall 2.00 for work completed at the University but have not been suspended from the University will be counseled regarding other possible majors.

DEGREE REQUIREMENTS

Each degree candidate in a Teacher Education Program (see exceptions below) must complete the requirements listed below:

1. All requirements of the student's major.
2. The University Core Curriculum.
3. Education 301, 302, 303, 308, 311, 313, 314, 319, 401 in the professional education sequence (with a grade of C or better).
4. English 101 and 102 with a grade of C or better. (The two composition courses are a prerequisite for admission).

- 5. Teacher candidates must receive a grade of C or better in all courses in one's major and endorsement area(s) to receive recommendation for entitlement to teacher licensure.
- 6. CI 360 is required of all secondary teacher candidates unless otherwise specified in the major.

Professional Education Sequence (depending on major) **20-32**

Basic Professional Preparation	
EDUC 311	3
EDUC 314	3
EDUC 313	3
EDUC 319	3
EDUC 308	3
<i>Total</i>	15
Courses with Clinical Practice	
EDUC 301	1
EDUC 302	1
EDUC 303	1
EDUC 400 (SPED only).....	6
Professional Semester of Student Teaching	
EDUC 401	12
<i>Total</i>	15-20

An undergraduate major in special education entitles the teacher candidate to qualify for the State of Illinois Special License with the **Learning Behavior Specialist I** endorsement.

Student Teaching

Student teaching constitutes a total professional commitment on the part of the teacher candidate and is a full semester of clinical practice in the public school classroom carrying 12 hours of credit. Enrolling in coursework during student teaching is strongly discouraged. Teacher candidates must have a 3.0 grade point average or better and special permission of the Office of Teacher Education to enroll in an extra course during student teaching.

The student teacher must follow the same daily schedule as the cooperating teacher with whom the teacher candidate is placed. This means that the student teacher remains in the school for the entire day, and participates in whatever extracurricular activities might be the responsibility of the co-operating teacher.

Teacher candidates majoring in elementary education will be assigned to work with a cooperating teacher in one of the elementary grades in an affiliated school. Teacher candidates majoring in early childhood will be assigned to work with a cooperating teacher in a preschool/kindergarten, primary grade, or in an affiliated school. Teacher candidates are expected to teach all subject areas taught within the specific major.

Teacher candidates who major in a secondary school subject field which has an approved program in the teacher education program will be assigned to work with a cooperating teacher in a secondary school, grades nine through twelve, whose teaching assignment is consistent with the teacher candidate's teaching major.

Special education majors will be assigned to work with a cooperating teacher in a cross-categorical area in order to receive LBS I licensure. Special education majors will be assigned at both the elementary and secondary levels in order to meet licen-

sure requirements. Teacher candidates majoring in communication disorders and sciences will be assigned to a cooperating teacher who is a speech clinician in an affiliated school.

Teacher candidates who wish to enroll in the student teaching professional semester during the fall or spring semester of the academic year must file an application with the Office of Teacher Education in the College of Education and Human Services, Wham Building, Room 135, at least one semester in advance of the semester during which they wish an assignment. Teacher candidates who wish to student teach in the Belleville or Chicago suburban schools must request such placement considerations at least one year in advance. Student teaching is limited to the schools approved by the Office of Teacher Education as partnership schools.

PLACEMENT OF STUDENT TEACHERS

Student teaching under the supervision of Southern Illinois University Carbondale faculty is conducted in teaching centers with affiliated schools located in southern Illinois as well as specific locations in Belleville and suburban Chicago. Off-campus programs in Elementary Education and Special Education may be available at the Rend Lake College Marketplace, or University College of Lake County. A current listing of specific schools to which student teachers may be assigned is available in the College of Education and Human Services Teacher Education website. Cooperating teachers for student teachers must be tenured and highly qualified in their grade level and subject area, have prior experience with clinical practice teacher candidates, and have earned a rating of proficient or higher on their latest evaluation. Teacher candidates will be assigned to one of the SIU clinical sites. To help ensure an unbiased performance and evaluation, student teachers will not be placed in a school from which they graduated, have children or other family members who attend, or a school in which they have worked or family members currently work. SIU is not responsible for teacher candidates' transportation to their student teaching site. Although every consideration is made to place student teachers within 45 minutes of their home, no guarantees of a close placement can be made. Student teachers are responsible for their own transportation to and from student teaching sites.

STUDENT TEACHING PREREQUISITES

1. Teacher candidates must have submitted a completed student teaching application form, have formal acceptance into the teacher education program, and must present their records of acceptance when applying for the professional semester.
2. The teacher candidate is responsible for having all transcripts of credit earned at colleges or universities other than Southern Illinois University Carbondale on file in the Office of Teacher Education. These must be on file prior to the first day of the semester for which the teacher candidate is applying.
3. Prior to the professional student teaching semester, the teacher candidate must have completed a minimum of 20 semester hours in the subject area to be taught and must have completed the entire pre-student teaching professional sequence with a grade of C or higher. The course work must meet the approval of the department chair of one's major de-

partment. A list of approved majors in the Teacher Education Program may be found on the website, the Teacher Education Office, or the College of Education and Human Services Academic Advisement Office.

4. The teacher candidate must have completed all clinical practices with a C or better.
5. The teacher candidate must have completed 90 semester hours of credit with a minimum cumulative average of 2.75 in the major before beginning work in student teaching.
6. All courses in the major, as well as the professional education sequence must have been completed with a grade of C or better.
7. The teacher candidate must have completed with a C or better all methods class(s) required for the major prior to the professional student teaching semester, as well as in all EDUC courses and courses in one's major and endorsement area(s). No incompletes will be accepted prior to student teaching.
8. Teacher candidates must pass their respective Illinois content test before being permitted to student teach.
9. Every student teacher must have a health clearance performed by the Health Center or by their own medical doctor. A record of the health clearance must be on file in the Office of Teacher Education.

Majors to Prepare for Secondary School Teaching

Teacher candidates who elect to pursue a Bachelor of Science degree in the College of Education and Human Services, College of Agricultural Sciences, College of Liberal Arts, or College of Science in order to teach in middle level or senior high schools should select academic majors from the areas included in the list below. Included in the column headed 'Major' are those areas for which Southern Illinois University Carbondale has approval from the Illinois State Board of Education and from the Illinois State Educator Preparation and Licensure Board.

TEACHING AREA	MAJOR	MINOR ¹
Agriculture	•	
Art Education	•	
Biological Sciences	•	•
Economics		•
English Education	•	•
Foreign Languages	•	•
History Education	•	•
Mathematics Education	•	•
Music Education	•	•
Physical Education	•	
Political Science		•
Social Science Education	•	
Sociology		•
Special Education LBS I	•	
Workforce Education and Development	•	•
<i>Business Education</i>		
<i>Family and Consumer Sciences</i>		
<i>Technology Education</i>		
<i>Health Careers</i>		

Each teacher candidate who wishes to apply for the Initial Secondary License through the licensure process at Southern Illinois University Carbondale must fulfill the following requirements:

1. Successful completion of one of the baccalaureate majors listed above (including at least 32 semester hours in the area of specialization with a grade of C or better) with 12 semester hours of upper level coursework for most secondary majors. No incompletes.
2. Completion of the specialization methods course(s) with a grade of C or better.
3. Completion of CI 360, EDUC 301, 302, 303, 308, 311, 313, 314, 319, 401 with a grade of C or better.
4. Completion of all courses in their major and endorsement area(s) with a grade of C or better.
5. Passing the Illinois Test of Academic Proficiency (or having an ELIS-verified ACT Plus Writing or SAT score report on file at ISBE), passing the appropriate Illinois Content Area Test(s) for their desired endorsement(s), and passing the Illinois Assessment of Professional Teaching; successful completion of edTPA.
6. Successful completion of the Capstone.

Licensure

A teacher candidate nearing completion of the Teacher Education Program (usually during the last semester) can make application for entitlement to teacher licensure from the Illinois State Board of Education through the College of Education and Human Services Office of Teacher Education, Wham Education Building, Room 135. Upon notification of entitlement from ISBE, teacher candidates who meet the requirements will be able to apply for initial licensure and register their license with a Regional Office of Education.

Applicants for licensure must register for and pass the Illinois Test of Academic Proficiency, the appropriate Illinois Content Area Test, the Assessment of Professional Teaching Test, the edTPA, and successfully pass the Capstone in addition to completing all other program requirements prior to being granted entitlement. The Illinois Licensure Content Test must be passed prior to student teaching, edTPA submitted during student teaching, and teacher candidates must have earned a C or better in all courses within their major, endorsement areas, and EDUC courses.

Once approved by the institution, ISBE will issue, through the entitlement process, the appropriate teaching license. For additional information pertaining to teacher education, please contact the ISBE website www.isbe.net/.

Courses (EDUC)

301-1 Clinical I, Reflective Instructional Practices. Clinical I, Reflective Instructional Practices, is the first clinical field experience course in the TEP for all majors seeking licensure and is taken concurrently with EDUC 313. This field experience consists of five weeks of an introduction to using technology for student engagement and reflective teaching. It also includes ten weeks of clinical placement in the public school classrooms, where candidates will apply knowledge and skills presented in

EDUC 313. Concurrent enrollment in EDUC 313. Restriction: Admittance to the Teacher Education Program.

302-1 Clinical II, Methods of Instructional Practices. Clinical II, Methods of Instructional Practices, is the second clinical field experience course in the TEP for all majors seeking licensure. This course is taken concurrently with methods courses within the candidate's major. This field experience consists of five weeks of advanced technology use for student engagement and reflective teaching. It also includes ten weeks of clinical placement in the public school classrooms, where candidates will apply content and skills presented in content method courses. Prerequisites: EDUC 301 and EDUC 313 with a grade of C or above. Concurrent enrollment in EDUC 319.

303-1 Clinical III, Advanced Instructional Practices. Clinical III, Advanced Instructional Practices, is the third clinical field experience course in the TEP for all majors seeking licensure. This course is taken concurrently with methods courses within the candidate's major. This field experience consists of five weeks of practical legal issues for educators and ten weeks of clinical placement in the public school classrooms, where candidates will apply content and skills presented in content method courses. Prerequisite: EDUC 302 and 319 with a minimum grade of C or above. Concurrent enrollment in EDUC 308.

304-3 Clinical IV-English as a Second Language Field Placement. Clinical IV-English as a Second Language Field Placement, is the clinical field experience course in the TEP for candidates in ESL classrooms. This field experience consists of 16 weeks of clinical placement in the public school classrooms (128 hours), where candidates will apply knowledge and skills learned in methods courses.

308-3 Characteristics and Methods for Teaching Exceptional Children. (Same as SPED 408) For pre-service teachers who serve children and youth with disabilities. The course focuses on essential disability characteristics, data-based decision making, scientifically-based academic and behavioral interventions and strategies to differentiate instruction and accommodate learners with disabilities in general education classrooms. Prerequisites: EDUC 313, EDUC 314. Co-requisite: EDUC 303.

311-3 Diversity, Culture, and Education in a Pluralistic Society. (Advanced University Core Curriculum course) Education 311 is one of the foundational courses required in the Teacher Education Program (TEP). The course fulfills the minimum state certification requirement for diversity in education and Standard 1 of the IPTS. The course introduces students to the philosophical and definitional issues related to pluralistic education. Course focus addresses philosophical positions, the design and implementation of effective teaching strategies that reflect ethnic and cultural diversity, and prepares students to function in a multicultural society.

312-1 to 8 Field Observation and Participation. Allows the pre-service teacher candidate to observe and participate in activities and experiences related to their major. Field experiences are correlated with courses in the student's major department. Enrollment is coordinated by the student's major department and placement in public school settings is coordinated by the Office of Teacher Education. Prerequisite: EDUC 313 or concurrent enrollment, or permission from instructor or the Director of Teacher Education.

313-3 Reflective Classroom Planning, Organization, and Management. This course prepares teacher candidates to analyze and use student academic and behavioral data to design instruction that meets the diverse needs of students, and leads to ongoing growth and achievement. The candidates will develop an understanding of principles and techniques of evidence-based instructional practices that enable active student engagement and effective management of classrooms and student behavior. Concurrent enrollment with EDUC 301. Restriction: Admittance to the Teacher Education Program.

314-3 Human Growth, Development, and Learning in a Digital Age. (Advanced University Core Curriculum course) A requirement in the professional education sequence. This course examines human behavior as individuals and in groups. It includes social science research strategies, human development, individual differences, group dynamics, and principles of learning.

319-3 Language, Culture, and Learning. This course introduces first and second language development and acquisition, language variation, cultural diversity, bilingual education, and culturally and linguistically responsive instruction. The course will serve as a foundation for methods courses in the teacher education program where teacher candidates will learn best practices to teach ELLs (English language learners), dialect speakers, and other students from diverse cultural and linguistic backgrounds. Prerequisite: EDUC 313 and EDUC 301 with a grade of C or above. Concurrent enrollment in EDUC 302.

350-3 Culture in the Classroom. Students will develop competencies and skills needed by educational professionals for work with children and their families from diverse cultural and linguistic backgrounds. This course will examine many social, political, and cultural factors that affect learning and teaching. (online course)

351-3 Foundations of Bilingual Education. Students will develop competencies and skills needed by educational professionals for work with children and their families from diverse cultural and linguistic backgrounds in school settings. Students will be presented with a developmental overview of the historical, philosophical, socio-cultural, and legislative foundations of bilingual education in the United States. (online course)

352-3 Linguistics for the ESL Teacher. Students will develop competencies and skills needed by educational professionals for work with children and their families from diverse cultural and linguistic backgrounds. Educational Linguistics as it relates to this course focuses on training and research in linguistics as it relates to educational theory and practice, specifically the teaching and learning of preschool-3rd grade ELL students. (online course)

353-3 Assessment of Bilingual Students. Students will develop competencies and skills needed by educational professionals for work with children and their families from diverse cultural and linguistic backgrounds. Students will examine instruments, strategies, and techniques related to assessment and placement of ELL students. (online course)

354-3 Bilingual and ESL Methods and Materials. Students will develop competencies and skills needed by educational professionals for work with children and their families from diverse cultural and linguistic backgrounds. This course will focus on bilingual and ELL curriculum development and instruc-

tion for bilingual and ELL students (preschool-3rd grade) in a variety of language and program settings. (online course)

400-6 Clinical Field Experience III-Special Education. This clinical field experience is limited to Special Education majors. Concurrent enrollment in SPED 417 and SPED 419 is required. Enrollment is coordinated by the teacher candidate's major department while placement in public school settings is coordinated by the Office of Teacher Education. Prerequisite: EDUC 302 and 319.

401A-12 Clinical Practice/Student Teaching. A requirement in the undergraduate professional education sequence necessary for initial teacher licensure by entitlement. For undergraduate credit only. Prerequisite: successful completion of prior professional education sequence courses and all required methods courses with a grade of C or better, required major GPA, special approval needed from the department, full semester of clinical practice/student teaching and all required seminars, and required licensure tests. Laboratory Fee: \$100.

401B-6 Clinical Practice/Student Teaching. A requirement in the undergraduate professional education sequence necessary for initial teacher licensure by entitlement. For undergraduate credit only. 6 credit hours (may be repeated). Prerequisite: successful completion of prior professional education sequence courses and all required methods courses with a grade of C or better, required major GPA, special approval needed from the department, full semester of clinical practice/student teaching and all required seminars, and required licensure tests. Laboratory Fee: \$50.

401C-3 Clinical Practice/Student Teaching. A requirement in the professional education sequence necessary for initial teacher licensure by entitlement. 3 credit hours (may be repeated). Prerequisite: successful completion of prior professional education sequence courses and all required methods courses with a grade of C or better, required major GPA, special approval needed from the Office of Teacher Education. Laboratory Fee: \$25.

Teacher Education Faculty

Burris, Deborah, Associate Clinical Professor, Ph.D., Southern Illinois University, 1988.

Calvert, Brenda, Senior Lecturer, Ph.D., Southern Illinois University, 2004.

Cox, Jackie, Clinical Instructor, *Emerita*, Ph.D., Southern Illinois University, 2000.

Easton, Sue, Instructor, Ph.D., Southern Illinois University, 1996.

Haar, April, Assessment Coordinator, M.S., Southern Illinois University, 2005.

Kirgan, Belinda, Clinical Instructor, Ed.S, Eastern Illinois University, 1996.

Loman, Casey, *Coordinator of Teacher Education Admission*, M.Ed., Northern Arizona University, 2006.

Maginel, Paige, Instructor, Ed.D., Oakland City University, 2004.

McAnelly, Kenneth, Clinical Instructor, M.S. Ed., Southern Illinois University, 1977.

Mundschenk, Nancy, *Director of Teacher Education*, Ph.D., University of Iowa, 1992.

Nobel, JoVonna, Instructor, M.S., Southern Illinois University, 1986.

Smith, Sue, Instructor, M.S. Southern Illinois University, 2005.

Speith, Gerald, Clinical Instructor, M.S., Southern Illinois University, 1977.

Riley, Cheryl, Instructor, M.S., Southern Illinois University, 1988.

Technical Resource Management (Major, Courses, Faculty)

The Bachelor of Science in Technical Resource Management (TRM) is specifically designed for the student who has entered a technical career path for which a traditional baccalaureate degree may not be available. The degree is ideally suited for community college and technical institute graduates possessing occupational associate's degrees, including an Associate of Applied Science (AAS). It also serves students with other types of education, training, or experience, including military and the skilled trades. It can also provide a bridge for those seeking re-entry into the workforce following displacement due to personal, organizational, or general economic factors.

The TRM curriculum focuses on preparing technicians for career advancement into supervisory, management, and entrepreneurial roles in their fields of technical expertise. Foundational courses in the degree provide students with skills in professional communication, work center management, data analysis, quality management, and project management. Additionally, each student works with the program advisor to design an academic plan that reflects his or her specific career goals.

General admission to the TRM program requires a 2.0 GPA. The Capstone Option may be available to eligible students who have earned an Associate in Applied Science (AAS) degree or the equivalent. The Capstone Option reduces University Core Curriculum requirements from 41 to 30 hours. See Chapter 3 for more information regarding the Capstone Option.

Students who are interested in pursuing a degree in Technical Resource Management are encouraged to contact a program representative as early as the first semester at their community college. For more information, contact the School of Information Systems and Applied Technologies. Contact information may be found at <http://isat.siu.edu/>.

Bachelor of Science Degree in Technical Resource Management, College of Applied Sciences and Arts

The Bachelor of Science in Technical Resource Management requires a minimum of 120 semester hours, to be completed in accordance with SIU Degree Requirements (see Chapter 2). In addition to University Core Curriculum and TRM courses, students can select from a specialization or one of over 60 minors, or they can develop an individualized plan of study that complements their professional aspirations.

Technical Resource Management Major - Organizational Development Specialization

The Organizational Development specialization provides students with a comprehensive curriculum in the management of

technical enterprises. Students who select the specialization will have the opportunity to explore the labor-management relationship, the relevance of technology and innovation to international trade, the management of a sustainable enterprise, the fiscal and legal aspects of management, and the professional development of the individual, as well as selected special topics. The broad perspective of the specialization equips graduates for mid-level positions in most any industry.

The specialization includes the 15 hours of the TRM Core Requirements plus a total of 21 semester hours of TRM Support Courses to be selected from the following: TRM 332, 361, 362, 421, 426, 440, 483, 488, and 490.

Technical Resource Management Major - Professional Construction Management Specialization

The specialization in Professional Construction Management is available to students with prior education, training, or experience in construction. It is designed to provide the skills needed to manage the complex demands of the critical alliance of the three core stakeholders in any construction project: the owner, the designer, and the builder.

The specialization includes 18 semester hours, as follows: TRM 450, 451, 452, 453, 454, and 455. The first five courses are taken to satisfy the Approved Electives requirement. The last course, TRM 455, substitutes for TRM 470 in the TRM Core.

Students enrolled in this specialization are eligible to become members of the SIU Student Chapter of the Construction Management Association of America (CMAA). The organization enhances the student knowledge base of the Professional Construction Management profession by sharing industry resources, information, and technology at the campus, state, national and international level through collaboration and networking on-campus and off-campus with industry leaders (owners, builders, and designers), including the CMAA-Chicago and CMAA-National organizations.

Technical Resource Management Major-Health and Safety Management Specialization (Available only at SIU Off-Campus locations)

This specialization augments the TRM program’s technical management core and builds upon the student’s technical training to open career opportunities as a Safety Technologist. Typically, people in occupational health and safety roles are making worksite assessments to determine risks, identifying potential hazards and recommending controls, evaluating risks and hazard control measures, investigating incidents, maintaining and evaluating incident and loss records, and preparing emergency response plans. This training supports certification by the Council on Certification of Health, Environmental and Safety Technologists (CCHST), Savoy, Illinois, including Construction Health and Safety Technician and/or Occupational Health and Safety Technician, and meets the blueprint relating to program management, worksite auditing, training, and professional responsibility.

The specialization includes 15 semester hours, as follows: HED 335, 345, 430, 435, and 496. See Health Education for course descriptions. The specialization courses are taken to satisfy the Approved Electives requirement.

University Core Curriculum Requirements¹ 41

Requirements for Major in Technical Resource

Management 36

TRM Core Requirements (or approved equivalents):
 TRM 316, 364, 383, 464, and 470
 (455 for PCM specialization) 15

TRM Support Courses, select from: TRM 332, 361, 362, 421, 426, 440, 483, 488, 490, or approved equivalents..... 6

Approved Electives (specialization, minor, or individualized plan): 15

Career Electives 43

An Associate in Applied Science degree (AAS) from an accredited institution meets this requirement. An approved apprenticeship or a maximum of 30 semester hours of internship, work experience credit, or independent study may be part of these 43 hours.

Total 120

¹The Capstone Option reduces University Core Curriculum requirement to 30 hours.

Technical Resource Management Suggested Curricular Guide

THIRD YEAR	FALL	SPRING
TRM 316, 383	3	3
TRM 364, TRM Support Course.....	3	3
University Core or Elective	6	6
Approved Elective	3	3
<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
TRM 464, 470	3	3
TRM Support Course	3	-
University Core or Elective	6	6
Approved Elective	3	6
<i>Total</i>	15	15

Courses (TRM)

259-1 to 60 Occupational Education Credit. Credit will be awarded via program evaluation of past lower-level non-accredited occupational education and training related to the student’s academic and career objectives. Unless otherwise determined by the program director, the credit may be applied only to the approved technical or career elective requirement of the Technical Resource Management degree. Restricted to Technical Resource Management majors.

316-3 Applications of Technical Communication. (Same as ISAT 366) The course will increase students’ abilities in communicating various workplace documents common to technical disciplines. Oral presentations use computerized presentation software. The course is designed to meet the writing portion of the College’s Communication-Across-the-Curriculum initiative. A grade of C or better is required. Prerequisite: ENGL 101 w/C or better. Restriction: College of Applied Sciences and Arts.

319-1 to 15 Occupational Internship. Each student will be assigned to a University approved organization engaged in activities related to the student’s academic program and career objectives. The student will perform duties and services as assigned by the preceptor and coordinator. Reports and assign-

ments are required to be completed by the student. Hours and credits to be individually arranged. Mandatory Pass/Fail.

320-1 to 10 Work Study Internship. Provides work-study students with an opportunity to participate in an on-campus work experience related to their academic program and career objectives. Hours and credits are to be individually arranged. Mandatory Pass/Fail.

321-3 Seminar in Applied Sciences and Arts. This course is designed to allow College of Applied Sciences and Arts students to become knowledgeable of specific and current requirements in the profession to which they aspire. Subject matter will be determined by academic major.

332-3 Labor-Management Relations. The student will gain an understanding of the basic concepts and techniques of modern labor-management relations. Topics covered include labor history, labor law, unions, labor contracts, collective bargaining processes, grievance and arbitration procedures, and the move towards participative models of labor relations. Restricted to TRM major.

350-1 to 32 Technical Career Subjects. In-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, professions, and health service occupations offered through various workshops, special short courses, and seminars. Hours and credit to be individually arranged. This course may be classified as independent study. Special approval needed from the school.

358-1 to 30 Work Experience Credit. Credit will be granted via departmental evaluation of prior job skills, management-worker relations and supervisory experience gained through experiences related to the student's academic and course objectives. Unless otherwise determined by the school director, this credit may be applied only to the approved Career Elective requirements of the Technical Resource Management degree. Restriction: TRM major.

359-1 to 60 Occupational Education Credit. Credit will be awarded via program evaluation of past upper-level non-accredited occupational education and training related to the student's academic and career objectives. Upper-level credit is defined as that which is determined to be equivalent to junior- or senior-level college coursework either by faculty evaluation or by the evaluation of a recognized body, such as the American Council on Education (ACE). Unless otherwise determined by the program director, the credit may be applied only to the approved technical or career elective requirement of the Technical Resource Management degree. Restricted to Technical Resource Management majors.

361-3 Fiscal Aspects of Technical Management. An introduction to fiscal structures and problems encountered in the technically oriented enterprise. Restriction: TRM major.

362-3 Legal Aspects of Technical Management. An introduction to the types of legal problems encountered in the technically oriented enterprise. Restriction: TRM major.

363A-3 Special Topics in Technical Management-Management Field Experience. Specialized study for the investigation of management problems relating to the student's career objective. Study of the techniques of employee relationships to include the dynamics and procedures required for managing the work center. Need not be taken sequentially.

363B-3 Special Topics in Technical Management-Re-

search Management Applications. Specialized study for the investigation of management problems relating to the student's career objective. Study of the techniques of employee relationships to include the dynamics and procedures required for managing the work center. Need not be taken sequentially.

363C-3 Special Topics in Technical Management-Comparison Analysis of Organizational Strategies in the Professions. Specialized study for the investigation of management problems relating to the student's career objective. Study of the techniques of employee relationships to include the dynamics and procedures required for managing the work center. Need not be taken sequentially.

363D-3 Special Topics in Technical Management-Current Trends. Specialized study for the investigation of management problems relating to the student's career objective. Readings regarding economic trends impacting upon the business or profession. Study of the techniques of employee relationships to include the dynamics and procedures required for managing the work center. Need not be taken sequentially.

363E-3 Special Topics in Technical Management-Employee Relations. Specialized study for the investigation of management problems relating to the student's career objective. Study of the techniques of employee relationships to include the dynamics and procedures required for managing the work center. Need not be taken sequentially.

364-3 Work Center Management. A study of the problems of managing a small working unit (division, department, work center, section, etc.) within a larger unit (agency, company, regional office, etc.). Included items will be work center goals identification, staffing needs, monitoring of work process reporting, work center communications, and interpersonal relations within the work center. Restriction: TRM major.

383-3 Data Applications and Interpretation. (Same as ISAT 365) This course will give students an understanding of the basic principles and techniques involved in the statistical treatment of data, including the selection of data sources, the design of statistical studies, and the analysis, synthesis, and utilization of data. Students will gain experience in using data for decision-making in their respective professions. Technical Resource Management majors must earn a grade of C or better. Prerequisite: University Core Curriculum Mathematics. Restriction: College of Applied Sciences and Arts.

421-3 Professional Development. Presents prevailing elements to attain technical career success. Organizational cases explore management and leadership roles, training, strategic planning, and career research explores employment processes and applications practices. Deliverables include a portfolio comprised of career case studies and professional profile materials. Prerequisite: TRM 316 w/C or better or ENGL 102 w/C or better. Restriction: TRM major.

426-3 Technology and International Trade. The international trade of products and services is studied by examining the technology development and transfer concerns of transnational corporations and national governments in industrialized, newly industrialized and developing countries.

440-3 Technology and Management of Sustainable Enterprises. This course focuses on the technology and business principles found in the growing sector of environmentally green enterprise. A variety of sustainable business practices will be studied.

464-3 Managing For Quality. The course focuses on management techniques used to upgrade the level of quality of products and services in organizations. Topics cover the processes of continuous quality improvement: strategies and objectives, quality measures, participative management practices, worker empowerment, customer preferences and expectations, vendor/supplier inputs, process technology outputs, integrated feedback loops, and quality audits and review. Prerequisites: UCC Mathematics, TRM 364, 383. Restriction: TRM major.

470-3 Project Management. This course is designed to provide students with an overview of the project management process followed by an in-depth examination of the activities needed to successfully initiate, plan, schedule, and control the time and cost factors of the project from a technical management perspective. Prerequisites: UCC Mathematics, TRM 364, TRM 383. Not for graduate credit. Restriction: TRM major.

483-3 Quality Measurement. Specialized study of the design of quality control for the improvement of processes and to enhance product or service outcomes. Instruction will focus on the construction of Statistical Process Control (SPC) diagrams and charts appropriate to the technologies found in various types of work environments. The major course project requires students to design aspects of an SPC program based on their specialty area. Lecture three hours. Not for graduate credit. Prerequisite: TRM 383.

488-3 Technical Innovation. A lecture course intended to educate students on how to survive and prosper in hyper-innovative work places. Both intrapreneurial and entrepreneurial aspects will be pursued, as will planned obsolescence and product replacement. Not for graduate credit. Prerequisite: TRM 316, 383, 364.

490-3 Technical and Professional Theory. A department honors seminar with challenging assignments and limited enrollment to prepare the student for the values, needs, demands, ethics, epistemologies, and socioeconomic roles of technical work, technicians, professional arenas and professional fields. Not for graduate credit. Prerequisite: 3.25 or better GPA in major, TRM 316 or ISAT 366.

Technology (Department)

Two undergraduate degree programs are available in technology. One program leads to the Bachelor of Science degree with a major in engineering technology (see Engineering Technology) with specialization in electrical engineering technology. The other program leads to the Bachelor of Science degree with a major in industrial technology.

Engineering technology courses contain topics related to the design and development of products. Industrial technology courses contain topics related to the manufacture and distribution of products.

The present technological society has increased the demand for new types of personnel known as technologists. A technologist utilizes established methods to achieve improvements in existing designs and systems. Technologists should be knowledgeable in the state of the art of a particular technology, capable of utilizing handbooks and other forms of codified information with skill and discrimination, and sufficiently versed in mathematics and science to recognize sound procedures.

The industrial technology program is flexible enough to pro-

vide the means whereby a graduate of a two-year occupational program can obtain a bachelor’s degree in a minimum length of time. The program also provides credit to individuals for related work experience outside the institution.

The programs are designed to provide the necessary training for entry into employment upon the completion of the baccalaureate degree. Opportunities for advanced study are available in manufacturing systems.

Theater (Department, Major, Minor, Courses, Faculty)

The Department of Theater is an accredited institutional member of the National Association of Schools of Theatre, 11250 Roger Bacon Drive, Suite 21, Reston, VA 20190.

The Bachelor of Arts degree in Theater is designed to provide the student with broad-based exposure to human experience and sound foundation in basic skills of theater craft. The undergraduate theater major provides the student with invaluable interpersonal and intrapersonal skills and builds inquiring and open minds—qualities required in most professions the student might wish to pursue after graduation—and further offers essential education and training for continued work in graduate or professional schools.

Courses in acting, voice, movement, directing, theater history, dramatic literature, playwriting, production design, and technical theater, are augmented by the extensive production schedule in two theaters—a proscenium house, the McLeod Theater, seating about 499, and the Christian H. Moe Laboratory Theater, a flexible space seating 100—providing training in all aspects of theater. The production schedule is extensive enough to allow students the opportunity to design sets, lights, and costumes and to write, perform, and direct for productions bridging all dramatic genres, including musical theater.

In addition to the University Core Curriculum requirements, all theater majors must complete a theater core curriculum of 27 semester hours, each of which must be completed with a grade of C or better; a liberal arts component of 20 hours, selected by advisement from courses outside the Department of Theater; and 32 hours of theater electives, to include at least 9 hours at the 400 level. These 32 hours may include a minor of 15 hours in such complementary fields as art, fashion design and merchandising, computer science, English, foreign languages, history, journalism, music, dance, philosophy, psychology, recreation, sociology, and communication studies. Theater students must complete all major coursework with a cumulative 2.0 GPA.

Theater course credit earned at other institutions of higher learning, not used for University Core Curriculum requirements at the time of transfer, can be applied to the Bachelor of Arts degree program with the approval of the faculty of the Department of Theater.

Bachelor of Arts Degree in Theater, College of Liberal Arts

University Core Curriculum Requirements 41
 Must include Theater 220 as substitute for Theater 101.
College of Liberal Arts Component (by advisement) 20
Requirements for Major in Theater 59
 Theater Core Curriculum27
 Theater 205, 218A, 218B or C, 217, 300, 311A, 354A and B,

402 or 401A and B.
 Theater Electives (minimum of 9 semester hours at the 400 level)32
 Total 120
 Students must have a total of 42 semester hours at the 300-400 level from a four year institution(s).

Theater (BA) Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101, THEA 217	3	3
ENGL 101,102/LING 101,102	3	3
MATH 101, CMST 101	3	3
THEA 203A/218A, THEA 218A/B/C	3	3
THEA 220 (UCC Fine Arts req.)	3	-
Theater Electives* (See list of Interest Areas below)	-	3
Total	15	15

SECOND YEAR	FALL	SPRING
Human Health, THEA 205 Makeup	2	2
Physical Science, Life Science	3	3
ENGL 290/291/365.....	-	3
THEA 218B/C /THEA elective, 311A	3	3
THEA 300	1	1
Theater Electives* (See list of Interest Areas below)	6	3
Total	15	15

THIRD YEAR	FALL	SPRING
Foreign Language I, II.....	4	4
Social Science	3	3
THEA 300.....	1	1
THEA 354A, 354B.....	3	3
Theater Electives* (See list of Interest Areas below)	4	4
Total	15	15

FOURTH YEAR	FALL	SPRING
Humanities	3	3
Multicultural.....	-	3
Liberal Arts Electives	3	6
THEA 402/401A,B.....	3/2+1	-
Theater Electives* (See list of Interest Areas below)	6	3
Total	15	15

*Interest Areas include Performance, Playwriting, History, Dramaturgy, Design and Production.

Bachelor of Fine Arts in Musical Theater Degree, College of Liberal Arts

Co-sponsored by the Department of Theater and the School of Music, the BFA in Musical Theater is a professional degree program designed to prepare students for a career in musical theater performance. All students must audition to enter the program. Toward the end of their 3rd semester, BFA can-

didates must pass a jury of singing, acting and dance, along with a review of their efforts to date in order to continue in the program¹. The degree requires 120 credit hours for graduation, 79 of which must be in music, theater and dance. Those students not passing their jury will receive advisement as to other options in music and theater. In addition to their coursework, BFA Musical Theater students are required to audition for all musicals and plays², and attend the pre-determined number of plays and concerts³. BFA MT students are waived from the College of Liberal Arts foreign language requirements and from mandatory music ensemble participation required each semester of applied study. BFA MT students are required to meet only 2 semesters of ensemble requirement.

¹The evaluation of the barrier jury based on five criteria: 1. meeting academic standards; 2. attitude and commitment to training; 3. singing; 4. acting; 5. dancing.
²Candidates must audition for all Department of Theater productions, but do not have to accept roles if they conflict with course commitments or undermine classroom achievement. Prior commitments (ie. choir, classes, other productions) must be made clear at auditions listing those conflicting dates. Candidates are not permitted to audition for or accept roles or other assignments in productions outside of SIUC without approval from the BFA Area Coordinator.
³Candidates must attend 7 concerts/plays each semester. Either 4 plays and 3 concerts, or the reverse. One production per semester may be a professional production.

University Core Curriculum Requirements 41
 Including THEA 220, *Theater Insight* and MUS 203, *Diversity and Popular Music in American Culture* as UCC substitutes
Requirements in Music 27
 MUS 020 or MUS 022 Concert Choir (1,1) 2
 MUS 030 A,B (1,1)..... 2
 MUS 104A Aural Skills 1
 MUS 105A Basic Harmony 3
 MUS 140X (1,1) 2
 MUS 240X (1,1) 2
 MUS 340X (1,1) 2
 MUS 440X (1,1) 2
 MUS 402 Musical Theater Workshop (2,2,2) 6
 MUS 471 History of Musical Theater 3
 MUS 489 Senior Project..... 2
Requirements in Theater 34
 THEA 203B Stage Diction and IPA 3
 THEA 205 Stage Make-up..... 2
 THEA 217 Beginning Acting 3
 THEA 220 Theater Insight (included in UCC req. above) ... 0
 THEA 300 Practicum 2
 THEA 303A, 403A or 417 3
 THEA 303B Voice for the Actor..... 3
 THEA 311A Play Analysis (WAC)..... 3
 THEA 317A Intermediate Acting..... 3
 THEA 317B Intermediate Acting..... 3
 THEA 322 Summer Theater..... 2
 THEA 354A Theater History..... 3
 THEA 400 Production..... 1
 THEA 424 Audition Technique 3
Requirements in Dance 12
 KIN 103 A, C and F Dance (2+2+2) 6
 THEA 323 Musical Theater Dance (1,1,1) 3
 THEA 423 Musical Theater Dance (1,1,1) 3
Approved Performance Electives 6
 MUS/THEA
Total 120

Musical Theater Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
UCOL 101, Math.....	3	3
MUS 020/022.....	1	1
MUS 140X.....	1	1
MUS 030A,B.....	1	1
KIN 103A,C.....	2	2
KIN 103F.....	2	-
THEA 220 (UCC Fine Arts), 217.....	3	3
THEA 203B.....	-	3
<i>Total</i>	13	14

FIRST YEAR	SUMMER
THEA 322.....	2
<i>Total</i>	2

SECOND YEAR	FALL	SPRING
ENGL 101, ENGL 102.....	3	3
CMST 101, MUS 203.....	3	3
MUS 240X.....	1	1
MUS 104A, MUS 402.....	1	2
MUS 105A.....	3	-
Approved Perf. Elective, THEA 205.....	3	2
THEA 303B.....	-	3
THEA 323.....	1	1
<i>Total</i>	15	15

THIRD YEAR	FALL	SPRING
Humanities.....	3	3
THEA 300, Social Science.....	1	3
MUS 340X.....	1	1
THEA 354A, MUS 402.....	3	2
THEA 424, MUS 471*.....	3	3
THEA 317A,B.....	3	3
THEA 323, 423.....	1	1
<i>Total</i>	15	16

FOURTH YEAR	FALL	SPRING
Human Health, Social Science.....	2	3
Science.....	3	3
MUS 440X.....	1	1
MUS 489, 402.....	2	2
THEA 423.....	1	1
THEA 303A/403A/417, App Perf Elec....	3	3
THEA 311A.....	3	-
THEA 400, 300.....	1	1
<i>Total</i>	16	14

*MUS 471 is offered every other spring semester. Alternate with approved performance elective as in senior year.

Theater Minor

Requirements for Minor in Theater..... 16
 A minor in theater consists of THEA 311A, THEA 101 as a prerequisite, THEA 354A or B, 218A,B or C, 217 and 300.

Courses (THEA)

101-3 Theater Insight. (University Core Curriculum) [IAI Course: F1 907] Through lectures, discussions, projects, text readings and written critiques, students examine how plays are written and produced and how these plays reflect the people and cultures that produce them. Theater Insight Fee: \$13.

203A-3 Introduction to Voice and Movement. Fundamentals of vocal production and movement for the stage. Including breathing, kinesthetic awareness, vocal placement and resonance; physical storytelling.

203B-3 Stage Speech and The IPA. Fundamental use of the International Phonetic Alphabet as it pertains to standard stage speech.

205-2 Stage Make-up. General survey covering design and application of makeup for the stage, including youth, middle and old age, texture, color, special effects, wigs and latex. \$10 lab fee required.

217-3 Acting. Preparing the actor's instrument through basic acting technique; concentration/relaxation exercises; improvisations. The course objective is the discovery and development of the actor's inner resources. Contemporary American plays are studied from the actor's point of view.

218A-3 Beginning Stagecraft-Scenery. [IAI Course: TA 911] Fundamentals of scenic construction and state rigging, including basic tools and equipment. Each class has a practical laboratory requirement of 45 hours. \$20 lab fee required.

218B-3 Beginning Stagecraft-Lighting. Fundamentals of stage lighting including instrument handling, focusing, basic electrical theory. Each class has a practical laboratory requirement of 45 hours. \$20 lab fee required.

218C-3 Beginning Stagecraft-Costumes. Fundamentals of stage costume construction. Each class has a practical laboratory requirement of 45 hours. \$20 lab fee required.

220-3 Freshman Theater Seminar. (Advanced University Core Curriculum course) Through lectures, discussions, projects, text readings and written critiques, students examine how plays are written and produced and how these plays reflect the people and cultures that produce them. Students are exposed to information skills and strategies necessary to succeed in the Department's academic and production programs. Strong focus on American plays and practice. Satisfies University Core Curriculum Fine Arts requirement in lieu of 101.

260-1 to 15 Internship. Outside departmental internship, which is, related to the major program but not part of a regular instructional course. Written reports are required of student and outside supervisor. Mandatory Pass/Fail. Special approval needed from the instructor.

300-1 to 4 (1 per semester) Theater Practicum. Offers students an opportunity to increase their skills in stagecraft, stage lighting, and costumes by working on department productions. Prerequisite: THEA 218A, B, or C.

303A-3 Movement for the Actor. Intermediate studies in stage movement. Prerequisite: THEA 203A and 217.

303B-3 Voice for the Actor. Intermediate studies in stage voice, IPA, standard speech, text analysis, scansion, cold readings. Prerequisite: THEA 203A and THEA 203B.

311A-3 Play Analysis. Development of basic skills in play analysis and application of these skills to a variety of dramatic

forms through class discussions and written assignments. Satisfies CoLA Writing-Across-the-Curriculum requirement for Theater majors. Prerequisite: THEA 101 or THEA 220.

311C-3 Fundamentals of Writing for the Stage and Screen. This course introduces basic writing skills for playwrights, scriptwriters, and performance artists. It focuses on techniques-such as plot structure, dialogue, and the manipulation of images-used in all dramatic media. Written exercises are submitted and discussed weekly to identify dramatic events and techniques. For final projects, students write a script for either a 10-minute play, 10-minute film, or a 10-minute solo performance. Prerequisite: THEA 311A.

317A-3 Intermediate Acting. The study and application of Stanislavskian-based technique to the acting process. Course-work includes scene and monologue work. Prerequisite: THEA 203, THEA 217, THEA 303A, THEA 303B.

317B-3 Intermediate Acting. The study and application of European realism in the development of the actor's process. Prerequisite: THEA 317A.

322-1 to 12 SIUC Summer Theater. Practical experience in summer stock play production. A maximum of twelve credit hours may be accumulated for performance or technical work in SIU Summer Theater only. Special approval needed from the instructor.

323-1 to 3 (1 per semester) Musical Theater Dance I. Developing and performing musical theater choreography using intermediate jazz, tap, ballet, social and modern dance skills. Prerequisite: KIN 103A; KIN 103C and KIN 103F.

354A-3 History of the Theater. (Same as CLAS 354A) Theater history from the ancient Greek and Roman periods to the 17th century.

354B-3 History of the Theater. Theater history from the 17th century to the present.

390-1 to 6 Independent Study. Independent work on selected problems in academic or blend of academic and creative research. A maximum of three hours may be taken for a single project and a cumulative maximum of six hours may count toward the degree. Special approval needed from the instructor.

400-1 to 6 (1 to 2 per semester) Production. Practicum for support of major department productions in all areas. Roles in department productions may fulfill requirement.

401A-2 Stage Management. Study of the theories and skills required to successfully stage manage a theater production. Prerequisite: THEA 217, THEA 218A, concurrent enrollment in THEA 401B.

401B-1 Stage Management Lab. Practical application of the theories and skills learned in the 401A course and applied on a department of theater production. Prerequisite: THEA 217, THEA 218A, concurrent enrollment in THEA 401A.

402-3 to 6 Directing Studio. Introduction to the art of directing through examination of various genres. An exploration of the fundamentals of directing culminating in scene work and studio presentation. Advanced students will approach the directing process from play selection through dramaturgy to production and through the context of contemporary directing styles. Prerequisites: THEA 217 and THEA 311A.

403A-3 Advanced Movement for the Actor. Advanced studies in stage movement with special attention to period styles. Prerequisite: THEA 303A, THEA 317A, THEA 317B.

403B-3 Advanced Voice for the Actor. Advanced studies in voice with special attention to stage dialects and advanced vocal techniques. Prerequisite: THEA 303B, THEA 317A.

404-3 Theater Management. Discussion of legal and financial aspects concerning the professional and community theaters of the United States. Consideration of and practice in managerial activities of an educational theater including administration, purchasing, and accounting practices, direct sales, publicity, promotion and public relations.

406-9 (3,3,3,) Properties Studio. Beginning and advanced studio work in traditional and non-traditional crafts for theatrical events, including mask work, puppetry, stage furniture construction, upholstery, weaponry, armor, and special effects. Repeatable. Prerequisite: THEA 218A. Studio Fee: \$60.

407-3 Scene Design. Technical and artistic aspects of scene design. Theory and practice. Prerequisite: THEA 218A, THEA 413.

409-6 (2,2,2) Scene Painting Studio. Studio work in basic and advanced scene painting techniques and materials. Projects include wood, drapery, foliage, marble, transparencies, scrim painting, dye painting, faux finishes, metal reflections, and murals. Repeatable. Prerequisite: THEA 218A. Studio fee: \$65.

410-9 Children's Theater. Theory and practice in performing theater for children. Class activities include lectures on various aspects of production as well as producing a touring children's play for local area schools. Special approval needed from the instructor.

412-2 Patterning and Draping for the Theatre. This course introduces the theatrical costume design and technical student to the basics of pattern development and construction techniques used to develop a 3-dimensional theatrical costume, with focus on giving the student a working knowledge of costume production, flat patterning, and draping techniques. Prerequisite: THEA 218C. Studio fee: \$25.

413-6 (3,3) Drafting for the Theater. Development of the student's skill in scenographic techniques including ground plans, sections, elevations, and detail construction drawings. Prerequisite: THEA 218A.

414-3 Costume Design. Technical and artistic aspects of costume design. Development of the design process, understanding and use of color theory and fabric, and practice of costume drawing techniques. Prerequisite: THEA 218C.

415A-2 to 4 Costume Crafts I. This course focuses on advanced skills in costume technology, including but not limited to, millinery, jewelry-making, armor and masks. Prerequisite: THEA 218C, THEA 412 with grades of C or better. Craft Fee: \$35.

415B-2 to 4 Costume Crafts II. This course focuses on advanced skills in costume technology, including but not limited to, dyeing and fabric modification, wig ventilating, and dress form model projects. Prerequisite: THEA 218C, THEA 412. Craft fee: \$35.

416-3 Structural Design for the Stage. In-depth study of the art and practice of structural design for the stage and analysis of structural properties of standard stage scenic materials. Prerequisite: THEA 218A.

417-3 to 6 (3,3) Advanced Acting. Utilization of the actor's process in the performance of various theories and styles of act-

ing. May be repeated once for credit. Prerequisite: THEA 317B.

418-3 Lighting Design. Investigation of stage lighting design, theory and professional practice. Special attention to color theory and its application to stage lighting. Lecture/Laboratory. Prerequisite: THEA 218B and THEA 413.

419-3 Technical Direction. Advanced study of principles and procedures of scenic construction and stage rigging. Includes scene shop organization, materials, and specialized stage equipment; preparation for professional technical direction. Lecture and laboratory to be arranged. Prerequisite: THEA 218A and THEA 413.

420-2 Senior Seminar. Students are provided an opportunity to integrate their previous training in theater and to assess it. Students are exposed to information skills and strategies necessary for survival in the professional world. Mandatory Pass/Fail. Not for graduate credit. Concurrent enrollment in THEA 421.

421-1 Senior Project. Preparation of any of the following based on the student's area of interest: a portfolio, script, critical research paper, design, acting recital or direction of a short play. Projects are chosen and prepared under the supervision of a theater faculty member. Mandatory Pass/Fail. Not for graduate credit. Concurrent enrollment in THEA 420.

422-1 Playreading. Build student's familiarity with theatrical canon through reading and discussion of a play a week. Brief writing assignments help develop deeper understanding of individual plays and connections between scripts. As reading list changes each semester, the class may be repeated up to three times.

423-1 to 3 (1 per semester) Musical Theater Dance II. Developing and performing musical theater choreography using advanced jazz, tap, ballet, social and modern dance skills. Prerequisite: THEA 323.

424-3 Audition Techniques. Methods of auditioning for theater and musical theater. The course covers audition techniques for open calls, cold reading/singing, improvisation, interviews, as well as the development of an audition portfolio and the preparation of head shots and resumes. Prerequisite: THEA 217.

450-1 to 9 Topical Seminar. An intensive examination and application of selected areas of interest. Topics will vary and may include such areas as stage management, audition and interview, current political theater.

454-3 American Theater. The development of American theater from colonial times to the present. Includes a study of the American musical theater from preminstrels through contemporary music-drama.

455-3 Dramaturgy. An introduction to the theory and practice of dramaturgy, including a survey of contemporary critical theories as they apply to the pre-production work of the dramaturg. The student will apply methodologies studies to plays from the classical repertory and to the works of new playwrights. Prerequisite: THEA 311A.

460-3 Black Theater: Intersections of Culture and Performance. (Same as AFR 420: Themes in Africana Drama) This course will freely examine the intersections between African and African American Theater. It will study the origins, form and agenda of Black Theater by tracing the commonalities of culture and Performance between African and African American Theaters. Students will be exposed to seminal essays, topical plays and performances while they hone their own critical and creative skills.

Theater Faculty

Bogumil, Mary L., Associate Professor, Ph.D., University of South Florida, 1988.

Fagerholm, Thomas, Assistant Professor, M.F.A., Minnesota State University, Mankato, 2012.

Fink, Timothy, Professor, M.F.A., Southern Illinois University Carbondale, 1993.

Fletcher, Anne, *Distinguished* Professor, Ph.D., Tufts University, 1992.

Juntunen, Jacob, Assistant Professor, Ph.D., Northwestern University, 2007.

Kidd, J. Thomas, Assistant Professor and *Chair*, M.F.A., Southern Illinois University Carbondale, 1998.

Merrill-Fink, Lori, Associate Professor and *Director University Honors Program*, M.F.A., University of Arizona, 1988.

Moe, Christian H., Professor, *Emeritus*, Ph.D., Cornell University, 1958.

Naversen, Ronald, Professor, *Emeritus*, Ph.D., Southern Illinois University, 1990.

Ojewuyi, Olusegun, Associate Professor, M.F.A., Yale University, 1998.

Patrick Benson, Susan, Associate Professor, M.F.A., Rutgers University, 1995.

Rush, David, Professor, *Emeritus*, Ph.D., University of Illinois, 1974.

Varns, Mark, Professor, M.F.A., University of Missouri-Kansas City, 1990.

Vintu, Tatiana, Assistant Professor, M.F.A., Tulane University, 2014.

Walker, Cody, Lecturer, M.F.A., San Diego State University, 2014.

Wilson, Donna, Associate Professor, M.F.A., University of Oklahoma, 1975.

Zea, Wendi, Assistant Professor, M.F.A., Kent State University, 2006.

Adjunct Undergraduate Theater Faculty

Edwards-Britton, Molly Seale, M.F.A., University of Texas at Austin, 1981.

Therapeutic Recreation

(SEE RECREATION)

Tourism

(SEE HOSPITALITY AND TOURISM ADMINISTRATION)

Turf Management

(SEE HORTICULTURE)

University (Courses)

Courses (UNIV)

001-1 to 6 (1 per year) Student Volunteer Community Service. Provides university students an opportunity to participate in community service activity. A maximum of one semester hour of credit may be awarded per year for thirty hours or more of community service. Credit may not be used for gradu-

ation or toward semester eligibility for athletics, financial aid, student loan status or University honors. Grade of CR only.

100-3 Academic Success Seminar. This required course introduces students to the academic culture of the university by using an activity-oriented approach. Students examine their own strengths and learn to use them to develop college-level critical thinking and study skills. The class focus is to help students better understand the university environment through instruction in time management, study skills, setting and achieving goals, and enhancing personal and social skills. Restricted to CAS students.

301A-1 Undergraduate Research and Professional Development Seminar. Explores the undergraduate experience with a special concentration on research proposal writing and professional development. Special approval needed from the instructor.

301B-1 to 6 McNair Research Project. Prepares McNair Scholars for their McNair Research Project by developing academic and research skills. Preparation of McNair research proposal, paper and presentation of original research project under the joint supervision of a faculty mentor and McNair Program staff. Special approval needed from the instructor.

388-1 Study Abroad Continuing Enrollment. Continuing enrollment status for undergraduate students participating in an approved study abroad or travel/study program. Requires concurrent enrollment at host institution. Requires approval from the academic unit and study abroad programs. Mandatory Pass/Fail. This course does not count toward the 120 hours needed for graduation.

401A-1 Graduate School Preparation Seminar. Prepares McNair Scholars for graduate school by developing academic and research skills. Overviews credentials for acceptance into an appropriate graduate program. Not for graduate credit. Explores the graduate school application process with a concentration on professional development. Special approval needed from the instructor.

401B-1 Graduate School Preparation Seminar. Prepares McNair Scholars for graduate school by developing academic and research skills. Overviews credentials for acceptance into an appropriate graduate program. Not for graduate credit. Focuses on the graduate school experience of first generation/low-income/minority students. Special approval needed from the instructor.

University College (College, Courses)

Courses (UCOL)

100-1 to 3 Transfer Student College Planning. The course is designed to help first-year transfer students make a successful transition to college life. Students will be guided through the transfer process. Topics of discussion include the value of pursuing higher education, developing a career goal; identifying academic majors, admissions and academic requirements, university comparison, and options in financial aid. The content of the course is pertinent to any student who is planning to transfer to a four-year institution to complete a Bachelor's degree and satisfies transfer orientation requirements.

100A-1 Foundations of Inquiry for Dual Admission Pro-

gram Students: Part one of three. This online course supports transfer students who plan to attend SIU Carbondale and are participating in the SIU Dual Admission Program. Upon completion of this course, students will have started to prepare their transfer plans, built community among other prospective transfer students, and learned to cope with pressures affecting college students. Students will acquire these capabilities as they are introduced to potential academic and career tracks associated with the disciplines offered at SIU. Students will take from one to three credit hours each semester beginning as early as their second semester at a community college. Completing parts A, B, and C satisfies the University Core Curriculum, Foundations of Inquiry requirement at SIU. Course material fee: \$49.

100B-1 Foundations of Inquiry for Dual Admission Program Students: Part two of three. This online course supports transfer students who plan to attend SIU Carbondale and are participating in the SIU Dual Admission Program. Upon completion of this course, students will have started to prepare their transfer plans, built community among other prospective transfer students, and learned to cope with pressures affecting college students. Students will acquire these capabilities as they are introduced to potential academic and career tracks associated with the disciplines offered at SIU. Students will take from one to three credit hours per semester beginning as early as their second semester at a community college. Completing parts A, B, and C satisfies the University Core Curriculum, Foundations of Inquiry requirement at SIU.

100C-1 Foundations of Inquiry for Dual Admission Program Students: Part three of three. This online course supports transfer students who plan to attend SIU Carbondale and are participating in the SIU Dual Admission Program. Upon completion of this course, students will have started to prepare their transfer plans, built community among other prospective transfer students, and learned to cope with pressures affecting college students. Students will acquire these capabilities as they are introduced to potential academic and career tracks associated with the disciplines offered at SIU. Students will take from one to three credit hours each semester beginning as early as their second semester at a community college. Completing parts A, B, and C satisfies the University Core Curriculum, Foundations of Inquiry requirement at SIU.

101A-1 to 3 Foundations of Inquiry: Academic Success Seminar. This First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry through intentional delivery of the Academic Success Seminar student-centered materials and supplementary services. Sections will be limited to approximately 25 students each. [This course is a replacement for UNIV 100.] \$46 fee will cover access to Pearson's MyStudentSuccessLabPlus and a bundled etext that students can use as part of SIU's tablet initiative that begins Fall 2013.

101B-1 to 3 Foundations of Inquiry for Business. The First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge,

skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines of the College of Business at SIUC. \$49 fee will cover access to Pearson’s MyStudentSuccessLabPlus and a bundled e-text that students can use as part of SIU’s tablet initiative that begins Fall 2013.

101C-1 to 3 Foundations of Inquiry: School of Art and Design. This First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines offered in the School of Art and Design at SIUC. Sections will be limited to approximately 25 students each. [Note: This is the replacement for SFY 101C.]

101D-1 to 3 Foundations of Inquiry: Foreign Languages. This First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interest, assumptions, methodologies, and potential academic and career tracks associated with the study of a foreign language. In UCOL 101D: Foreign Language, you will study theories of second language acquisition, and how they can inform your learning across the curriculum, and you will discuss and debate the interaction between language and culture.

101E-1 to 3 Foundations of Inquiry: Introduction to Engineering. (Same as ECE 101 and ENGR 101) Introduction to the engineering profession and the engineering programs in the College of Engineering. Lectures and hands-on laboratory projects aimed at stimulating interest in engineering and at guiding students in choosing an engineering curriculum. Seminars presented by distinguished speakers on engineering careers, ethics, and employment trends. No prerequisites.

101F-1 to 3 Foundations of Inquiry: Women’s Seminar. The first-year women’s seminar course creates a collective environment where female students can discuss and examine their experiences, achievements, and positions in higher education and society. The primary goal is to build a community of first-year women leaders and provide a space to examine their academic experiences. The course supports the transition of first-year female students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. \$49 fee will cover access to Pearson’s MyStudentSuccessLabPlus and a bundled e-text that students can use as part of SIU’s tablet initiative that begins Fall 2013.

101G-1 to 3 Foundations of Inquiry: Campus Sustainability: SIU Environmental Activities. The First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behav-

iors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines of a particular college at SIUC. Students will learn about, experience, and participate in sustainability activities on campus and in the southern Illinois region. Sections limited to approximately 20 students.

101H-1 to 3 Foundations of Inquiry: Education and Human Services. This course provides a survey of various fields of study in the College of Education and Human Services. The course is oriented for students in their first year of university life, and supports the transition to a research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors that are required for academic and personal success. Students will develop these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career pathways found among the disciplines in this College. \$49 fee will cover access to Pearson’s MyStudentSuccessLabPlus and a bundled e-text that students can use as part of SIU’s tablet initiative that begins Fall 2013.

101I-1 to 3 Foundations of Inquiry: Introduction to Agriculture, Food and Forestry. This First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines of the College of Agricultural Sciences at SIUC. Sections will be limited to approximately 25 students each.

101J-1 to 3 Foundations of Inquiry: Careers in Music. The First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with music. Students will explore what it means to be a music major, what careers they might pursue, activities, required skills, rewards, and expectations associated with majors in music, and how to navigate programs involving more than one school or college. Course material fee: \$49.

101K-1 to 3 Foundations of Inquiry: Introduction to History. This first-year seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with history. This is a recommended course for potential history majors (in the College of Liberal Arts and the College of Education and Human Services), but is open to any interested students. Students will acquire an understanding of the basic analytical, writing, and research skills specific

to the historical profession and general to the social sciences and the humanities. Course material fee: \$49.

101L-1 to 3 Foundations of Inquiry in the Liberal Arts. Course provides a survey of various fields of study that comprise the liberal arts. The course is oriented for students in their first year of university life, and supports the transition to a research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors that are required for academic and personal success. Students will develop these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career pathways found among the social sciences, arts, and humanities.

101M-1 to 3 Foundations of Inquiry: Introduction to Mass Communication and Media Arts. This First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines offered in the College of Mass Communication and Media Arts.

101N-1 to 3 Foundations of Inquiry: Non-Traditional and Military. The First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines at SIU. This class focuses on concerns of Non-traditional and Military (Active, Guard, Reserve, Veterans) students, but it is open to any interested students.

101O-1 to 3 Foundations of Inquiry in Anthropology. This First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks found among the social sciences, arts, and humanities. The specific content of this section of UCOL 101 adds an anthropological perspective to the topics discussed. [Modifies SFY 101D].

101P-1 to 3 Foundations of Inquiry: Careers in Psychology. This First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with psychology. This is a required course for psychology majors but is open to any interested student.

101R-1 to 3 Foundations of Inquiry: Communication Studies. This student success course supports the transition of

first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. As students acquire these capabilities they will be introduced to the foundations of inquiry—those interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines of a particular college at SIU. Specific to Communication Studies, this course will provide a rich foundation for developing essential personal, academic, and professional communication skills. These skills will be explored in relation to everyday interactions, education, networking and mentoring relationships, the workplace, social media, cultural awareness, and civic engagement. \$49 fee will cover access to Pearson's MyStudentSuccessLabPlus and a bundled etext that students can use as part of SIU's tablet initiative that begins Fall 2013.

101S-1 to 3 Foundations of Inquiry: Introduction to Scientific Research. This seminar-style course is designed to promote an understanding of the value and expectations of higher education and to explore the resources available to science majors. Students will learn study skills, time management, and explore strategies for success in classes. The nature and process of scientific investigation will be presented by SIUC and regional scientists who solved local and global problems and contribute to the science knowledge-base. Students will be exposed to the excitement of inquiry-based discovery and will explore the methods by which practicing scientists guide their work. Classroom activities will enhance communication skills and assist students in networking and integrating into the scientific community at SIUC.

101T-1 to 3 Foundations of Inquiry in Aviation Technologies. This First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with a major in Aviation Technologies.

101U-1 to 3 Foundations of Inquiry for Pre-Majors. This First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines offered at SIUC. Sections will be limited to approximately 25 students each. [Modification of UNIV 101]. \$49 fee will cover access to Pearson's MyStudentSuccessLabPlus and a bundled etext that students can use as part of SIU's tablet initiative that begins Fall 2013.

101UN-1 to 3 Foundations of Inquiry into College and Career. This course provides a basis for students to explore interests, abilities, skill-sets and the correlation between a major and career. Student will gain exposure to major and career topics through targeted inventories, assignments and guest speakers. The course is oriented for students in their first year of university life, and supports the transition to a research uni-

versity. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors that are required for academic and personal success. Students will develop these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career pathways.

101V-1 to 3 Foundations of Inquiry: Political Science.

This course provides a survey of various fields of study that comprise the liberal arts. The course is oriented for students in their first year of university life, and supports the transition to a research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors that are required for academic and personal success. Students will develop these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career pathways found among the social sciences, arts, and humanities. Seminars presented by distinguished speakers on careers and topics of particular interest to Political Science majors. Open to students in any major.

101W-1 to 3 Foundations of Inquiry: Gender and Sexuality in Higher Education.

The First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with the interdisciplinary subject of gender and sexuality studies. Course material fee: \$49.

101X-1 to 3 Foundations of Inquiry: Introduction to Information Assurance and Cybersecurity.

The First-Year Seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines at SIU. Students will be exposed to concepts and terminology relating to computer security. Additional topics will include methods for identifying and avoiding common online security threats. Course material fee: \$49.

101Y-1 to 3 Foundations of Inquiry: Black Men's Initiative.

This first-year seminar supports the transition of first-year students as they enter our research university. Upon completion of this course, students will be able to demonstrate the knowledge, skills, and behaviors critical for academic and personal success. Students will acquire these capabilities as they are introduced to the foundations of inquiry—the interests, assumptions, methodologies, and potential academic and career tracks associated with the disciplines offered at SIU. The particular focus of this course is on the black male experience. Through studying African American role models, students will investigate the triumphs, struggles, and complexities of the black male experience. Students will also learn how media and cultural representations affect expectations of academic success for black males. Enrollment in this course is open to all

students. \$49 fee will cover access to Pearson's MyStudentSuccessLabPlus and a bundled etext that students can use as part of SIU's tablet initiative that begins Fall 2013.

101Z-1 to 3 Foundations of Inquiry: Aviation Management and Flight.

The First-Year Seminar supports the transition of first-year students as they enter our research university. Students will demonstrate the knowledge, skills and behaviors critical for academic and personal success; acquiring these capabilities as they are introduced to the foundations of inquiry. Successful completion of UCOL 101Z will fulfill the University Core Curriculum requirements for Area 1-Inquiry for Aviation Management and Flight students.

102-1 Strategies for Success Seminar.

This course facilitates the reentry into the University of students who have been academically suspended. It provides assistance and support in pursuing their academic degrees, focusing on the acquisition of knowledge, attitudes and skills associated with successful academic performance, career and personal development. Restricted to Pre-Majors in their first semester following suspension. [Replaces UNIV 102]

103-2 Learning and Metacognitive Strategies.

This skills-based course encourages students to apply learning and metacognitive strategies to their academic pursuits. Topics include: approaches to learning, test preparation, academic goal setting, self-regulated behavior, developing an academic self-concept, becoming part of a scholarly community, active versus passive learning, and developing habits of mind for success. Restricted to students who have completed or who are exempt from UCOL 101. Academic advisor approval required.

251-1 Leadership in Peer Academic Support.

This course is open to SIU students who want to learn how to be an effective tutor. The course includes topics required by the College Reading and Learning Association's International Tutor Training Certificate Program: tutoring guidelines and responsibilities; ethics; academic honesty; planning the study session; opening and closing the study session; interpersonal dynamics of the tutoring relationship.

University Honors Program

Courses (UHON)

111-3 Honors Colloquium. Open to underclass members of the University Honors Program. Special approval needed from the Director.

150-3 to 6 Disciplinary Honors I. For University Honors Program members only. Courses for which the student contracts for Honors credit. Prior written departmental approval required. May be repeated, up to a maximum of six credit hours.

250-3 to 9 Disciplinary Honors II. For University Honors Program Members only. Courses for which the student contracts for Honors Credit. Prior written departmental approval required. May be repeated, up to a maximum of nine credit hours.

350-3 to 9 Disciplinary Honors III. For University Honors Program Members only. Courses for which the student contracts for Honors Credit. Prior written departmental approval required. May be repeated, up to a maximum of nine credit hours.

351F-3 to 9 (3 per topic-repeatable for credit) Honors Seminar in Fine Arts. For University Honors Program Members only. Topics vary and will be announced by the University Honors Program each time the course is offered. These seminars may be used to satisfy the University Core Curriculum requirement for disciplinary studies in fine arts.

351I-3 to 9 (3 per topic-repeatable for credit) Honors Seminar in Interdisciplinary Studies. For University Honors Program Members only. Topics vary and will be announced by the University Honors Program each time the course is offered. These seminars may be used to satisfy the University Core Curriculum requirement for interdisciplinary studies.

351L-3 to 9 (3 per topic-repeatable for credit) Honors Seminar in Human Health. For University Honors Program Members only. Topics vary and will be announced by the University Honors Program each time the course is offered. These seminars may be used to satisfy the University Core Curriculum requirement for disciplinary studies in human health.

351M-3 to 9 (3 per topic-repeatable for credit) Honors Seminar in Multicultural Diversity in the United States. For University Honors Program Members only. Topics vary and will be announced by the University Honors Program each time the course is offered. These seminars may be used to satisfy the University Core Curriculum requirement for Integrative Studies in Multicultural Diversity in the United States.

351O-3 to 9 (3 per topic-repeatable for credit) Honors Seminar in Social Science. For University Honors Program Members only. Topics vary and will be announced by the University Honors Program each time the course is offered. These seminars may be used to satisfy the University Core Curriculum requirement for disciplinary studies in social science.

351S-3 to 9 (3 per topic-repeatable for credit) Honors Seminar in Science. For University Honors Program Members only. Topics vary and will be announced by the University Honors Program each time the course is offered. These seminars may be used to satisfy the University Core Curriculum requirement for disciplinary studies in science.

351U-3 to 9 (3 per topic-repeatable for credit) Honors Seminar in Humanities. For University Honors Program Members only. Topics vary and will be announced by the University Honors Program each time the course is offered. These seminars may be used to satisfy the University Core Curriculum requirement for disciplinary studies in humanities.

388-1 to 15 Honors International Experience. Credit toward fulfilling requirements for the Honors Diploma or Honors Certificate for study at either accredited foreign institutions or approved international study or service programs. Final determination of credit is based on student's completion of assigned work. One to fifteen hours per semester, one to nine hours for summer, maximum of 21. Student must not be receiving credit through another academic department. Requirements: special approval by Study Abroad Programs, and the Director of the UHP. Course may be pass/fail at the discretion of the Honors Program. Students must complete LAC 288-Study Abroad Orientation prior to departure.

399-1 to 15 Honors Independent Study. Preparation of a paper or comparable project under supervision of a faculty member in the appropriate discipline or director of the University Honors Program. Special approval needed from the Director.

450-3 to 9 Disciplinary Honors IV. For University Honors Program Members only. Courses for which the student contracts for Honors credit. Prior written departmental approval required. May be repeated, up to a maximum of nine credit hours.

499-3 to 9 Undergraduate Honors Thesis. Preparation of Honors thesis or comparable project under supervision of a committee consisting of one or more faculty members in appropriate disciplines and director of University Honors Program. Not for graduate credit. Special approval needed from the director of University Honors Program.

University Studies (Program)

University Studies allows students to design an interdisciplinary program of study leading to a Bachelor of Science or Bachelor of Arts degree. The Bachelor of Arts degree requires one full year of college-level foreign language, while the Bachelor of Science degree does not. Students must successfully complete 2 courses providing a global or comparative perspective on the world (see section A of the Global Studies minor for complete listing of courses). Students must also take one course in English composition in addition to the University Core Curriculum composition requirement and one writing intensive course designated by a College of Liberal Arts department as fulfilling the Writing-Across-the-Curriculum requirement.

University Studies imposes few specific requirements for the degree other than those that are University-wide baccalaureate requirements. It is nonetheless essential that students are in good academic standing when entering the program, and maintain a grade point average of 2.0 or higher for all subsequent course work.

Bachelor of Arts Degree in University Studies³

<i>University Core Curriculum Requirements</i>	41
<i>Requirements for University Studies</i>	79 ¹
Foreign language	6
English Composition (3rd course)	3
Writing Intensive course	3
300-400 level coursework	42
Other courses approved by the chief academic advisor in the College of Liberal Arts.....	25
<i>Total</i>	120

Bachelor of Science Degree in University Studies³

<i>University Core Curriculum Requirements</i>	41
<i>Requirements for University Studies</i>	79 ¹
English Composition (3rd course)	3
Writing intensive course	3
300-400 level coursework	42 ²
Other courses approved by the chief academic advisor in the College of Liberal Arts	31
<i>Total</i>	120

¹Two limitations are placed on course distribution:

- Students may take no more than 40 semester hours excluding courses used to satisfy University Core Curriculum requirements in any College, except for the College of Liberal Arts where they may take up to 54 hours (but no more than 27 semester hours in the social sciences, humanities, or fine and performing arts);
- Students may take no more than 20 semester hours excluding courses used to satisfy University Core Curriculum requirements, in a department or in a School within a College.

²Upper Division coursework for the University Studies degree counts towards the University's Senior Institution hours requirement of 42 hours at the 300-400 level.

³Cannot be earned in conjunction with any other Bachelor's degree.

Urban Forestry

(SEE FORESTRY)

Watershed Management

(SEE FORESTRY)

Wilderness Recreation

(SEE RECREATION)

Women, Gender and Sexuality Studies (Minor)

Women, Gender and Sexuality Studies (WGSS), an interdisciplinary and transnational field of inquiry, explores the intersections of gender, sex, sexuality, race, class, nation, religion, and ability, and how these intersecting identities influence individuals' experiences, achievements, and positions in society. The WGSS program offers a critical cultural approach in its examination of all genders and sexualities through lenses of contemporary feminist and queer theories. Scholarship in Women, Gender and Sexuality Studies is found in virtually every branch of academics, including the humanities, social sciences, sciences, education, and the arts. WGSS is a strong interdisciplinary program where students from every academic college on the SIUC campus can pursue their interests in issues regarding women, gender, sexuality and/or feminisms, and also discover the relevance of Women, Gender and Sexuality Studies to their own lives and their own fields of study.

A minor in Women, Gender and Sexuality Studies offers an interdisciplinary complement to any undergraduate degree program. It is an appropriate minor for students planning graduate or professional studies. The minor also offers an emphasis in Sexual Diversity Studies. It is designed to enrich and extend a student's major field by enhancing awareness of the issues and theories associated with the study of gender, race, sexuality and social class. Students who wish to minor in WGSS take 18 semester hours of credit. Students must officially declare their minor to both their advisor and the Director of Women, Gender and Sexuality Studies.

Women, Gender and Sexuality Studies Minor

Minors must be approved by the Director of Women, Gender and Sexuality Studies in order to assist students in developing a coherent program that meets their individual interests. The minor requires 18 semester hours of credit, 15 of which must be in Women, Gender and Sexuality Studies courses, while the remaining 3 hours may be selected from a special interest or related course - for example, from Africana Studies. Schedules of classes contain listings of relevant courses. The minor must include WGSS 201, 300 and 495. Elective courses should be taken from at least two different cross-listing departments. Students must discuss and plan their minors with the director of Women, Gender and Sexuality Studies or with a faculty member who

teaches Women, Gender and Sexuality Studies courses.

Minors in Women, Gender and Sexuality Studies may elect an emphasis in Sexual Diversity Studies. This emphasis requires 18 semester hours of credit, which must include WGSS 201, 203, and 496. Students who choose this emphasis must plan their minor in consultation with the Director of Women, Gender and Sexuality Studies or with a faculty member who teaches Sexual Diversity courses.

Courses (WGSS)

200-3 Women in French and Francophone Literatures. (University Core Curriculum) (Same as FR 200) This course offers a study of the representation of women in 20th century French and Francophone literatures. The class will study female characters as they are represented in novels, short stories and essays of contemporary French and Francophone writers, and will analyze the development of women as characters from a psychological, sociological, and literary point of view. All readings and lectures are in English.

201-3 Multicultural Perspectives on Women, Gender and Sexuality. (University Core Curriculum) This interdisciplinary and multicultural survey course covers important issues of women, gender and sexuality studies in the United States. Topics include language, media, education, family, labor, politics, literature and the arts. Within each topic, issues of race, class, ability, and other intersecting aspects of identity are also addressed.

203-3 Introduction to Sexual Diversity Studies. An interdisciplinary examination of sexual diversity, including discussion of major concepts and theories of sexual identity and sexual politics, application in various disciplines, and intersections with race, class, and ability.

220-3 Gender Around the World. (Same as ANTH 221) This course is designed to introduce students to the variety of gender relations in different cultures around the world. Through reading about a number of different world areas, students will be introduced to questions of differing notions of what makes "men", "women" and other possible gender categories, to issues of different power relations, to cultural constructions of sexuality, and to the relationship of gender to everyday life.

223-3 Women and Men in Contemporary Society. (University Core Curriculum) [IAI Course: S7 904D] (Same as SOC 223) Examines theories of women and men's roles in society. Surveys contemporary gender inequalities in the U.S. and developing countries. Special attention given to employment, race, sexual assault, feminist movements, alternative family/lifestyles and childrearing.

225-3 Women in Literature. (Advanced University Core Curriculum course) (Same as ENGL 225) [IAI Course: H3 911D] Examines the ways in which women are portrayed in literature, especially in twentieth-century novels, drama, short fiction, and poetry written by women. Prerequisite: English 102 or English 120. Satisfies University Core Curriculum Multicultural requirement in lieu of ENGL 205.

233-3 Psychology of Gender in Diverse Context. (Same as PSYC 233) (University Core Curriculum) The course examines how gender affects all aspects of our lives at the individual, societal and cultural levels. It will cover psychological theories

and topics related to gender, and will examine issues of diversity, such as race/ethnicity, class, sexuality, disability and age as they interact with gender.

286-3 Intimate Relationships and Family Development. (Same as CI 227) [IAI Course: S7 902] This course will explore topics related to intimate relationships, including attraction, communication, dating, cohabitation, marriage and conflict. Study of changing patterns in family living throughout the family life cycle and the dynamic relationships within families. Students will critically evaluate current theory and research concerning the elements of family relationships.

298-3 Multicultural Applied Experience Option. (University Core Curriculum) An applied experience, service-oriented credit in American diversity involving interaction with those exemplifying life experiences centering on women's issues, organizations, services, etc. Students should consult the Women, Gender and Sexuality Studies Program staff to discuss placement options and supervision. Special approval needed from the Women, Gender and Sexuality Studies Director. Not for graduate credit.

300-3 Feminist Theories. This course is an introduction to feminist social and political theory. The course covers the definition of feminism and feminist theory, the development of multiple perspectives within social and historical contexts, and major debates within feminism. Prerequisite: WGSS 201 or consent of the instructor

301I-3 Women in Science, Engineering and Technology. (University Core Curriculum) This course will explore the historical contributions of women and challenges they faced as they entered educational programs and careers in various fields of engineering, science and technology. The course will also consider the current status of women in these fields.

307I-3 Women in the Visual Arts: Social and Educational Contexts. (Same as AD 307I) (University Core Curriculum) This interdisciplinary course examines women's lives as artists, visual representations of women, and issues of gender distinction in the history of Western art from the medieval period to the present. From perspectives that include social history and cultural anthropology as well as both traditional and feminist art history, the course considers the ways in which the experiences of women and opportunities available to them have historically differed from those of men. The course examines how such differences have affected the emphases, subject matter, and traditions of women's art as well as the ways in which women have been represented.

314-3 Love, Sex, Gender and Philosophy. (Same as PHIL 314) A survey of philosophical approaches to love, sex, and gender. A philosophical inquiry into the representation of love, sex, and gender, including materials that combine text, words, and images. The course studies an ancient philosophy text on love, a classical text of twentieth-century feminist philosophy, and critiques of feminism that draw on the life of gender, sexuality, and race. It questions the nature and possibilities of love.

315-3 Global Perspectives on Sexual Diversity. (Same as SOC 307) This course explores sexual diversity within different hegemonic heterosexual cultures, worldwide. Using insight from historical and sociological analysis, the contemporary development of social movements for lesbians, gays, and bisexuals and their oppositional forces is analyzed, and consequent

cultural changes that have resulted from the confrontation of these forces are examined.

320I-3 Language, Gender and Power. (University Core Curriculum) (Same as LING 320I) This course looks at language practices and men and women from different cultures in terms of how speech reflects and shapes their social identities. Perspectives from the fields of communication studies, linguistics, anthropology, psychology, and sociology will be used.

321-3 Reproduction and Sexuality. (Same as PHSL 320) Comprehensive course examining the physiological basis of mammalian reproduction and the behavioral aspects of sexuality. Human sexuality and reproductive function is the primary focus. Topics include hormonal control, anatomy, ovulation, sexual response and behavior, fertilization, pregnancy and parturition. Human specific topics include reproductive medicine, STDs, paraphilias, birth control and infertility. Prerequisite: BIOL 200A.

341-3 Psychology of Women. (Same as PSYC 333) An examination of empirical evidence on the biological, psychological, and social functioning of women, describing women's roles, the genetic versus social determinants of women's behavior, and the implications for women's potential. Prerequisite: PSYC 102 or consent of instructor.

348-3 Women in Western Society: 1600 to Present. (Same as HIST 324) The legal, social, economic and political positions of women in Western society during the past 350 years are examined against the backdrop of industrialization, political democratization, world wars totalitarianism. Emphasis is on women in England, France and the United States.

356-3 US Women's History. (Same as HIST 356) This course will survey the role of women in US history from colonial times to the present. Students will be introduced to contributions made by women to US society, politics, and cultures.

357-3 Women and Work in the United States. (Same as HIST 357) An introduction to the diversity of women's experiences as workers in the home, the household economy, and the labor market segregated by race, ethnicity and gender.

360-3 American Rural History. (Same as HIST 360) An examination of America's rural history from the 17th to the 20th century, focusing especially on social and economic relationships and attitudes, the role of ethnicity and gender, environmental and technological issues, agrarian radicalism, and governmental activities.

396-3 Special Topics in Sexual Diversity Studies. Consideration of a topic of interest in sexual diversity studies not offered through regular course listings.

401-3 Contemporary Feminisms in Global Contexts. This course discusses theories and practices of third wave feminism from a national and global perspective. We will discuss ways third wave feminism is being talked about and understood by others and ourselves. The selected readings offer a range of voices and articulation of third wave feminism including United States, post-colonial, transnational, queer, multicultural, theoretical, and practical. The course is heavy on reading. By the end of this course students should be able to express their understanding of third wave feminism.

403-3 Masculinity in the United States. This course is a readings-based seminar covering concepts of masculinity in the United States. The readings cover cultural as well as identity

elements of what being a “man” means (and how that definition has changed over time and contexts), historical as well as contemporary understandings of masculinity.

406A-3 Gender, Family and Sexuality in Pre-Modern Europe. (Same as HIST 406A) A discussion of the history of the family, creation of gender roles and importance of sexuality from medieval times to the French Revolution.

406B-3 Gender, Family and Sexuality in Modern Europe. (Same as HIST 406B) From the French Revolution. A discussion of the history of family, creation of gender roles, and importance of sexuality from the French Revolution to the present. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement.

410-3 Transcending Gender. (Same as ANTH 410L) How do humans become male and female in different societies? Can men become women and women become men? What other gender possibilities exist? Is male dominance universal? What are the sources of male and female power and resistance? Do women have a separate culture? What are the relationships between gender, militarism and war? These and other questions will be examined in cross-cultural perspective. Prerequisite: ANTH 240D or ANTH 500D.

411-3 Human Sexuality. (Same as HED 410) Provides detailed information on dimensions of sexuality; characteristics of healthy sexuality; anatomy and physiology; gender roles; relationships; sexually transmitted infections/diseases; contraceptive issues and concerns; sexual victimizations; and sexuality through the life cycle.

415-6 (3,3) Topics in Gender, Sexuality, and Communication. (Same as CMST 415) An exploration of advanced theories and research in gender and sexuality from communication perspectives. Course may be repeated when topics vary. Special approval needed from the instructor.

416-3 Black Feminist Thought as Theory and Praxis. (Same as AFR 416, CMST 416) Explore the roots, contemporary manifestations, and current embodiments of black feminist thought. Explore the works of black women to engage in critical thinking and thoughtful dialogue that positions the valuable knowledge, experiences and perspectives of women of color at the center of inquiry while simultaneously discovering spaces for multicultural alliances. Prerequisite: CMST 301I or 341 or consent of instructor.

426-3 Gender, Culture and Language. (Same as ANTH 426 and LING 426) This course is designed for students who have had some exposure to gender studies. It will focus on readings in language and gender in the fields of anthropological and sociolinguistics. Issues to be addressed are the differences between language use by men/boys and women/girls, how these differences are embedded in other cultural practices, and the various methodologies and theories that have been used to study gendered communication.

437-3 Lesbian and Gay History in the Modern United States. (Same as HIST 437) This course explores the social, political, and cultural history of lesbians, gay men, and other sexual and gender minorities in the United States from the turn of the twentieth century to the present. Themes to be taken up in the class include: the emergence of heterosexuality and homosexuality as distinct categories of identity; the intersection between sexual identity and identities of race, class, gender, and ethnicity; the relationship between homosexuality and trans-

genderism; the movement for gay liberation; the creation of lesbian and gay urban and rural subcultures; representations of homosexuality in popular culture; anti-gay backlash; and AIDS.

438-3 Women and the Law. (Same as POLS 438 and WGSS 538) The course is an advanced seminar in public law with a focus on gender, law and society. The course will engage with issues in feminist legal practice and the development of legal theories regarding gender. We will interrogate the relationship between theory and practice and the ways in which feminist jurisprudence has taken shape in the dynamics of this relationship. POLS 114 and 230 recommended.

440-3 Queer Visual Culture. (Same as CP 469) Course discusses aspects of the aesthetics, history, theory and politics of media representations of gender and sexuality. Cultural texts from one or a combination of media forms, genres, historical periods, and platforms will inform the historical and theoretical consideration of media representations of gender and sexual variation with a special interest on their bearings upon the present moment. May be repeated if topics vary.

442-3 Sociology of Gender. (Same as SOC 423) Examines social science theory and research on gender issues and contemporary roles of men and women. The impact of gender on social life is examined on the micro level, in work and family roles, in social institutions, and at the global, cross-cultural level.

446-3 Gender and Global Politics. (Same as POLS 456) An advance course examining gender systems and women’s situations across cultures and countries. This course also studies the impact globalization has had on gender issues by looking at women’s activism at international and transnational levels. Topics covered include women’s political representation, gender and culture, women’s social movements, gender and development, and gendered policy issues.

448-3 Gender and Family in Modern US History. (Same as HIST 448) This course explores the history of gender and the family in the United States from the late 19th century to the present. Themes to be explored include: the family and the state, motherhood, race and family life, and the role of the “family” in national politics.

449-3 Advanced Human Sexuality. (Same as PHSL 450) Advanced, comprehensive course intended to supplement and expand the critical examination of topics covered in PHSL 320, Reproduction and Sexuality. The objectives of this class are to examine the physiological and behavioral basis of human reproduction and sexuality. Examining how humans reproduce from a physiological perspective including all aberrations and clinically relevant dysfunctions, as well as, the spectrum of human sexual behaviors including typical and atypical sexual behavior, paraphilias and diversity of human relationships. Prerequisite: PHSL 320.

450A-3 Women in Music. (Same as MUS 450A) Explores the creative contributions of women in music, examining women’s participation across a range of genres, cultural/geographic areas, and time periods. Restricted to junior/senior/graduate music major or consent of instructor.

452A-3 Traditions of Uppity Women’s Blues. (Same as AFR 452A and MUS 452A) Examines the tradition of “uppity” women’s blues from the so-called “classic” blues singers of the 19th century (Gertrude “Ma” Rainey, Bessie Smith, Ida Cox, etc.) to the contemporary blues of Saffire, Denise LaSalle and others.

Explores ways blues women challenge conventions of gender and sexuality, racism, sexism, classism and homophobia. Restricted to junior/senior/graduate music major or consent of instructor.

456A-3 Feminist Philosophy. (Same as PHIL 446A) A general survey of feminist theory and philosophical perspectives.

456B-3 Special Topics in Feminist Philosophy. (Same as PHIL 446B) A special area in feminist philosophy explored in depth, such as Feminist Ethics, French Feminism, Feminist Philosophy of Science, etc.

456C-3 Women Philosophers. (Same as PHIL 446C) Explores the work of one or more specific women philosophers, for example Hannah Arendt, Simone DeBeauvoir, etc.

464-3 Audio Documentary & Diversity. (Same as RTD 464) The purpose of this course is the creation of short and long form documentaries by students, regardless of production background. It will introduce students to basic production techniques and diversity considerations during the making of a documentary. This course uses qualitative methods to investigate an issue or document an event, with an emphasis on observation and interview techniques. Topics will explore the role of gender, race, ethnicity and class during the planning, gathering and production stages of the documentary. Course open to non-majors.

465-3 History of Sexuality in America. (Same as HIST 465) Comprehensive survey of sexuality from colonial times to the present. Examines social trends, politics, and cultural debates over various forms of sexuality. Students will engage in discussion, research, and writing.

470-3 College Student Sexuality. (Same as EAHE 470) Seminar designed to provide students with a strong grounding in the field of college student sexuality and sexual identity, covering the lived experiences of U.S. college students, the construction of sexualized collegiate identities through U.S. history, and how institutions of higher education have attempted to regulate, control, and (intentionally as well as inadvertently) effect college student sexuality.

475-3 College Student Masculinities. A readings-based seminar covering theories and concepts of masculinity as demonstrated by collegiate men in the United States. The readings in this course cover cultural as well as identity elements of what being a "college man" means (and how that definition has changed over time and contexts). The readings cover historical, theoretical and empirical research on collegiate men and masculinity. Prerequisite: WGSS 403 or consent of the instructor.

476-3 Women, Crime and Justice. (Same as CCJ 460 or SOC 461) A study of women as offenders, as victims and as workers in the criminal justice system.

489-3 Women, State and Religion in the Middle East. (Same as HIST 489) Following an introduction to the question of women in Islamic law and Islamic History, this course will examine the changing status and experiences of women in a number of Middle Eastern countries in the 20th century, focusing on Egypt, Iran, and Turkey. Major themes will include legal, social and political rights, participation in social and economic life, cultural and literary production, and recent secular and Islamist women's movements.

490-1 to 6 Readings. Supervised readings in selected content areas of Women, Gender and Sexuality Studies. Special approval needed from the instructor and Director of Women, Gender and Sexuality Studies.

491-1 to 6 Special Topics. Concentration on a topic of interest not offered through the regular course listings.

492-3 Women and Religion. This course will heighten and strengthen student's awareness of the roles and responsibilities of women as outlined in the sacred writings and scriptures of various world religions and as carried out in various cultures around the world.

493-2 to 6 Individual Research. Exploration of a research project under the supervision of a faculty member having graduate faculty status. The project must result in a written research report, which is filed with the Director of Women, Gender and Sexuality Studies. Restricted to senior standing. Special approval needed from the instructor and Director of Women, Gender and Sexuality Studies.

494-1 to 6 Practicum. Supervised practical experience in situations centering on women's issues, organizations, services, etc. The setting may be in one's own field of study or in general content areas recognized in the women's studies program. Special approval needed from the instructor and Director of Women, Gender and Sexuality Studies.

495-3 to 6 Women, Gender & Sexuality Studies Student Seminar. A synthesizing experience for individuals minoring or interested in women, gender and sexuality studies. Topics will differ each semester.

496-3 Advanced Special Topics in Sexual Diversity Studies. Advanced consideration of a topic of interest in sexual diversity studies not offered through regular course listings.

497-3 Independent Study in Sexual Diversity. Supervised readings in selected content areas in sexual diversity studies. This is a capstone, synthesizing experience for students in sexual diversity studies. Prerequisites: WGSS 201, 203. Special approval needed from the instructor.

Workforce Education and Development

(Department, Major [Workforce Education and Development], Minor, Courses, Faculty)

The Department of Workforce Education and Development offers a major in Workforce Education and Development with specializations in: **(a)** Career and Technical Education; and **(b)** Organizational Training and Development. Graduates with a degree in Workforce Education and Development under the Career and Technical Education specialization are prepared for teaching positions in public secondary career/technical education programs. Students may complete teacher licensure programs in the following areas: Business, Marketing, and Computer Education; Family and Consumer Sciences; Health Careers; Technology Education-Capstone; or Technology Education/Automotive Technology Dual Degree. A grade of *C* or better is required in all teacher education coursework. Eligible teacher candidates may elect to apply for Capstone. Graduates with the degree under the Organizational Training and Development specialization are prepared for such positions as instruction and learning (training) specialist, training curriculum developer/instructional systems designer, human resource specialist, or internal auditor/training evaluator in private sector training departments. Program areas of emphasis are

offered within each specialization. On approval of the department, students may complete a minor in WED major within the Organizational Training and Development specialization. A grade of C or better is required in all WED prefix courses. Eligible students may elect to apply for Capstone.

Bachelor of Science Degree in Workforce Education and Development, College of Education and Human Services

<i>University Core Curriculum Requirements</i>	41
To include MATH 101 or 108; PSYC 102; EDUC 311; 314 Family and Consumer Sciences also requires: CHEM 106 or 140A and HND 101	
<i>Requirements for Major in Workforce Education and Development</i>	49
<i>Specialization Requirements</i> ² (see below)	30
Total	120

¹Capstone = 30; UCC = 41.

²Teacher candidates choosing the health career option in the Career and Technical Education specialization must: (1) have an Associates Degree in Nursing; (2) qualify for admission to Capstone; and (3) complete the core requirement and 57 semester hours beyond the 60 semester hours earned in the Associates degree. Teacher candidates choosing the technology education option in the Career and Technical Education specialization must: (1) have an Associate of Applied Science Degree; (2) qualify for admission to Capstone; and (3) complete the core requirements and 57 semester hours beyond the 60 semester hours earned in the Associates degree. For those teacher candidates intending to receive state teacher licensure, additional courses may be required. Career and Technical Education Specialization teacher candidates selecting this specialization will complete teacher licensure requirements as identified by the ISBE Division of Educator Licensure for their selected career and technical education (6-12 Secondary License) option.

BUSINESS, MARKETING AND COMPUTER EDUCATION OPTION

ACCT 220; 230 or 240	6
ECON 240; 241.....	6
FIN 270 or 280.....	3
MGMT/ACCT/FIN 208.....	3
WED 427 OR MKTG 305	3
MGMT 304	3
MATH 139	3
WED 404, 405, 407, 413, 416A, 416B, 466, 472, 473	27
(For Business Computer Programming certification, an additional 6 hours of pre-approved courses in computer programming or systems analysis is required)	
<i>Professional Education Requirements</i>	24
Additional Education Requirement: CI 360	3
Total	81

Business, Marketing and Computer Education Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101,102.....	3	3
MATH 108, CMST 101	3	3
UCOL 101, Fine Arts	3	3
Human Health, Biology	2	3
PSYC 102, Humanities	3	3
WED 404	3	-
Total	17	15

SECOND YEAR	FALL	SPRING
Humanities.....	3	-
Physical Science, ECON 241	3	3
EDUC 314.....	3	-
WED 413, ECON 240	3	3
MATH 139, WED 466	3	3
EDUC 311 , ACCT 208/MGMT 208	3	3
ACCT 220	-	3
Total	18	15

THIRD YEAR	FALL	SPRING
ACCT 230	-	3
FIN 270/280, WED 427.....	3	3
MGMT 304, WED 473.....	3	3
WED 407	3	-
EDUC 313, 319.....	3	3
EDUC 301, 302.....	1	1
WED 472, 416B.....	3	3
Total	16	16

FOURTH YEAR	FALL	SPRING
CI 360, EDUC 401.....	3	12
WED 405.....	3	-
WED 416A	3	-
EDUC 308.....	3	-
EDUC 303.....	1	-
Total	13	12

FAMILY AND CONSUMER SCIENCES OPTION

CI 227, 237, 327, 337	12
FIN 200	3
MKTG 305	3
CHEM 106 or 140A	3-4
WED 413, 416C, 416D, 420, 427, 466, 472, 473	24
Additional hours of pre-approved courses required for licensure in designated areas of Fashion Design and Mer- chandising and/or Human Nutrition and Dietetics, Hospital- ity Tourism Administration and/or Living Environments... 9	
<i>Professional Education Requirements</i> or pre-approved career electives for Educational Services/Extension	27
<i>Major Requirements</i>	81-82
Total Requirements	122-123

Family Consumer Science Education Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101,102.....	3	3
MATH 101/108, CMST 101	3	3
UCOL 101, Fine Arts	3	3
HND 101, Biology	2	3
PSYC 102.....	3	-
Total	14	12

SECOND YEAR	FALL	SPRING
Humanities.....	3	-
CHEM 106/140A, FIN 200.....	3/4	3

EDUC 314.....	-	3
CI 227	-	3
WED 413, 466.....	3	3
EDUC 311, CI 237.....	3	3
FDM 111, 112	3	3

Total 15/16 18

THIRD YEAR	FALL	SPRING
WED 427, 416D.....	3	3
WED 472.....	3	-
EDUC 313, 319.....	3	3
EDUC 301, 302.....	1	1
CI 360, WED 473.....	3	3
MKTG 305, CI 337.....	3	3
FDM 241, HND 215	2	2

Total 18 15

FOURTH YEAR	FALL	SPRING
HND/HTA 360, EDUC 401.....	4	12
HND/HTA 206.....	1	-
WED 420.....	3	-
CI 327	3	-
EDUC 308	3	-
EDUC 303	1	-
WED 416C	3	-

Total 18 12

TECHNOLOGY EDUCATION CAPSTONE OPTION

Admission: Completion of the Associate of Applied Science Degree (minimum of 60 semester hours – 48 hours of technical courses plus 12 hours of transferred University Core Curriculum courses), credentialed through national or Illinois occupational/industry skills standards system in the industrial occupation that the teacher candidate will teach, and admitted to the Capstone Option.

WED 403 or 404 or 474	3
WED 413, 416F, 259, 460, 466	15
<i>Professional Education Requirements</i>	33
<i>Total</i>	51

Technology Education Suggested Curricular Guide

FIRST AND SECOND YEAR

Associate Degree Completion

THIRD YEAR	FALL	SPRING
WED 413, EDUC 314.....	3	3
WED 404, 466.....	3	3
EDUC 311, WED 460	3	3
EDUC 313, 319	3	3
EDUC 301, 302	1	1
WED 259.....	3	-

Total 16 13

FOURTH YEAR	FALL	SPRING
WED 416F, EDUC 401	3	12
EDUC 308	3	-

EDUC 303	1	-
CI 360	3	-
Electives	6	-

Total 16 12

HEALTH CAREERS OPTION

Admission: Completion of the Associate Degree in Nursing (minimum of 60 hours – 45 hours of technical nursing courses plus 15 hours of transferred University Core courses), licensed through the National Council Licensure Examination for Registered Nurses, and admitted to the Capstone Option.

WED 404, 407, 413, 416E, 460	15
<i>Professional Education Requirements</i>	30
<i>Electives</i>	17
Additional Education Requirement: CI 360	3
<i>Total</i>	65

Health Careers Suggested Curricular Guide

FIRST YEAR

Associate Degree Completion

SECOND YEAR

EDUC 311, 314	6
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THIRD YEAR	FALL	SPRING
WED 413, 407.....	3	3
WED 404, Elective	3	2
EDUC 313; 319	3	3
EDUC 301, WED 466	1	3
EDUC 302	-	1
Core Curriculum, WED 460	3	3
Core Curriculum	3	3

Total 16 18

FOURTH YEAR	FALL	SPRING
WED 416E, EDUC 401.....	3	12
EDUC 308	3	-
EDUC 303	1	-
CI 360	3	-
Core Curriculum	3	-
Core Curriculum	3	-

Total 16 12

Organizational Training and Development Specialization

The purpose of the Organizational Training and Development (OTD) specialization is to prepare people for training and development positions in corporate, apprenticeship, proprietary, government, military and volunteer organizations, as well as, community colleges and other post-secondary technical institutions. OTD students are prepared in the areas of *instruction and learning, training program development, administration, and supervision*. Also, the OTD specialization establishes a sound academic base for advanced study in the WED graduate concentration. OTD graduates are prepared as technical

instructors, occupational analysts, curriculum designers, curriculum writers, managers, supervisors, and related training and development positions.

The OTD specialization is comprised of “Regular” and “Capstone” options. Both options have *University Core, Professional Sequence, Occupational Training, and Work Experience* requirements. The semester hours posted for each area represent the minimum number of semester hours needed to complete the 120 semester hour requirement for graduation.

OTD Specialization

Professional Sequence: 30 semester hours (see example programs of study below)	30
Occupational Training courses: 34 semester hours minimum	34
Work experience: 15 semester hours minimum	15
Total	79

*The University Core requirements of the “Regular” and “Capstone” options differ. The “Regular” option requires students to complete 41 semester hours of University Core courses, whereas the “Capstone” Option requires only 30 semester hours. To offset the difference, the Capstone Option requires an additional 11 hours of occupational training credit. Both options require 120 semester hours for graduation.

**A student may chose an approved internship, WED coursework or a combination of internship and coursework to satisfy the six semester hour WED elective.

Organizational Training and Development Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101,102.....	3	3
MATH, CMST 101	3	3
Fine Arts, Humanities	3	3
Health, Biology.....	2-3	3
UCOL 101, Social Science	3	3
<i>Total</i>	14-15	15
SECOND YEAR	FALL	SPRING
Humanities, Social Science	3	3
Physical Science, WED 466	3	3
Multicultural, WED 474.....	3	3
WED 460, 486.....	3	3
Professional Electives	3	3
<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING
WED 462, 403.....	3	3
WED 463, 469.....	3	3
Professional Electives	3	3
Professional Electives	3	3
Professional Electives	3	3
<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
Professional Elective, WED 495/496.....	3	6
Professional Electives	3	3
Professional Electives	3	3
Professional Electives	3	3
Professional Electives	3	2
<i>Total</i>	15	17

Professional Electives	3	3
Professional Electives	3	2
<i>Total</i>	15	17

Human Resources Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101,102.....	3	3
MATH, CMST 101	3	3
Fine Arts, Humanities	3	3
Health, Biology.....	2-3	3
UCOL 101, Social Science	3	3
<i>Total</i>	14-15	15
SECOND YEAR	FALL	SPRING
Humanities, Social Science	3	3
Physical Science, WED 466	3	3
Multicultural, WED 467	3	3
WED 460, 486.....	3	3
Professional Electives	3	3
<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING
WED 302, 461.....	3	3
WED 463, 469.....	3	3
Professional Electives	3	3
Professional Electives	3	3
Professional Electives	3	3
<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
Professional Elective, WED 495/496.....	3	6
Professional Electives	3	3
Professional Electives	3	3
Professional Electives	3	3
Professional Electives	3	2
<i>Total</i>	15	17

Examples of Organizational Training and Development Programs of Study for Different Career Tracks

Instruction and Learning Specialist:

WED 381A,B-6	Training Proposal and Report Writing
WED 460-3	Occupational Analysis and Curriculum Development
WED 462-3	Instructional Methods and Materials
WED 463-3	Assessment of Learner Performance
WED 486-3	Adult Learning
WED 495 and/or 496	Instructional/Professional Internship

Curriculum Developer-Instructor Systems Designer:

WED 381A,B-6	Training Proposal and Report Writing
WED 403-3	Integrating and Managing Technology Applications for Workforce Education and Training
WED 460-3	Occupational Analysis and Curriculum Development
WED 461-3	Workforce Education Needs Assessment

WED 474-3 Preparing Instructional Materials
 WED 495
 and/or 496 Instructional/Professional Internship

Human Resources Specialist:

WED 302-3 Business Communications
 WED 381A,B-6 Training Proposal and Report Writing
 WED 460-3 Occupational Analysis and Curriculum Development
 WED 461-3 Workforce Education Needs Assessment
 WED 465-3 The Human Resource Specialist
 WED 467-3 Theory and Practice of HRD
 WED 469-3 Training Systems Management
 WED 495
 and/or 496 Instructional/Professional Internship

Evaluation and Quality Specialist:

WED 460-3 Occupational Analysis and Curriculum Development
 WED 461-3 Workforce Education Needs Assessment
 WED 463-3 Assessment of Learner Performance
 WED 470 Quality Systems Management in Education
 WED 495
 and/or 496 Instructional/Professional Internship
 EPSY 402-3 Basic Statistics
 IT 386-3 Total Quality
 IT 475-3 Quality Control
 IT 485-3 Quality Control II

Instructional Systems Design Specialist Certificate (Online)

The ISD Specialist certificate recognizes achievement of specific skill sets in the ADDIE model. This online certificate program is specifically designed for those non-degree seeking individuals needing or desiring documented evidence of competency in instructional system design theory and application for employment purposes. However, students will receive academic credit after the successful completion of each course, which may be applied toward the B.S. degree within the major of Workforce Education and Development. Completion of this program and receipt of the certificate will require students to successfully complete (grade of C or better) WED 460-3 Occupational Analysis and Curriculum Development; WED 461-3 Workforce Education Needs Assessment; WED 462-3 Instructional Methods and Materials; WED 463-3 Assessment of Learner Performance; WED 469-3 Training Systems Management; and, WED 486-3 Adult Learning.

Admission Requirements

Students must submit at least two years of documented, relevant, full-time work experience. Students can transfer up to 12 hours of completed college coursework, including specific math and English prerequisites, from an accredited institution. To earn the certification, students must complete a total of 30 hours of coursework.

Workforce Education and Development Minor

A minor in Workforce Education and Development consists of 20 hours. The student and advisor plan minors for Workforce Education and Development.

Courses (WED)

258-1 to 30 Work Experience. Credit granted for past work experience while employed in business, industry, labor, government service or military organizations. Credit determined by departmental evaluation. Prerequisite: Completion of 12 semester hours of WED courses with C or better.

259-1 to 60 Occupational Training. Credit is awarded for all formal training beyond high school that prepares an individual for entry-level employment in an occupation; non-transferable training received from “other than accredited educational institutions; that is, corporate, apprenticeship, proprietary, government, military or volunteer organizations or non-accredited post-secondary vocational-technical institutions.” Credit determined by departmental assessment of prior learning. Restriction: Completion of 12 semester hours of WED courses with C or better. This course does not qualify as SIUC Senior Institution credit.

302-3 Business Communications. Creating and managing written and oral administrative communications including the analysis, planning and practice of composing different types of internal and external communications in various administrative and business contexts. To successfully complete this course, a communication competency examination (additional fee required) must be passed with at least 70% accuracy prior to University course drop date. Prerequisite: ENGL 101 or equivalent.

327-3 Management of Family Resources. Emphasis of the resources used in Family and Consumer Sciences (clothing, food, housing, money, time and other resources related to daily needs of individuals and families) to enhance family well-being. Emphasis given to life skills reflected in needs of students.

358-1 to 30 Work Experience. Credit is awarded for work experience that demonstrates an individual’s increased value to the employer through promotion, in-service training, assumed supervisory and/or increased technical responsibilities and years of employment. The credit is awarded for documented (past) work experience. Credit determined by departmental assessment of prior work experience. Restriction: Completion of 12 semester hours of Workforce Education and Development courses with C or better. This course qualifies as SIUC Senior Institution credit.

359-1 to 60 Occupational Training. Credit is awarded for all formal training beyond high school provided by “other than accredited educational institutions, that is, corporate, apprenticeship proprietary, government, military or volunteer organizations or non-accredited proprietary vocational-technical schools.” The training offered by each of the organizations is recognized by an outside professional association(s) or accrediting body or bodies. WED 359 credit can be awarded for either pre-service or in-service training received by the student. Credit determined by departmental assessment of prior learning. Restriction: Completion of 12 semester hours of WED courses with C or better. This course qualifies for SIUC Senior institution credit.

381-3 Technical Communication. An introduction to the professional field of human resource development (HRD) with a focus on trends, issues, roles, and competencies. Content and activities are provided to assist students in planning and pre-

paring for a career in human resource development.

382-3 Developing Your Career. An introduction to the professional field of human resource development (HRD) with a focus on trends, issues, roles, and competencies. Content and activities are provided to assist students in planning and preparing for a career in human resource development (HRD).

395-1 to 30 Field Experience. Supervised work experience in a departmental approved position in business, industry, labor, government or military organizations for students in Workforce Education and Development. Clock hours/credit arranged by department coordinator.

398-1 to 3 Special Problems. Independent study for qualified students in Workforce Educational and Development. Special approval needed from the instructor.

403-3 Integrating and Managing Technology Applications for Workforce Education & Training. Design of workforce training applications integrating professional advanced features of computer software, communication technologies and multimedia features, including management of educational LAN systems. Restricted to WED majors or consent of department.

404-3 Technology Applications in Workforce Education and Training. Analyses of technology used and demonstration of skill level needed to train others in secondary/postsecondary education and business training environments on technological administrative processes, data management, and curriculum integration. Students will learn advanced computing concepts and applications using integrated software. Prerequisite: WED 403 or equivalent. Restricted to WED majors or consent of department.

405-3 Multimedia-based Instruction for Workforce Education. Acquisition of skills to produce multimedia "assets" (web page, audio/soundbytes) and application of instructional design techniques to computer-based instruction in workforce education. Impact of multimedia on workplaces and workforce training and utilization of course management systems to deliver instruction will be analyzed. Prerequisite: WED 404. Restricted to WED majors or consent of department.

407-3 Administrative Communications and Technology. Application of communication theory, human relations concepts, and information technology to workplace situations. The process of organizational information for productivity will be stressed. Students will acquire skills to make sound decisions of how to best communicate in work-based situations. Students will learn computerized procedures for communication. Prerequisite: WED 404 or equivalent. Restricted to WED majors or consent of department.

410-3 Issues in Business Training/Education. Study of current issues in business training and education related to history, current status and trends. Organization of instruction, instructional settings, relation to general education, integration and impact of technology, curriculum development/review and evaluation of business training/education impact in the workplace. Restricted to WED majors or consent of department.

413-3 Organizing and Directing Instruction in Secondary Career and Technical Programs. Techniques and procedures applicable to effective teaching including planning for instruction, instructional design technology and general teaching strategies for the secondary career and technical classroom.

This course will study pedagogy and utilize various techniques and technology to help students master the skills needed in their respective careers. Students will learn about and practice various teaching methods including demonstrations, cooperative learning, service learning, integration of academics and technology into the workplace-oriented class, project-based learning, and contextual learning. A laboratory section will be required. Limited to Workforce Education and Development students admitted to the teacher education program or one of the career and technical education alternative certification programs in workforce education. Restricted to WED majors or consent of department.

416A-3 Instructional Methods in Career and Technical Education. Specific methods, techniques and materials to deliver instruction in (a) Business-accounting, basic business, economics, personal finance, marketing, entrepreneurship. This course requires an additional laboratory meeting time. Prerequisite: WED 413 or WED 462. Restricted to WED majors or consent of department.

416B-3 Instructional Methods in Career and Technical Education. Specific methods, techniques and materials to deliver instruction in (b)-Business-business computer systems, information processing, keyboarding. This course requires an additional laboratory meeting time. Prerequisite: WED 413 or WED 462. Restricted to WED majors or consent of department.

416C-3 Instructional Methods in Career and Technical Education. Specific methods, techniques and materials to deliver instruction in (c) Family & Consumer Sciences-nutrition, wellness, and hospitality. This course requires an additional laboratory meeting time. Prerequisite: WED 413 or WED 462. Restricted to WED majors or consent of department.

416D-3 Instructional Methods in Career and Technical Education. Specific methods, techniques and materials to deliver instruction in (d) Family & Consumer Sciences-living environments, apparel, and textiles. This course requires an additional laboratory meeting time. Prerequisite: WED 413 or WED 462. Restricted to WED majors or consent of department.

416E-3 Instructional Methods in Career and Technical Education. Specific methods, techniques and materials to deliver instruction in (e) Health Careers. This course requires an additional laboratory meeting time. Prerequisite: WED 413 or WED 462. Restricted to WED majors or consent of department.

416F-3 Instructional Methods in Career and Technical Education. Specific methods, techniques and materials to deliver instruction in (f) Technology Education. This course requires an additional laboratory meeting time. Prerequisite: WED 413 or WED 462. Restricted to WED majors or consent of department.

420-3 Family and Consumer Sciences Profession. A social, psychological, and philosophical interpretation of family and consumer sciences in today's world. Examination of the profession's history, theory and foundation. Overview of career areas and identification of goals and competencies which serve as a basis for decisions to prepare for a wide variety of business, education, and human services-related careers.

426-3 Living Environment and Facility Planning. This course is designed to provide students with resources, activities, and experiences to learn and prepare to teach principles and elements of design as applied to interior design of resi-

dential, commercial, and public space environments including textiles, furnishings, and color. Emphasis is on creating a more knowledgeable consumer with focus on project-based implementation and recognition of design principles.

427-3 Resource Management and Consumer Economics for Work and Life. Focus on utilizing resources and consumer information to address the diverse needs and goals of individuals in areas such as resource management, home ownership, and financial literacy.

460-3 Occupational Analysis and Curriculum Development. System approach to curriculum development. Includes analyzing occupations, specifying objectives and developing curriculum. Restricted to WED majors or consent of department.

461-3 Workforce Education Needs Assessment. Overview of needs assessment and analysis procedures used in workforce education environments. Learners will design and develop needs assessment instruments, collect and diagnose data to identify those workplace performance issues requiring training solutions, and develop a formal report detailing needs assessment findings and training solution recommendations. Restricted to WED majors or consent of department.

462-3 Instructional Methods and Materials. Instructional methods in occupational training program. Restricted to WED majors or consent of department.

463-3 Assessment of Learner Performance. Development and use of evaluation instruments to assess student performance in training classrooms and laboratories. Criterion- and norm-referenced objectives, applications of taxonomies in development of written tests, performance tests and attitude measure. Restricted to WED majors or consent of department.

465-3 The Human Resource Specialist. This course provides an overview of the theoretical frameworks and practices related to human resource management and development. Examines the strategic alignment of human resource functions with organizational goals. Restricted to WED majors or consent of department.

466-3 Foundations of Workforce Education. Examination of the historical, social, economic and psychological foundations of workforce education. Nature and role of education and training in preparing people for the world of work. Restricted to WED majors or consent of department. Course material fee: \$126.

467-3 Theory and Practice of HRD. Students will examine different factors that influence, direct and shape the functions of human resource development (HRD) in organizations. Topics include models, theoretical foundations, and philosophical perspectives with HRD, an overview of the HRD functions within organizations, and the various roles HRD can play within organizations. Restricted to WED majors or consent of department.

468-3 Education/Labor Force Linkages. Attention given to the following areas: overcoming barriers to the linkage process; developing effective lines of communication; resource sharing; conducting joint problem solving with other agencies and individuals within the community; and jointly developing and providing programs and services. Restricted to WED majors or consent of department. Not for graduate credit.

469-3 Training Systems Management. Insight and understanding of administration and management of organizational

training. Principles and techniques of managing training organizations. Process of planning, organizing, marketing, programming, staffing, budgeting and evaluating a training organization. Restricted to WED majors or consent of department.

470-3 Trends and Issues in Quality Systems Management in Education. This course provides an overview of the economic basis of and trends and issues relevant to Quality Systems Management in Education. The course examines compliance models and criteria models for quality systems. Concentration will be on ISO 9000:2000 series model requirements with specific emphasis on internal audits, documentation, implementation and registration. Restricted to WED majors or consent of department.

472-3 Organizing Cooperative Education. Introduction to cooperative education including history, rationale, legislation, goals and objectives. Programming, public relations and evaluation of cooperative education. Introduction of student selection and management of cooperative education programs. Fulfills three semester hours of six required for State of Illinois certification. Restricted to WED majors or consent of department.

473-3 Coordinating Cooperative Education. Competencies required for coordination of cooperative education programs. Selection and maintenance of training stations, student placement, related instruction and program management. Fulfills the remaining three semester hours required for State of Illinois Certification. Restricted to WED majors or consent of department.

474-3 Preparing Instructional Materials. Preparation of instructional materials needed by a student to attain a learning objective. Includes writing and developing various types of instruction sheets, presentation guides, knowledge tests and demonstration, practice and performance evaluation materials. Prerequisite: WED 460 completed with a grade of C or better or consent of the instructor.

486-3 Adult Learning. Course focus is on adult development and learning principles. Adult learning styles and motivation to learn are discussed in the context of designing effective instructional strategies appropriate in various workforce education venues. Restricted to WED majors or consent of department.

490-1 to 4 Readings. Supervised reading for qualified students in Workforce Education and Development. Restricted to WED majors or consent of department. Special approval needed from the instructor.

491-1 to 5 Advanced Occupational Skills. Modern occupational practice in selected fields for experienced professionals seeking advanced techniques. Restricted to WED majors or consent of department. Special approval needed from the instructor.

494-1 to 4 Workshop. Current workforce education issues for teachers, supervisors, and administrators. Emphasis of each workshop will be identified in workshop announcements. Restricted to WED majors or consent of department.

495-3 to 12 Instructional Internship. Internship in approved education and/or training centers. Intern instructor will increasingly assume responsibilities for preparing, presenting and guiding occupational learning in workforce education and development. Not for graduate credit. Prerequisite: WED 462 and 12 semester hours in Workforce Education and Development. Restricted to WED majors or consent of department.

496-3 to 12 Professional Internship. Research, curriculum development or program management at approved education

training sites. The intern will follow the program of a supervising professional in regular and related activities. For students in Workforce Education and Development. Not for graduate credit. Prerequisite: 12 semester hours in Workforce Education and Development. Restricted to WED majors or consent of department. **497-1 to 6 Practicum.** Applications of work education skills and knowledge. Cooperative arrangements with corporations and professional agencies to study under specialist. Prerequisite: twenty hours in specialty. Restricted to WED majors or consent of department.

498-1 to 6 Special Problems. Investigation of problems in workforce education and development. Restricted to WED majors and consent of department. Special approval needed from the instructor.

Workforce Education and Development Faculty

Aguirre, Jeanne, Visiting Assistant Professor, *Emerita*, Ph.D., Southern Illinois University, 1975.

Anderson, Garfield, Visiting Assistant Professor, *Emeritus*, Ed.D., Auburn University, 1976.

Anderson, Marcia, Professor, *Emerita*, Ph.D., Southern Illinois University, 1975.

Aydt, Roger, Visiting Assistant Professor, *Emeritus*, Ph.D., Southern Illinois University, 1987.

Bailey, Larry J., Professor, *Emeritus*, Ed.D., University of Illinois, 1968.

Baker, Clara Mae, Associate Professor, *Emerita*, Ph.D., Ohio State University, 1989.

Blackstone, Glen, Senior Lecturer, Ph.D., Southern Illinois University Carbondale, 1985.

Bortz, Richard F., Professor, *Emeritus*, Ph.D., University of Minnesota, 1967.

Bourne, Shirley A., Visiting Assistant Professor, *Emerita*, Ph.D., Southern Illinois University, 1983.

Bubnas, Phyllis, Assistant Professor, *Emerita*, M.S., Southern Illinois University, 1960.

Buila, Theodore, Associate Professor, *Emeritus*, Ph.D., Cornell University, 1968.

Davis, Marty S., Visiting Assistant Professor, *Emerita*, Ph.D., Southern Illinois University, 1995.

Dotzler, Robert J., Visiting Assistant Professor, *Emeritus*, Ph.D., George Washington University, 1987.

Eversden, Terre, Senior Lecturer, Ph.D., Southern Illinois University, 2001.

Garcia, Roberta, Senior Lecturer, MPA, University of New Mexico, 2005.

Gooch, Bill G., Professor, *Emeritus*, Ed.D., University of Tennessee, 1973.

Griffin, Keith H., Visiting Assistant Professor, *Emeritus*, Ph.D., Louisiana State University, 1977.

Hagler, Barbara, Associate Professor, Ph.D., Arizona State University, 1991.

Hall, M. Eugene, Visiting Assistant Professor, *Emeritus*, Ph.D., Ohio State University, 1982.

Hamilton, Molly, Lecturer, Ph.D., Southern Illinois University Carbondale, 2011.

Hunter, Wallace D., Visiting Assistant Professor, *Emeritus*, Ph.D., The Florida State University, 1974.

L'Angelle, David, Visiting Assistant Professor, *Emeritus*, Ph.D., Ohio State University, 1983.

Lee, Robert, Senior Lecturer, *Emeritus*, M.B.A., City University-Washington, 1998.

Owens, Douglas, Senior Lecturer, M.S., Eastern Illinois University, 2003.

Plessman, Connie K., Visiting Assistant Professor, Ph.D., University of Nebraska, 1985.

Putnam, Alvin R., Associate Professor, *Emeritus*, Ph.D., Oklahoma State University, 1978.

Reneau, Fred, Professor, *Emeritus*, Ed.D., Virginia Polytechnic Institute and State University, 1979.

Shields, Bill J., Assistant Professor, *Emeritus*, M.S. in Ed., Southern Illinois University, 1963.

Sidell, Charles, Visiting Assistant Professor, Ph.D., Southern Illinois University, 1999.

Sims, Cynthia, Associate Professor and *Chair*, Ed.D., Northern Illinois University, 2004.

Stadt, Ronald W., Professor, *Emeritus*, Ed.D., University of Illinois, 1962.

Stitt, Thomas R., Professor, *Emeritus*, Ph.D., Ohio State University, 1967.

Sullivan, James A., Professor, *Emeritus*, Ed.D., West Virginia University, 1967.

Taylor, David, Visiting Assistant Professor, *Emeritus*, Ed.D., Alliant International University, 2004.

Washburn, John S., Professor, *Emeritus*, Ed.D., University of Illinois, 1977.

Waugh, C. Keith, Associate Professor, Ph.D., Virginia Polytechnic Institute and State University, 1996.

Veterinary Medicine, Preprofessional Program

(SEE ANIMAL SCIENCE OR COLLEGE OF SCIENCE PRE-HEALTH PROFESSIONAL PROGRAMS)

Youth Development

(SEE RECREATION)

Zoology (Department, Major, Minor, Faculty)

A major in Zoology is an appropriate beginning for those planning careers in teaching, research, or other employment in animal biology, environmental biology, fisheries biology, veterinary medicine, or wildlife biology. Students majoring in Zoology are required to develop an individualized curriculum in consultation with a faculty advisor within the department.

A student majoring in Zoology may work toward either a Bachelor of Arts (B.A.) or Bachelor of Science (B.S.) degree. The B.A. with a major in Zoology provides the opportunity for a broad, liberal arts education by allowing students to take 18-25 hours of courses in areas of interest outside the major. The B.A. is appropriate for students who desire a strong background in zoology, but have interests in biology-associated careers in business, law, journalism, or other fields. Students with a B.A. may continue their education toward a graduate degree in zoology or biology, but may need to fulfill deficiencies in physical sciences and mathematics.

Students seeking a B.S. with a major in Zoology must choose one of five specializations: animal biology, environmental biology, fisheries biology and aquatic conservation, pre-veterinary medicine, or wildlife biology and conservation. The B.S. requires more courses in physical sciences and mathematics than does the B.A., and is appropriate for students planning careers as practicing zoologists in one of the emphasized fields, particularly those who wish to pursue graduate studies.

To prepare for a major in Zoology at SIU Carbondale, students should have a solid high school background in biology, mathematics, and physical sciences, as well as practiced writing skills and a sustaining curiosity about animal life. Students transferring to SIU after two years at a community college should have completed introductory biology, introductory chemistry, and pre-calculus sequences.

Zoology majors must take ZOOL 215 (Sophomore Seminar) immediately after completing BIOL 200A and B, or (for transfer students) during the first semester of enrollment at SIU. ZOOL 215 provides students with an orientation to the department and requirements of the major, and assigns them faculty advisors who will act as mentors until graduation. Each student will complete an independent-study project under the supervision of their faculty mentor, submit a written summary of the project, and present their results as part of ZOOL 482 (Senior Seminar), to be taken during the final year of study.

B.A. and B.S. degrees require a minimum of 41 semester hours of biology or zoology courses. No more than 11 semester hours of biology or zoology courses that are used to satisfy degree requirements for another major may be used to meet the Zoology requirements.

Bachelor of Arts Degree in Zoology, College of Science

<i>University Core Curriculum Requirements</i>	41 ¹
<i>College of Science Academic Requirements</i>	7-9
Biological Sciences: completed with the Zoology major	
Mathematics: MATH 108 and 109, or 111 or 141 or 150	
Physical Sciences: completed with the Zoology major	
Supportive Skills: at least six credit hours chosen from QUAN 402 or MATH 282 or PLB 360 or ZOOL 360; CS 105 or 200B, 201 or 202; ENGL 290 or 291; any two-semester sequence of a foreign language (Chinese, French, Latin, German, Greek, Japanese, Spanish) ^{2,3}	
<i>Requirements for Major in Zoology</i>	50-52
BIOL 200A, 200B, 304, 305, and 307	
CHEM 200, 201, 202	
CHEM 210, 211 and 212; or GEOL 220 and 223; or GEOL 221 and 224; or PHYS 203A, 253A	
ZOOL 215, 220, and 482	
20 hours of 300- and 400-level Biology or Zoology courses ³	
One of the following quantitative skills courses ⁴ :	
QUAN 402 or MATH 282 or ZOOL 360	
CS 201 or 202	
MATH 141 or 150	
<i>Electives</i>	18-22
<i>Total</i>	120

¹A total of nine hours of biological science, mathematics, and physical science course work is accounted for in the 41-hour University Core Curriculum requirement.

²The foreign language requirement can also be met by one of the following:

(a) earning eight hours of 100- level credit in one language by proficiency examination; (b) completing three years of one language in high school with no grade lower than C.

³Courses used to satisfy College of Science requirements may not be used to satisfy the quantitative skills requirement of the major. Only one of QUAN 402, MATH 282 and PLB 360 may be counted toward the supportive skills or major requirements.

Zoology Suggested Curricular Guide (B.A.)

FIRST YEAR	FALL	SPRING
UCOL 101, ENGL 101	3	3
MATH 108, 109	3	3
CHEM 200, 201, 202; 210, 211, 212	5	5
BIOL 200A, 200B	4	4
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
ENGL 102, 290	3	3
CS 201, Social Science	3	3
ZOOL 215, 220; Fine Arts	6	3
CMST 101	-	3
Humanities	3	3
<i>Total</i>	15	15

THIRD YEAR	FALL	SPRING
BIOL 305, 307; 304	6	3
Human Health, ZOOL 360	2	3
Social Science, Multicultural	3	3
Zoology electives	4	4
Elective	-	2
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
ZOOL 482	-	1
Zoology electives	6	6
Electives	9	8
<i>Total</i>	15	15

Bachelor of Science Degree in Zoology (Animal Biology Specialization), College of Science

The Animal Biology specialization is designed for students who wish to obtain a broad background in zoology, but especially those contemplating graduate studies of animal behavior, biodiversity, evolution, natural history, or systematics.

<i>University Core Curriculum Requirements</i>	41 ¹
<i>College of Science Academic Requirements</i>	7-9
Biological Sciences: completed with the Zoology major	
Mathematics: MATH 108 and 109, or 111	
Physical Sciences: completed with the Zoology major	
Supportive Skills: QUAN 402 or MATH 282 or PLB 360 or ZOOL 360; ENGL 290 or 291 or 391, or JRNL 310	
<i>Requirements for Major in Zoology</i>	63-67
BIOL 200A, 200B, 304, 305, 307, and 409	
CHEM 200, 201, 202, 210, 211, and 212	
CHEM 340, 341, 350, and 351; or GEOL 220, 221, 223, and 224; or PHYS 203A, 203B, 253A, and 253B	

CS 200B or 201 or 202
 MATH 139 or 141 or 150
 ZOOL 215, 220, and 482
 At least 18 hours from the following: BIOL 302, ZOOL 385, 405, 407, 408, 409, 410, 413, 414, 415, 417, 418, 425, 426, 433, 434, 435, 438, 444, 450, 461, 465, 467, 471, 472, 473, 478, 490.
Electives 3-9
Total 120

¹A total of nine hours of biological science, mathematics, and physical science course work is accounted for in the 41-hour University Core Curriculum requirement.

Zoology Suggested Curricular Guide (B.S., Animal Biology specialization)

FIRST YEAR	FALL	SPRING
UCOL 101, ENGL 101.....	3	3
MATH 108, 109.....	3	3
CHEM 200, 201, 202; 210, 211, 212.....	5	5
BIOL 200A, 200B.....	4	4
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
ENGL 102, MATH 139.....	3	3
GEOL 220, 223; 221, 224.....	4	4
ZOOL 215, 220.....	1	5
CMST 101, Fine Arts.....	3	3
Human Health, Humanities.....	5	-
<i>Total</i>	16	15
THIRD YEAR	FALL	SPRING
BIOL 305, 307; 304, 409.....	6	6
ENGL 290, Humanities.....	3	3
CS 201, ZOOL 360.....	3	3
Social Science.....	3	3
<i>Total</i>	15	15
FOURTH YEAR	FALL	SPRING
Zoology electives.....	9	9
Multicultural, ZOOL 482.....	3	1
Electives.....	3	4
<i>Total</i>	15	14

Bachelor of Science Degree in Zoology (Environmental Biology Specialization), College of Science

The Environmental Biology specialization is designed for students interested in biological approaches to the study of environmental quality. Students in this program should also consider the Environmental Studies minor.

University Core Curriculum Requirements 41¹
College of Science Academic Requirements 7-9

Biological Sciences: completed with the Zoology major
 Mathematics: MATH 108 and 109, or 111
 Physical Sciences: completed with the Zoology major
 Supportive Skills: QUAN 402 or MATH 282 or PLB 360 or ZOOL 360; ENGL 290 or 291 or 391, or JRNL 310

Requirements for Major in Zoology 69-70
 BIOL 200A, 200B, 305, 307, 409
 CHEM 200, 201, 202, 210, 211, 212, 340, 341
 MATH 139 or 141 or 150
 ZOOL 215, 220, 410, 411, 432, 433 or 434, and 482
 At least 12 hours from the following Zoology electives: BIOL 304; ZOOL 351, 415, 426, 435, 438, 443, 444, 445, 458, 490
 At least 9 hours from the following environmental science electives: CHEM 350 and 351; CSEM 240; FOR 429; GEOG 310I, 320, 330, 401, 404, 422, 424, 425, 426, 430, 434, 439, 471; GEOL 220 and 223, 221 and 224, 222 and 223; MICR 301; PHSL 310; PLB 440, 443, 444, 452
Electives 0-3
Total 120

¹A total of 12 hours of biological science, mathematics, physical science, and interdisciplinary course work is accounted for in the 41-hour University Core Curriculum requirement.

Zoology Suggested Curricular Guide (B.S., Environmental Biology specialization)

FIRST YEAR	FALL	SPRING
UCOL 101, ENGL 101.....	3	3
MATH 108, 109.....	3	3
CHEM 200, 201, 202; 210, 211, 212.....	5	5
BIOL 200A, 200B.....	4	4
<i>Total</i>	15	15
SECOND YEAR	FALL	SPRING
ENGL 102, 290.....	3	3
Social Science, MATH 141.....	3	4
ZOOL 215, 220; Fine Arts.....	6	3
CMST 101.....	-	3
Humanities.....	3	3
<i>Total</i>	15	16
THIRD YEAR	FALL	SPRING
BIOL 305, 307; Multicultural.....	6	3
CHEM 340, 341.....	5	-
ZOOL 410; 360, 411.....	3	6
Human Health, Social Science.....	2	3
Environmental elective.....	-	3
<i>Total</i>	16	15
FOURTH YEAR	FALL	SPRING
BIOL 409.....	-	3
ZOOL 433; 432, 482.....	3	4
Zoology electives.....	9	3
Environmental electives.....	3	3
<i>Total</i>	15	13

Bachelor of Science Degree in Zoology (Fisheries Biology and Aquatic Conservation Specialization), College of Science

Fisheries Biology and Aquatic Conservation is designed for students whose primary interest is in the ecology and management of fishes and aquatic ecosystems. This emphasis is appropri-

ate for those with career goals involving fisheries management, aquaculture, aquatic ecosystem management, or graduate studies in applied fish biology. Course requirements are those necessary for certification as a Fisheries Professional Associate by the American Fisheries Society.

<i>University Core Curriculum Requirements</i>	41 ¹
<i>College of Science Academic Requirements</i>	7-9
Biological Sciences: completed with the Zoology major	
Mathematics: MATH 108 and 109, or 111	
Physical Sciences: completed with the Zoology major	
Supportive Skills: QUAN 402 or MATH 282 or PLB 360 or ZOO 360; ENGL 290 or 291 or 391, or JRNL 310	
<i>Requirements for Major in Zoology</i>	61-63
BIOL 200A, 200B, 305, and 307	
BIOL 304 or 409	
CHEM 200, 201, 202, 210, 211, and 212	
CHEM 340, 341, 350, and 351; or PHYS 203A, 203B, 253A, and 253B	
MATH 141 or 150	
ZOOL 215, 220, 415, 465, 466, 477, and 482	
At least 9 hours from the following: ZOOL 306, 385, 414, 417, 418, 426, 433, 434, 458, 473, 490	
<i>Electives</i>	7-11
<i>Total</i>	120

¹A total of nine hours of biological science, mathematics, and physical science course work is accounted for in the 41-hour University Core Curriculum requirement.

Zoology Suggested Curricular Guide (B.S., Fisheries Biology specialization)

FIRST YEAR	FALL	SPRING
UCOL 101, ENGL 101	3	3
MATH 108, 109	3	3
CHEM 200, 201, 202; 210, 211, 212	5	5
BIOL 200A, 200B	4	4
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
ENGL 102, 290	3	3
MATH 282, 141	3	4
ZOOL 215, 220; Fine Arts	6	3
CMST 101	3	-
Humanities	3	3
<i>Total</i>	18	13

THIRD YEAR	FALL	SPRING
BIOL 305, 307; 304	6	3
CHEM 340, 341; 350, 351	5	5
ZOOL 465, Social Science	3	3
Human Health, Social Science	2	3
<i>Total</i>	16	14

FOURTH YEAR	FALL	SPRING
Multicultural	-	3
ZOOL 415, 482	3	1
ZOOL 466, 477	3	3

Zoology electives	3	3
Electives	6	4
<i>Total</i>	15	14

Bachelor of Science Degree in Zoology (Pre-Veterinary Science Specialization), College of Science

The Pre-Veterinary Science specialization is designed for Zoology majors planning to enter veterinary school. Students in this program must register with the College of Science Pre-Health Professions Advisement Office.

<i>University Core Curriculum Requirements</i>	41 ¹
<i>College of Science Academic Requirements</i>	7-9
Biological Sciences: completed with the Zoology major	
Mathematics: MATH 108 and 109, or 111	
Physical Sciences: completed with the Zoology major	
Supportive Skills: QUAN 402 or MATH 282 or PLB 360 or ZOO 360; ENGL 290 or 291 or 391, or JRNL 310	
<i>Requirements for Major in Zoology</i>	67
BIOL 200A, 200B, 305, 306 and 409	
CHEM 200, 201, 202, 210, 211, 212, 340, 341, 350 and 351	
CS 200B or 201 or MATH 139 or 141	
PHYS 203A, 203B, 253A, and 253B	
ZOOL 215, 220, and 482	

At least twelve hours of zoology electives from the following: ZOOL 407, 409, 413, 417, 418, 426, 432, 433, 434, 438, 440, 461, 467, 471, 478

At least six hours of pre-vet electives from the following: ANS 337; BIOL 304, 307; MICR 301, 302, 403, 460; PHSL 310, 410A, 410B, 430

<i>Electives</i>	2-5
<i>Total</i>	120

¹A total of nine hours of biological science, mathematics, and physical science course work is accounted for in the 41-hour University Core Curriculum requirement.

Zoology Suggested Curricular Guide (B.S., Pre-Vet specialization)

FIRST YEAR	FALL	SPRING
UCOL 101, ENGL 101	3	3
MATH 108, 109	3	3
CHEM 200, 201, 202; 210, 211, 212	5	5
BIOL 200A, 200B	4	4
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
ENGL 102, 290	3	3
CS 201, ZOO 360	3	3
ZOOL 215, 220; Fine Arts	6	3
CMST 101	-	3
Humanities	3	3
<i>Total</i>	15	15

THIRD YEAR	FALL	SPRING
BIOL 305, 307; 409	6	3
CHEM 340, 341; 350, 351	5	5

PHYS 203A, 253A; 203B, 253B.....	4	4
Social Science	-	3
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
Human Health, Multicultural.....	-	5
Social Science, ZOOL 482.....	3	1
Zoology electives.....	6	6
Pre-vet electives	3	3
Electives	3	-
<i>Total</i>	15	15

Bachelor of Science Degree in Zoology (Wildlife Biology and Conservation Specialization), College of Science

The Wildlife Biology specialization is designed for students whose primary interests are in wildlife ecology, management, and conservation. Course requirements in this track include those specified by The Wildlife Society's certification program.

University Core Curriculum Requirements 41¹
College of Science Academic Requirements 7-9

Biological Sciences: completed with the Zoology major
 Mathematics: MATH 108 and 109, or 111
 Physical Sciences: completed with the Zoology major
 Supportive Skills: QUAN 402 or MATH 282 or PLB 360 or ZOOL 360; ENGL 290 or 291 or 391, or JRNL 310

Requirements for Major in Zoology 66-69

BIOL 200A, 200B, 305, and 307
 BIOL 304 or 409
 CHEM 200, 201, 202, 210, 211, 212
 CS 200B or 201 or MATH 139 or 141
 CSEM 240; or PHYS 203A and 253A
 ZOOL 215, 220, 410, 468, and 482
 ZOOL 445 or 462A and 462B or 463 or 469
 FOR 325 or GEOG 422, 425, 426 or 471 or ZOOL 464
 Six hours of wildlife biology from the following: ZOOL 408, 461, 467, 478
 At least three hours of zoology electives from the following: ZOOL 385, 407, 408, 413, 414, 418, 426, 433, 434, 440, 461, 462A, 462B, 465, 466, 467, 469, 471, 473, 478²
 At least three hours from the following: FOR 202, PLB 300, 304, 451
 At least seven hours of botany from the following: PLB 300, 320, 400, 451²
Electives 1-6
Total 120

¹A total of nine hours of biological science, mathematics, and physical science course work is accounted for in the 41-hour University Core Curriculum requirement.

²No course duplications are allowed between elective categories.

Zoology Suggested Curricular Guide (B.S., Wildlife Biology specialization)

FIRST YEAR	FALL	SPRING
UCOL 101, ENGL 101.....	3	3
MATH 108, 109.....	3	3

CHEM 200, 201, 202; 210, 211, 212.....	5	5
BIOL 200A, 200B.....	4	4
<i>Total</i>	15	15

SECOND YEAR	FALL	SPRING
ENGL 102, 290.....	3	3
CMST 101.....	-	3
ZOOL 215, 220; Fine Arts.....	6	3
MATH 139; PHYS 203A, 253A.....	4	3
Humanities.....	3	3
<i>Total</i>	16	15

THIRD YEAR	FALL	SPRING
BIOL 305, 307; 304.....	6	3
FOR 325, ZOOL 462A,B.....	3	4
Social Science	3	3
ZOOL 410, 360.....	3	3
Human Health	-	2
<i>Total</i>	15	15

FOURTH YEAR	FALL	SPRING
ZOOL 468, Multicultural.....	3	3
Wildlife electives	3	3
PLB 300, ZOOL 482.....	4	1
Zoology elective	3	-
FOR 202, electives	3	6
<i>Total</i>	16	13

Zoology Minor

A minor in Zoology consists of BIOL 200A, 200B, ZOOL 220, and 15 hours of ZOOL courses suitable for majors. One course from BIOL 304, 305, 306, 307, and 409 may also be counted toward the 15-hour requirement, but no University Core Curriculum courses may be included. Courses used to satisfy degree requirements for a major or another minor cannot be used for the minor in Zoology.

Honors Program

An honors program is available to those juniors and seniors in zoology who maintain a grade point average of 3.25 or better, overall and in the major. To enroll in Zoology 493, the student must complete a departmental form that requires the project title; a description of the proposed project; and the signatures of the student, the faculty advisor, and the chair of the department. The student must complete six hours of 493 with a grade of B or better, file with the department a final report on the research, and present the results at a public seminar in order to graduate with departmental honors in zoology. At the time of graduation, an indication of participation in the program is made on the diploma and transcript for students who complete the requirements. Concurrent participation in the University Honors Program is encouraged.

Certificate Program in Histotechnology
 See Histotechnology in this chapter.

Courses (ZOOL)

Students enrolled in zoology courses may incur field or lab expenses of \$5 to \$25.

115-3 General Biology. (Same as PLB 115) (University Core Curriculum) [IAI Course: L1 900L] Introduction to fundamental biological concepts for non-life science majors interested in learning about interrelationships of human, plant and animal communities. Integrated lecture and laboratory cover topics that include structure and function of living systems, reproduction and inheritance, evolution, biological diversity and environmental biology. Laboratory applies scientific methods to the study of living systems. Laboratory/field trip fee: \$15.

118-4 Principles of Animal Biology. (Advanced University Core Curriculum course) [IAI Course: L1 902L] Introduction to the basic concepts of animal biology including chemical organization of protoplasm; organization of matter into cells, tissues, organs and organ systems; classification and distribution of animals; ecology; heredity and organic evolution; economic biology and conservation, and animal behavior. Credit may not be used toward a major in zoology. Three lecturers and one 2-hour laboratory per week. Prerequisite: high school biology. Laboratory/Field Trip Fee: \$15.

215-1 Sophomore Seminar in Zoology. Development of the skills and background knowledge required to be a modern zoologist. Students will receive an orientation to the Zoology Department and the requirements of their major, be assigned a faculty mentor, introduced to philosophy of science, critical thinking, and scientific literature, and learn the basics of scientific writing and oral presentation. One meeting per week. Prerequisites: BIOL 200A and 200B with grades of C or better.

220-5 Animal Diversity. (Advanced University Core Curriculum course) Diversity and its taxonomic treatment of animals, emphasizing structure, function, life cycles, behavior, and phylogeny. Three lectures and two two-hour laboratories per week. Prerequisite: BIOL 200A and BIOL 200B with grades of C or better. Laboratory/field trip fee: \$40. Satisfies University Core Curriculum Science Group II requirement in lieu of PLB 115 or ZOOL 115.

306-3 Fish Biology. Anatomy, physiology, sensory biology, functional morphology, and ecology of fishes. Prerequisite: ZOOL 220.

312I-3 Conservation of Natural Resources. (University Core Curriculum) [IAI Course: L1 905] This course adopts an interdisciplinary approach to the study of conservation of natural resources. It integrates environmental science and environmental economics. By examining the costs and benefits of resource consumption, we will attempt to determine the socially optimal level of resource utilization. We will look at ways in which governments attempt to achieve socially optimal resource use, and the effects of these government policies on the environment. Topics considered in the course include: solid waste, energy consumption, air pollution, agriculture and global environment change. Credit may not be used toward a major in zoology.

351-3 Ecological Methods. (Same as PLB 351) Basic ecological field techniques for analysis of community structure and functional relationships. Two 3-hour laboratories per week. Prerequisite: BIOL 307. Laboratory/field trip fee: \$25.

360-3 Introductory Biostatistics. (Same as PLB 360) Introduction to basic statistical concepts and methods as applied to biological data. Includes descriptive techniques such as measures of central tendency, variability, hypothesis testing, analysis of variance and simple linear regression and correlation. Analysis of computer generated output and report writing will be required. Prerequisite: MATH 108.

385-3 Introduction to Marine Biology. Principles of marine biology including physical and chemical characteristics of marine ecosystems, biology of important marine organisms, and descriptions of specific marine habitats ranging from coastal to pelagic and surface to deep benthic. The course will include a mandatory 4-day field trip to a coastal marine station over spring break, which will incur a cost to students of approximately \$350. Two 1-hour lectures and one 2-hour lab per week. Prerequisite: ZOOL 220 with a grade of C or better.

405-3 Systematic Zoology. Estimation, analysis, and interpretation of phylogenetic trees; concepts, delimitation, and description of species; biological taxonomy and systems of classification; application of phylogenetics to the study of evolution. Prerequisite: BIOL 304.

407-4 Parasitology. Principles, collection, identification, morphology, life histories, and control measures. Two lectures and two 2-hour laboratories per week. Prerequisite: ANTH 240A or MICR 301 or PHSL 310 or ZOOL 220. Laboratory/Field Trip Fee: \$15.

408-3 Herpetology. Taxonomic groups, identification, morphology, and natural history of amphibians and reptiles. One lecture and two 2-hour laboratories per week. Prerequisite: ZOOL 220B or ZOOL 220. Laboratory/Field Trip Fee: \$15.

409-4 Vertebrate Histology. Microscopic structure of organs and tissues with emphasis on mammalian material. Two lectures and two 2-hour labs per week. Prerequisite: ZOOL 220A,B or ZOOL 220. Laboratory/Field Trip Fee: \$15.

410-3 Conservation Biology. An introduction to patterns of global biodiversity and threats to that diversity. Course emphasizes how principles from numerous biological disciplines are involved in conserving and managing biodiversity, and how social, economic, and political factors affect conservation strategies. Prerequisite: BIOL 307.

411-3 Environmental Risk Assessment. Risk assessment can be defined as the process of assigning magnitudes and probabilities to the adverse effects of human activities or natural catastrophes. Prerequisite: ZOOL 220, BIOL 307, and CHEM 340.

413-4 The Invertebrates. Structure, phylogeny, distinguishing features and habitats of the invertebrates. Two lectures and two 2-hour laboratories per week. Prerequisite: ZOOL 220A or ZOOL 220. Laboratory/Field Trip Fee: \$15.

414-4 Freshwater Invertebrates. Taxonomic groups, identification, distribution, and habitats of the North American freshwater invertebrate fauna. Two lectures, two 2-hour laboratories per week. Prerequisite: ZOOL 220A or ZOOL 220. Laboratory/Field Trip Fee: \$15.

415-3 Limnology. (Same as PLB 416) Lakes and inland waters; the organisms living in them, and the factors affecting these organisms. Two lectures and one 4-hour laboratory alternate weeks. Prerequisite: BIOL 307 with a grade of C or better. Laboratory/Field Trip Fee: \$15.

417-3 Vertebrate Zoology. Evolution and diversity of fishes, amphibians, nonavian reptiles, birds, and mammals, including consideration of fossils, taxonomy, anatomy, physiology, ecology, behavior, and conservation. Prerequisite: ZOOL 220 with a grade of C or better.

418-3 Vertebrate Anatomy Laboratory. Comparative anatomy and dissection of representative vertebrate specimens. Three two-hour laboratories per week. Prerequisite: ZOOL 220B with a grade of C or better. Prior or concurrent registration in ZOOL 417 recommended. Laboratory/Field Trip Fee: \$30.

425-3 Invertebrate Paleontology and Paleoecology. (Same as GEOL 425) Concepts of paleontology and paleoecology. Emphasis on functional morphology, lifestyles and habitats of fossil invertebrates and algae. The nature and evolution of marine and coastal paleocommunities. The effects of extinction events on paleocommunities and biodiversity. Laboratory. Field trips required. Prerequisite: GEOL 325 or ZOOL 220 with grade of C or better. Field trip fee: \$95. Lab fee: \$5.

426-3 Comparative Endocrinology. (Same as ANS 426, PHSL 426) Comparison of mechanisms influencing hormone release, hormone biosynthesis, and the effects of hormones on target tissues, including mechanisms of transport, receptor kinetics, and signal transduction. Prerequisites: ANS 331 or ZOOL 220 or PHSL 310 with a grade of C. Laboratory/Field Trip Fee: \$15.

432-3 Principles of Toxicology. This course will introduce students to the main topics in the field of Toxicology. The emphasis will be on understanding physiological, biochemical and molecular mechanisms of toxicity. Prerequisite: ZOOL 220.

433-3 Comparative Animal Physiology. (Same as PHSL 433) Variations of physiological processes in animal phyla, comparison with human physiology, and review of basic physiology principles and comparative aspects of mechanism and function. Prerequisites: BIOL 200A; BIOL 200B or PHSL 310 with grades of C or better.

434-3 Environmental Physiology. (Same as PHSL 434) Physiological adaptations to environmental conditions in animals and humans. Lab/lecture course explores molecular, hormonal, immunological, developmental, and phenotypic processes mediating responses to factors such as stress, disease, contaminants, nutrition, and life history trade-offs. Prerequisite: BIOL 307 or PHSL 310 or ZOOL 433 with a grade of C or better. Laboratory/field trip fee: \$20.

435-3 Plant-Insect Interactions. (Same as PLB 435) Plants and insects have played major roles in influencing each other's evolutionary diversification. This course will be an evolutionary and ecological examination of the interactions between plants and insects. Topics will include herbivory, pollination relationships, ant-plant mutualisms, host plant choice, specialized vs. generalized relationships, seed and fruit dispersal, coevolution/cospeciation, and chemical ecology. Prerequisite: BIOL 200A and B or equivalent; BIOL 307 or equivalent.

438-3 Plant and Animal Molecular Genetics Laboratory. (Same as PLB 438, PSAS 438, AGSE 438, CSEM 438) Arabidopsis and Drosophila model organisms, training in laboratory safety, reagent preparation, phenotype analysis, genetics, DNA and RNA analysis, PCR, cDNA construction, cloning and sequencing. Includes plant and bacterial transformation,

and population level analysis of genetic variation using RAPD markers in grasses and Alu insertion in humans. Two 2-hr labs and one 1-hr lecture per week. Prerequisite: BIOL 305 or equivalent or consent of instructor. Lab fee: \$30.

440-3 Wildlife Nutritional Ecology. This course will provide an understanding of basic nutritional principles (including foraging, digestion, absorption, metabolism, and requirements), demonstrate their application to ecological relationships of wild terrestrial vertebrates with their environment, and stimulate students to critically evaluate published literature in this field of study. Prerequisite: BIOL 307.

443-3 Restoration Ecology. (Same as PLB 443) Ecological restoration tests current understanding of ecosystem assembly and function. This course applies ecological theory to restoration, with an emphasis on factors influencing plant community assembly and evaluating restoration success. Two lectures a week and one four-hour lab alternate weeks. Prerequisite: BIOL 307 or equivalent.

444-4 Ecological Analysis of Communities. (Same as PLB 444) Includes concepts and methods pertaining to the analysis of ecological data. Approaches will include a variety of methods for analyzing multivariate ecology, diversity, pattern, and spatial data. Laboratory will include the computer application of these concepts and methods to field situations. Two lectures and one 4 hour lab per week. Prerequisite: PLB/ZOOL 360, BIOL 307. Lab fee: \$15.

445-3 Wetland Ecology and Management. (Same as PLB 445) This course provides students with experience in wetland ecology and management with an emphasis on wetland functioning, field sampling, and identification of common wetland plants. Prerequisite: either BIOL 200B or PLB 200; and BIOL 307; or consent of instructor. Two lectures and one 4-hour lab per week. Lab fee: \$25.

450-3 Genome Evolution. (Same as PLB 455) This course introduces the diversity of genomes and the evolutionary forces shaping them. Molecular evolution from the level of single nucleotides to whole genomes will be covered. Prerequisites: BIOL 304 and BIOL 305.

458-3 Multiple Stressors in Ecology. In this class, students will use a step-by-step approach to evaluate an environmental issue or human concern compounded by climate change. The evaluation will begin with a conceptual model of the problem, followed by planned management strategies based on collaborative decision making. This class is designed to foster quantitative reasoning, include that reasoning in research, and articulate findings in terms that foster collaborative management and outreach. Examples of potential projects include climate change impacts in concert with: disease propagation, habitat quality and quantity, pollutant uptake in ectotherms, coral bleaching, changing human coastal communities, or fire incidence. Prerequisite: BIOL 307 with a grade of C or better.

461-3 Mammalogy. Taxonomic characteristics, identification, and natural history of mammals. Two 1-hour lectures and one 2-hour laboratory per week. Prerequisite: ZOOL 220B or ZOOL 220. Laboratory/Field Trip Fee: \$10.

462A-2 Waterfowl Ecology and Management (Lecture). This class will explore the pertinence of basic life history theory and ecological principles to waterfowl management. Lecture topics include but are not limited to waterfowl life histories

(i.e., productivity and mortality), foraging ecology, nutrition, habitat use, habitat management, migration, and the influence of harvest. Prerequisites: ZOOL 220, BIOL 307 with minimum grades of C. Co-requisite: ZOOL 462B.

462B-1 Waterfowl Ecology and Management (Laboratory). This laboratory will meet 1 day/week for 2 hours. The primary objective will be waterfowl identification with a secondary emphasis on wetland plant identification and field techniques in waterfowl research and management. There will be 2-3 Saturday field trips. Prerequisites: none. Laboratory/field trip fee: \$20.

463-3 Management and Conservation of Mammals. Course objectives include introducing the history and principles of management for mammalian species; providing an overview of the life history, ecology, and management of mammals of conservation concern in North America; and developing oral and written presentation skills through critical evaluation of management-related research and activities on mammals in North America. Prerequisite: ZOOL 220 with a grade of C or better. Laboratory/Field Trip Fee: \$10.

464-3 Wildlife Administration and Policy. Responsibilities of private, state, and federal natural resources management agencies. Legal and political processes in areas of wildlife and natural resources. Three lectures per week. Special approval needed from the instructor.

465-3 Ichthyology. Taxonomic groups, identification, and natural history of fishes. Two lectures and one 2-hour laboratory per week. Prerequisite: ZOOL 220B or ZOOL 220. Laboratory/Field Trip Fee: \$10.

466-3 Fish Management. Sampling, age and growth, dynamics, habitat improvement, manipulation of fish populations, and management of freshwater and marine fish stocks. Two lectures per week and one 4-hour laboratory alternate weeks. Prerequisite: 10 hours of biological science or consent of instructor.

467-3 Ornithology. Classification and recognition of birds and the study of their songs, nests, migratory habits, and other behavior. One lecture and one four-hour laboratory per week. Prerequisite: ZOOL 220B or ZOOL 220. Laboratory/Field Trip Fee: \$10.

468-3 Wildlife Biology Principles. Basic concepts of wildlife ecology and management. Includes lectures on ecological physiology, population dynamics, and wildlife management strategies. Prerequisite: ZOOL 220, BIOL 307.

469-3 Wildlife Techniques. Field-oriented course with instruction in techniques for management of wild species and their habitat. One 1 1/2-hour lecture and one 3-hour laboratory per week, two of which may be field trips on Saturdays. Prerequisite: ZOOL 220A,B or ZOOL 220. Laboratory/Field Trip Fee: \$30.

471-4 Entomology. Structure, classification, and life histories of insects. Two lectures and two 2-hour laboratories per week. Prerequisite: ZOOL 220A or ZOOL 220. Laboratory/Field Trip Fee: \$10.

472-3 Introduction to Systems Biology. (Same as PLB 471) The experimental and bioinformatics analysis of large genomic and post-genomic data sets. The goal is integration of gene regulation, protein interaction, metabolite and hormonal signaling molecules into an understanding of basic cellular circuitry net-

works. Examine redundancy, robustness and decision making in biological systems. Prerequisite: BIOL 305 or CS 330. Lab fee: \$15.

473-4 Aquatic Entomology. Structure, classification, and biology of aquatic insects. Two lectures and two 2-hour laboratories per week. Prerequisite: ZOOL 220A or ZOOL 220. Laboratory/Field Trip Fee: \$10.

477-3 Aquaculture. (Same as ANS 477) Production of food, game, and bait fishes. Design of facilities, chemical and biological variables, spawning techniques, diseases and nutrition. Two lectures per week and one four-hour laboratory on alternate weeks. Prerequisites: BIOL 200A or ZOOL 118 or ANS 121 with grade of C or better.

478-3 Animal Behavior. Biological basis of the behavior of animals. Two lectures and one 2-hour laboratory per week. Prerequisite: One year of biological science or permission of instructor.

482-1 Zoology Seminar for Seniors. Each student reports on a selected topic, the class discusses using original scientific literature, and the report. The course emphasizes development of Oral and Written communication skills. One meeting per week. Not for graduate credit. Restricted to senior standing or 24 hours of life science completed.

485-2 to 4 Special Topics in Zoology. Examination of topics of special interest not available in other departmental courses. Offered in response to student need and faculty availability. Special approval needed.

490-3 Energetics, Food Webs, and Ecosystems. (Same as PLB 490) This course places conservation of particular species into the context of community and ecosystem management. Approaches to quantifying energy needs of individual species will be extended to models of trophic networks among multiple species. Food web structure and function, species interactions, and resilience to species loss species invasions, and environmental changes will be examined in light of landscape processes. Prerequisite: BIOL 307 or consent of instructor.

491-1 to 6 Internship in Zoology. Supervised training in a formalized program with a zoological institution or agency. May not be used for minor in Zoology. For internships outside the department, a prospectus from the sponsoring agency with duties and duration of internship must be approved by a zoology faculty supervisor before registration. No more than three hours per semester may be taken if student is on-campus. Mandatory Pass/Fail. Not for graduate credit. Prerequisite: ZOOL 220 with a grade of C or better and departmental approval. Specific internships have specific selection criteria. Of all credits that a student completes for ZOOL 491, 492, 493, 496, and 497, a maximum of six hours (with grades of C or better) may count toward the major.

492-1 to 3 Individual Research in Zoology. Research on zoological problems. May not be used for minor in zoology. Some cost may be borne by student. A proposal describing the research project must be approved by a zoology faculty supervisor before registration. Not for graduate credit. Of all credits that a student completes for ZOOL 491, 492, 493, 496, and 497, a maximum of six hours (with grades of C or better) may count toward the major. Prerequisites: ZOOL 220 with grade of C or better, minimum of 2.50 GPA (A=4.00). Restricted to junior or

senior standing. Special approval needed from the department. **493-1 to 6 Honors Research in Zoology.** Individual research for honors students in zoology. May not be used for minor in Zoology. A research proposal must be approved by a zoology faculty supervisor before registration. Not for graduate credit. Prerequisite: ZOOL 220 with a grade of C or better, minimum 3.0 cumulative GPA (A=4.00), and departmental approval. Of all credits that a student completes for ZOOL 491, 492, 493, 496, and 497, a maximum of six hours (with grades of C or better) may count toward the major.

496-1 to 3 Zoology Field Studies. Formal, individualized training in field zoology, including experiences that acquaint students with animals in various environments, methods of field study, specimen collection and preservation, management and conservation, or other relevant skills. May not be used for minor in Zoology. A prospectus of the training experience must be approved by a zoology faculty supervisor before registration. Not for graduate credit. Mandatory Pass/Fail. Prerequisite: ZOOL 220 with a grade of C or better. Of all credits that a student completes for ZOOL 490, 492, 493, 496, and 497, a maximum of six hours (with grades of C or better) may count toward the major.

497-1 to 3 Zoology Laboratory Studies. Formal, individualized training in laboratory zoology, including experiences that acquaint students with dissection, microscopy, museum preparatory and curatorial techniques, biotechnology, environmental chemistry assays, or other relevant skills. May not be used for minor in Zoology. A prospectus of the training experience must be approved by a zoology faculty supervisor before registration. Not for graduate credit. Mandatory Pass/Fail. Prerequisite: ZOOL 220 with a grade of C or better. Of all credits that a student completes for ZOOL 491, 492, 493, 496, and 497, a maximum of six hours (with grades of C or better) may count toward the major.

Zoology Faculty

- Anderson, Frank E.**, Associate Professor, Ph.D., University of California, Santa Cruz, 1998.
- Anthony, Terence R.**, Associate Professor, *Emeritus*, M.D., Ph.D., University of Chicago, 1968, 1975.
- Boyles, Justin G.**, Assistant Professor, Ph.D., Indiana State University, 2009.
- Brandon, Ronald A.**, Professor, *Emeritus*, Ph.D., University of Illinois, 1962.
- Brooks, Marjorie L.**, Assistant Professor, Ph.D., University of Wyoming, 2003.
- Burr, Brooks M.**, Professor, *Emeritus*, Ph.D., University of Illinois, 1977.
- Catenazzi, Alessandro.** Assistant Professor, Ph.D., Florida International University, 2006.
- Chen, Da.** Assistant Professor, Ph.D., College of William and Mary, 2009.
- Eichholz, Michael W.**, Associate Professor, Ph.D., University of Alaska, 2000.
- Englert, DuWayne C.**, Professor, *Emeritus*, Ph.D., Purdue University, 1964.
- Feldhamer, George A.**, Professor, *Emeritus*, Oregon State University, 1977.
- Garvey, James E.**, Professor, Ph.D., Ohio State University, 1997.
- Halbrook, Richard S.**, Associate Professor, *Emeritus*, Ph.D., Virginia Polytechnic Institute and State University, 1990.
- Heidinger, Roy C.**, Professor, *Emeritus*, Ph.D., Southern Illinois University, 1970.
- Heist, Edward J.**, Professor, Ph.D., College of William and Mary, 1994.
- Ibrahim, Kamal M.**, Associate Professor, Ph.D., University of Cambridge, 1989.
- Jimenez-Ruiz, Francisco Agustin.** Assistant Professor, Ph.D., University of Nebraska-Lincoln, 2004.
- King, David.** Associate Professor, *Emeritus*, Ph.D., University of California at San Diego, 1975.
- Kohler, Christopher C.**, Professor, *Emeritus*, Ph.D., Virginia Polytechnic Institute and State University, 1980.
- Krajewski, Carey.** Professor and *Chair*, Ph.D., University of Wisconsin, 1988.
- Lovvorn, James R.**, Professor, Ph.D., University of Wisconsin, 1987.
- Lydy, Michael J.**, Professor, Ph.D., Ohio State University, 1990.
- McPherson, John E., Jr.**, Professor, *Emeritus*, Ph.D., Michigan State University, 1968.
- Muhlach, William L.**, Associate Professor, *Emeritus*, Ph.D., University of Illinois at Chicago, 1986.
- Nsofor, Margaret N.**, Senior Lecturer, Ph.D., Mississippi State University, 1998.
- Reeve, John D.**, Associate Professor, Ph.D., University of California Santa Barbara, 1985.
- Schauber, Eric M.**, Associate Professor, Ph.D., University of Connecticut, 2000.
- Shepherd, Benjamin A.**, Professor, *Emeritus*, Ph.D., Kansas State University, 1970.
- Sparling, Donald W.**, Associate Professor, *Emeritus*, Ph.D., University of North Dakota, 1979.
- Stahl, John B.**, Associate Professor, *Emeritus*, Ph.D., Indiana University, 1958.
- Thomas, Richard, H.**, Associate Professor, Ph.D., University of Arizona Tucson, 1985.
- Trushenski, Jesse T.**, Associate Professor, Ph.D., Southern Illinois University Carbondale, 2006.
- Waring, George H.**, Professor, *Emeritus*, Ph.D., Colorado State University, 1966.
- Warne, Robin W.**, Assistant Professor, Ph.D., University of New Mexico, 2008.
- Whiles, Matt R.**, Professor, Ph.D., University of Georgia, 1995.
- Whitledge, Gregory W.**, Associate Professor, Ph.D., University of Missouri, 2001.

6 / Campus Programs and Services



CAMPUS PROGRAMS & SERVICES

ALUMNI SERVICES

The goal of the SIU Alumni Association is to facilitate relationships in support of SIU. Founded in 1896, the SIU Alumni Association provides programs and services for alumni, current students, members, and friends in support of the University. A network of chapters, clubs, and constituent groups provide opportunities for engagement around the country. The online community provides access to alumni and members worldwide.

To learn more about the Association or to become a member, phone (618) 453-2408 or visit online at www.siualumni.com.

AUXILIARY SERVICES

Continuing Education and Outreach

Continuing Education and Outreach (CEO) provides non-academic support services for the SIU Carbondale campus. CEO's non-credit classes, workshops and conferences, and contractual services program offer the University's resources to a variety of groups and individuals both on and off campus.

Contractual Services. Continuing Education and Outreach provides specialized educational services to groups, organizations, governmental agencies, and businesses on a cost-recovery basis. Services are provided regionally, nationally, and internationally.

Conferences and Professional Programs. Conferences, workshops, seminars, non-credit, short courses, and institutes are offered both on and off campus. CEO assists with the development, implementation, evaluation and financial accounting for these programs. Major emphasis is to provide and support quality learning programs through innovative continuing education and outreach experiences for diverse audiences.

Professional development programs are offered through short-term formats. They feature instruction by University faculty and carefully selected specialists from business and industry. Continuing Education Units (CEU's) and Professional Development hours are available for many of these offerings and may meet mandated professional education requirements. Participants in these programs often include professionals from outside the University community.

The Community Listener's Permit Program opens classrooms of SIU to the people of Southern Illinois. It is a special program that provides people of all ages and walks of life the opportunity to access the college classrooms without enrolling for credit. For a modest fee and the permission of the instructors, participants can sample subjects that interest them the most from art history to zoology.

For more information contact:
Continuing Education and Outreach
1255 Lincoln Drive
SIU Carbondale, MC 6705
Carbondale, IL 62901
Phone: 618-536-7751
Fax: 618-453-5680
Email: continuinged@siu.edu
www.continuinged.siu.edu

Rainbow's End Child Development Center

Rainbow's End Child Development Center is on the campus of Southern Illinois University Carbondale. It is a comprehensive child care program licensed by the Department of Children and Family Services (DCFS), accredited by the National Association for the Education of Young Children (NAEYC), and recognized as a Gold Circle of Quality child care facility by National Lewis University. The DCFS licensing allows the center to provide services to a maximum of 133 children ages 6 weeks to 12 years. Priority for enrollment is for SIU students and employees. If there is no waiting list in a specific age group, alumni and community members may be offered enrollment. The Center participates in the State of Illinois Child Care Food Program and the Child Care Assistance Program. The staff at Rainbow's End Child Development Center is committed to promoting the well-being of children and their families. The center provides a secure and positive atmosphere for children during the most important years of growth, development, and learning. The center follows a curriculum model entitled Creative Curriculum, which is streamlined with the Illinois Kindergarten Standards and Illinois Learning Standards. The Center is open Monday through Friday from 7:30 a.m. to 5:30 p.m. There is a waiting list for most classrooms, therefore it is strongly advised that parents place their child's name on the waitlist before childcare is needed. For more information call (618) 453-6358.

Recreational Sports and Services (RSS) and the Student Recreation Center

All SIU Carbondale students paying student fees have access to the 210,000 square-foot Student Recreation Center. Memberships are also available to members of the community, alumni, and special guests. Operational hours to the facility are posted on the RSS website at reccenter.siu.edu

Among the Student Recreation Center's offerings are upper and lower indoor tracks, six multi-sport courts, a fixed-weight, "selectorized" room, a free-weight room, an Olympic-size swimming pool with diving well, a 28' climbing wall, 6 racquetball courts, 2 squash courts, cardio equipment room, and complete locker room facilities for both men and women with a sauna in each.

Recreational Sports and Services (RSS) offers a wide variety of programs and services including over 50 weekly classes for group fitness, yoga, boxing, martial arts, and cycling.

Additionally, our Personal Fitness and Wellness Studio offers light-weight and free-weight training, personal training services, and fitness assessments for students and members. Please check our website for more information.

RSS is the home for many Competitive Sports as well. We have an assortment of sports for individuals, small teams, and larger teams that range from basketball to more uncommon sports and activities such as Futsal (indoor soccer)!

With the Dr. Edward J. Shea Natatorium, our Aquatics Department offers swim lessons for all ages and skill levels!

RSS has program opportunities for special populations and those individuals with disabilities. We offer social opportunities, dinners, activities, and special events for targeted populations as well.

RSS offers a vast array of outdoor field and recreational lo-

cations across campus. We maintain three multi-sport, lighted playfields for softball, flag football, lacrosse, soccer, and other sports. These support some of the 38 plus sport clubs that compete during the fall and spring semesters. Among them are equestrian, rugby, soccer, water polo, Ultimate Frisbee, volleyball, paintball, and various martial arts.

We also have you covered with Outdoor Pursuit that provides guided trips, “how to” clinics, coordinates the climbing wall, and offers outdoor equipment rentals that include canoes, kayaks, tents, sleeping bags, and other specialized gear. Outdoor recreational facilities at SIU Carbondale’s include Campus Lake, a 2-mile walking trail, two 9-hole disc golf courses, a boat dock with various types of boats to use for students and members, and our popular nighttime “moonlight canoeing,” two soccer fields, a 3-field, lighted multisport complex, roller hockey court, and six lighted tennis courts.

RSS is very involved with student employment. Each year, we give back over \$650,000 to students at SIU Carbondale, making us the second-largest student employer on campus.

We hire many of our employees in the springtime before spring semester ends and again in the late summer/early fall when students arrive. If you have an interest in student employment with RSS, please go to our website (reccenter.siu.edu) to complete an application during the hiring blitz dates.

For up-to-date information and events, check us out on our website, Facebook, or Twitter. More information is available on the RSS website at: reccenter.siu.edu or call us at 618/453-1277.

Student Center

The Student Center covers over eight acres of floor space, but it is much more than just a building. The programs and services offered provide for the social and academic development of our students. In addition, the Student Center serves as a unifying force, bringing together the campus and the community. It is both an organization and a program, working together to form a foundation for university life. It provides support services, which complement the academic mission of the University through the bookstore, information services, dining service, and meeting facilities. It is a laboratory for learning. The Student Center is an extension of the classroom allowing practicum students, graduate assistants and interns the opportunity to develop on-the-job experience in their fields of learning. It is a focal point to which alumni and students can relate when returning to campus.

The Student Center, being in the center of campus, meets the needs of the students by providing convenient services, including multiple dining locations, ATMs, SIU student ID cards, the Debit Dawg program, mobile device charging stations, wireless Internet, TV lounges, study lounges, a meditation room and much more. SIU apparel, textbooks, greeting cards and other convenience items can be purchased at the University Bookstore. Laptop computer checkout, ability to send and receive domestic and international faxes, and campus lost and found are a few conveniences available at the Information Center.

The Student Center has something for everyone. Our many dining concepts and popular franchises, such as Starbucks, Chick-fil-A and Sbarro, create a well-rounded dining experience. The Marketplace Food Court also offers Mexican cuisine, soups, salads, and many grab 'n go items such as freshly made

wraps, yogurts, and veggie or fruit cups, as well as pastries, candy, a large selection of beverages and more. In addition, a variety of recreation opportunities are available, including Bowling & Billiards, a 16 lane facility with 12 Olhausen billiard tables. For those with artistic interests, the Craft Shop offers an opportunity to develop skills in clay pottery, stained glass, woodworking, card and jewelry making and more. The Student Center Graphics department provides design and print services for Student Center departments, Registered Student Organizations (RSOs), students and the community.

The Student Center is part of the educational program of the University and serves as a laboratory of learning and leadership through participation on various boards and committees that provide campus-wide social, cultural and recreational programs. Through the Student Center and Student Programming Council, students can become actively involved in planning and implementing a plethora of exciting cultural, educational, recreational and social events such as Homecoming, Family Week-end, lectures and concerts.

Additional Student Center facilities include four ballrooms, an auditorium, multiple meeting spaces and dining areas. Offices located in the Student Center include: Continuing Education and Outreach, University Programming Office, Center for Inclusive Excellence, Campus Sustainability Office, SalukiTech Computer Store, New Student Programs and Student Life. For more information about the Student Center or to reserve a space for your events, call 618/536-INFO or go to studentcenter.siu.edu.

Debit Dawg – The SIU Debit Card Program

Debit Dawg is the university’s debit card program. It is a function of your ID card and is designed as a service to SIU students, faculty and staff. There is no transaction or monthly fee to use the program. It is safer and easier than carrying cash. Simply deposit money into your account and you’ll enjoy convenient purchasing power at many on and off campus locations including: Student Center recreation and dining areas, the University Bookstore in the Student Center, campus vending machines, campus copy machines, Student Health Center, University Housing laundry facilities, Rec Center, network printing in most campus computer labs, and many off campus restaurants and businesses. Go to our website, studentcenter.siu.edu/debitdawg for a full listing of locations Debit Dawg is accepted. Your remaining balance will be displayed after most transactions so you will always know how much money is in your account. In addition, a monthly statement of transactions will be sent to the account holder’s SIU email account. Deposits to your Debit Dawg Account may be made in person, by telephone (618.453.3493), online using SalukiNet or by mail. To deposit in person, you may go to the Student Center Business Office windows located on the second floor of the Student Center and use cash or Visa, MasterCard, Discover, or American Express. Cash deposits may be made in person at “Debit Dawg” cash machines located at Lentz, Trueblood, Grinnell, Morris Library, Quigley, Rehn CLC3, Communications CLC4, Law School Library, Student Center, Faner CLC1 and CASA CLC2 and University Hall. For deposits by mail, please include the SIU Dawg Tag number and name of the account holder on a check (payable to SIU) and mail to Debit Dawg, Southern Illinois University, Student Center ID Office, Mail Code 4407, Carbondale, IL 62901.

University Bookstore

The University Bookstore is conveniently located on the first floor of the Student Center and is an integral part of a student's academic success. It is the official University Bookstore, providing new, used, rental and digital textbooks, school supplies, art supplies and engineering materials. Textbook rental is available to students through the University Bookstore as a cost saving option. They provide quality textbook rentals at affordable prices. In addition to textbooks, University Bookstore sells reference books and current best sellers. Show your SIU spirit with imprinted apparel and souvenir items such as pennants, cups, mugs, umbrellas, diploma frames and more. Gifts, greeting cards, and an array of convenience items can also be found at the University Bookstore.

Additionally, the University Bookstore provides many services to aid in a student's academic success. Books, thesis binding, cap and gown rental, textbook buy back services and special order services for textbooks and supplies are offered. All major credit cards are accepted.

Student Health Services

Student Health Services is AAAHC accredited and has now become more centralized and coordinated with its approach to facilitating partnerships between individual patients and their health care team. This new medical model will utilize multiple professional disciplines to promote holistic health and comprehensive medical care as the medical home away from home. For more information, call 618-453-3311 or visit our website at www.shc.siu.edu.

Our Services Include:

Saluki Health Web Portal

From the Student Health Services' website, students can access the Saluki Health Web Portal with their SIU Network ID and Password. In the secure portal, students have many options including: make, view, and cancel appointments, send secure messages to the e-nurse, complete required forms, request a prescription refill. Go to our website at www.shc.siu.edu for more information.

Medical Clinic

Medical problems may interfere with your ability to succeed academically. Our Medical Clinic offers diagnostic services including lab and x-ray, treatment, and follow-up care. The Medical Clinic is known for delivering exceptional and responsive care. In most instances, students with an urgent medical need may be seen the same day they call for an appointment. Students may schedule an appointment by accessing the Saluki Health Web Portal anytime (www.shc.siu.edu) Monday – Friday 8:00 am - 4:30 pm.

Wellness and Health Promotion Services (WHPS)

WHPS provides current and accurate health information about important lifestyle decisions. Our professional staff provides resources and programs in nutrition, sexual health, stress management, alcohol and other drug use, and other areas of wellness that impact student success. For more information, call 618-536-4441.

Counseling and Psychological Services (CAPS)

College is a time of change, transition and growth. At times,

students find it useful to seek the assistance of a caring professional. Each year 1 out of 10 SIU Carbondale students seek services at CAPS. Counseling and Psychological Services provides crisis walk-in counseling, group, individual, and couples counseling to SIU Carbondale students. Our staff of professional psychologists and counselors is trained to help you discover ways to cope more effectively with problems in day-to-day living. The staff has a commitment to meet the needs of individuals from diverse backgrounds including differences of culture, race, gender, sexual orientation, ability, and religion/spirituality. CAPS is located in the Student Health Center on the second floor, Room 253. For more information call 618-453-5371 or visit our website www.shc.siu.edu.

Sports Medicine & Physical Therapy

We offer a comprehensive approach towards the evaluation and treatment of activity-related injuries and physical impairments. After evaluation, recommendations are made which may include a supervised rehabilitation/treatment plan, a self-care plan or referral to a physician. Our therapy pool provides patients an aquatic environment to facilitate the rehabilitation process. Call 618-453-1292 for an appointment.

Psychiatry

Students can experience psychiatric difficulties which interfere with their academic and personal lives. The Psychiatric Clinic is staffed with a psychiatrist and psychiatric nurse who work closely with the psychologists and mental health professionals at Counseling and Psychological Services. Services include psychiatric evaluation and medication management. Call 618-453-4346 for an appointment.

Student Dental Service

Good oral care is one of the easiest ways to positively impact your overall health. We offer emergency, routine and preventive dental care for students. Routine dental services are provided on a fee-for-service basis. For an appointment or more information, call 618-536-2421.

Pharmacy

We have a full service pharmacy. You may fill prescriptions at our pharmacy from any licensed physician. In addition to prescriptions, the pharmacy has a selection of over-the-counter items available for purchase. You may purchase all pharmacy items with normal payment methods or by charging it to your Bursar account or Debit Dawg. Private insurance and Medicaid cards are not accepted. For pharmacy information, call 618-453-4417 or send a fax to 618-453-4672.

Insurance Benefits

The Student Medical Insurance Plan provides health insurance coverage that complements the on-campus primary care services with benefits for off-campus services such as hospitalization, surgery and specialty care. Most students are automatically enrolled in the Student Medical Insurance Plan as a condition of SIU Carbondale enrollment. Students with other health insurance coverage may be eligible for a refund of a portion of this fee. For more information go to our website at www.shc.siu.edu or call 618-453-4413.

Immunization Compliance

Illinois Higher Education Law requires all students born after

January 1, 1957, show proof of immunity to Measles, Mumps, Rubella, and vaccine protection against Tetanus Diphtheria. All international students, regardless of date of birth, must also complete a Tuberculosis screening at the Student Health Center. Students cannot register for classes in subsequent semesters until compliance requirements are met. Recommended immunizations such as Meningitis, Hepatitis, Flu, and travel immunizations are also available. Call 618-453-4326 for more information.

After-Hours

For after-hours emergencies, call 911 or go to the emergency room. Your Student Medical Insurance will not cover non-emergent ER visits.

Student Health Services
374 E. Grand Avenue
Mail Code 6740
Carbondale, IL 62901
Ph:618-453-3311
Fax:618-453-4449
Email:shcinfo@siu.edu
www.shc.siu.edu

University Housing

For information see Campus Living in Chapter 1 or visit the website at: www.housing.siu.edu.

CAMPUS MINISTRIES

The Campus Ministries for SIU believe in and affirm the presence of God working among us as a people. With an awareness of the diverse religious and cultural traditions existing among us, we are committed to all efforts unifying the people of God with loving concern for one another. We celebrate this diversity in unity because it reflects the rich variety of God's revelation throughout history.

We see the University as a unique and varied setting for the development of personal growth and religious commitment. We feel called to share with all participants in the University Community in a joint search for truth and spiritual meaning in life. Twelve individual ministries, Jewish and Christian, constitute the Campus Ministries organization. For a current brochure containing more detailed information about their worship, programs, and fellowship offerings, telephone (618) 529-3311 or write Campus Ministries, 715 South Washington Street, Carbondale, IL 62901 or visit our website at: <http://siucmin.rso.siu.edu>.

DEAN OF STUDENTS

Center for Inclusive Excellence

The Center for Inclusive Excellence serves as a catalyst for inclusion, diversity and innovation. We have resources and expertise on a variety of diverse issues. The Center works to bring together the Black Resource Center, Hispanic/Latino Resource Center, LGBTQ Resource Center and Women's Resource Center to facilitate student and professional development through numerous academic and non-academic programming. The goal of our programming is to increase the audience's ability to appreciate, value, respect and connect with multiple and diverse cultures now and into the future. Our mission is to foster an

environment where all campus members are respected and welcomed.

BLACK RESOURCE CENTER

The Black Resource Center is part of the overall educational mission of SIU Carbondale and is open to all members of the university community. Its purpose is to enhance the opportunity for African American student success, retention and graduation by providing support, advocacy, resources and programming activities - academic, educational, social and cultural - that enrich the learning environment for African American and all students in their pursuit of the best education possible.

HISPANIC/LATINO RESOURCE CENTER

The purpose of the Hispanic/Latino Resource Center is to support and assist Hispanic/Latino students on campus as well as in the community. We participate in collaborative efforts with other programs and organizations to provide guidance in the form of referrals. Also, we offer workshops, seminars, professional networking, social and cultural events, Spanish language support for families, and mentorship opportunities for students. We have an unwavering commitment to help Hispanic/Latino students succeed.

LGBTQ RESOURCE CENTER

The Lesbian, Gay, Bisexual, Trans*, Queer Resource Center serves as a centrally located safe campus space. We provide educational outreach, advocacy services, and referral information focused on individual needs and delivered in confidential and compassionate settings. We are committed to promoting an inclusive environment for LGBTQ students, faculty, staff, families, alumni, allies, and the greater southern Illinois community.

WOMEN'S RESOURCE CENTER

The Women's Resource Center at SIU Carbondale seeks to improve recruitment, retention, empowerment, education, wellness and college-career preparation for the women students of SIU. This program will address and include all aspects of women's wellness and include a focus on professional and leadership development. Campus safety and prevention of sexual assault is a central concern of the Women's Resource Center and its weekly and monthly programming. All year long, the WRC celebrates the accomplishments, history and achievements of women and connects current faculty, staff and civic leaders with our students. The intention of our evolving programming is to create the most vital and empowering campus culture and college experience for all SIU women. The Women's Resource Center is located in the Center for Inclusive Excellence (third floor of the Student Center, room 318). Call 618-453-4281 or email myeomans1@siu.edu or wrc.inclusiveexcellence@siu.edu for more information.

Center for Service Learning and Volunteerism

1. Service-Learning: The Center for Service-Learning and Volunteerism develops curricular and co-curricular service-learning opportunities on campus that build collaborative relationships with our surrounding community. Service-learning is defined as "a form of experiential education in which students engage in activities that address human and community needs together with structured opportuni-

ties intentionally designed to promote student learning and development. Reflection and reciprocity are key concepts in service-learning.” (Jacoby, 1996, p. 5). The Center for Service-Learning and Volunteerism is a central resource for faculty, staff, students and community partners interested in community-based learning opportunities. Courses with service-learning components are listed on the Center’s website. Phone (618) 453-7520. Website www.cslv.siu.edu.

2. Saluki Volunteer Corps (SVC) promotes social and civic responsibility by encouraging students to volunteer to participate in a minimum of 30 community service hours each academic year of their enrollment. Students can receive guidance in academic-related service and/or community service opportunities. Volunteering engages students in holistic educational experience which encourages self-reflection and prepares students to become aware, engaged citizens. Students and student organizations are honored annually in the area of community service. Students also receive transcript notations and involvement transcripts. Phone (618) 453-7520. Website www.cslv.siu.edu.
3. AmeriCorps National Service provides opportunities for students “to earn while serving” through participation in the Land of Lincoln AmeriCorps (LLA) program, a component of the Americorps National Service. Students selected to LLA focus their service in education by serving as tutors and mentors to children in grades PreK-8. Members receive a monthly stipend, in addition to a monetary education award upon successful completion of service. Students selected receive training in civic and leadership skills as well as professional development. Phone (618) 453-7520. Website www.cslv.siu.edu.

Disability Support Services

The University is committed to making all services, programs, and activities equally accessible to students with disabilities in integrated settings. The Disability Support Services (DSS) Office provides federally mandated academic and programmatic support services to students with permanent and temporary disabilities. Services provided include pre-enrollment planning, adapted testing, note takers, textbooks and course materials in alternate format (electronic, MP3, large print, Braille) assistive technology and software, listening devices, sign language interpreters, speech-to-text, campus familiarization, housing assessments, and liaison services with faculty, staff, and outside agencies such as Division of Rehabilitation Services. In addition, we offer adapted computer technology evaluation and training. Students are responsible for identifying themselves to DSS, for providing documentation, and for requesting accommodations. Eligibility for DSS services is determined on a case-by-case basis. Students are normally eligible if they provide adequate documentation and are enrolled SIU students. Other disability services are located throughout the University. The Housing Office provides modified housing in the student and family housing areas. There are accessible resources in the Computer Labs, Morris Library, and Student Recreation Center and accessible transportation in the form of the Saluki Express and the Accessible Van Transport. Overall, the campus is exceptionally accessible. Persons with disabilities apply and are considered for admission in the same manner as non-

disabled persons; the nature or severity of disability is not considered in the admission determination. Persons with disabilities interested in attending SIU Carbondale are encouraged to visit the campus in order to discuss services with DSS and to tour the campus. Prospective students who have disabilities are encouraged to formally apply for admission as far in advance as possible to ensure sufficient time for planning support services after being admitted but before the start of the semester. Further information is located on our website at <http://www.disabilityservices.siu.edu/> or students may contact DSS directly by e-mail at dsssiu@siu.edu or by calling (618) 453-5738 (v) or (618) 453-2293 (TDD).

Achieve Program

The Achieve Program is a fee-for-service program specializing in comprehensive academic support services for students with learning disabilities, attention deficits, and other learning differences.

The Achieve Program’s fee based services include case management, weekly supervision, academic coaching for effective study skills, one on one assistance for reading and writing, individualized or group tutoring for content in most college courses, tracking of academic progress, time management and organizational assistance. Adaptive technology solutions include Kurzweil for reading assistance and LiveScribe for note-taking. Test taking accommodations and referrals for mental health counseling are also provided upon request.

Interested students must submit a completed Achieve Program application with supporting documentation and attend an interview session with Achieve Program staff. The applicant is evaluated on the basis of academic, cognitive, and social-emotional appropriateness for college-level achievement.

For additional information, please visit the Achieve Program’s website at achieve.siu.edu.

Fraternity & Sorority Life

Since 1923, the fraternity & sorority community at SIU has continued with a tradition of excellence that has fostered a community of academic excellence, leadership, & philanthropic services. SIU has 33 sororities & fraternities. While each organization maintains its own activities, traditions, & national affiliations, each is founded on similar principles of scholarship, leadership, community service, & lifelong friendship. The fraternity & sorority experience at SIU provides a safe & fun way to maximize the college experience!

- Inter-Greek Council (IGC): since 1954, IGC has served as the legislative, standard-setting, & coordinating body for all fraternities & sororities in the four sub-councils: College Panhellenic Council, Interfraternity Council, Multicultural Greek Council, & National Pan-Hellenic Council.
- College Panhellenic Council (CPH): a sub-council of IGC and a member of the National Panhellenic Conference. Founded at SIU in 1931, it is the governing body of five sororities.
- Interfraternity Council (IFC): a sub-council of IGC and a member of the North American Interfraternity Conference (NIC). Founded at SIU in 1934, it is the governing council for 16 IFC fraternities.
- Multicultural Greek Council (MGC): a sub-council of IGC.

Serves as a governing body for the 6 culturally-based fraternities and sororities.

- **National Pan-Hellenic Council (NPHC):** a sub-council of IGC and a member of the National Pan-Hellenic Council, Inc. NPHC is the governing council for the local chapters of historically established African-American fraternities and sororities whose inter/national organization maintains membership in the NPHC, Inc.

Fraternity and Sorority Events:

- **Greek Sing (since 1934):** held each Saluki Family Weekend on the steps of Shryock Auditorium.
- **Variety Show (since 1947):** held in the spring semester at Shryock Auditorium and is open to all SIU students. Originally founded by SIU's Theta Xi Fraternity.
- **Greek Week:** a week of events that are held in the spring semester to unify all fraternities and sororities.
- **St. Jude Children's Research Hospital's Up 'til Dawn:** every fall semester nearly the entire fraternity & sorority community along with hundreds of other SIU students send letters to their friends and family to raise funds for St. Jude's. SIU ranks as one of the top schools in the country in raising funds for the hospital.
- **Safe Halloween:** a safe, fun, and kid-friendly event held annually in the Student Center for area children on Halloween.
- **Walk a Mile in her Shoes:** this event, in collaboration with the Women's Center, raises awareness regarding domestic violence. Men from the campus & community come together and walk a mile in high heel shoes to raise additional awareness. This event is organized by the Interfraternity Council.
- **Service to Southern Award:** since 1947, this award is given to an outstanding graduating SIU senior for their campus leadership and service. This award continues to be the highest honor a student can receive on our campus for involvement in co-curricular activities.

Non-Traditional Student Services

The office of Non-Traditional Student Services (NTSS) assists adult students with their transition into and through the campus learning environment by serving as a campus and community resource referral agency for students who may be non-traditional as defined by employment status, family status (spouse and/or dependents), gap in education, commuter status, etc. NTSS also serves as a resource for non-traditional student concerns in addition to promoting campus awareness of and response to SIU's adult student population, their spouses, and family members. Additional services include:

- Complete resource guide, transition checklist, childcare resources, scholarship information, and comprehensive monthly newsletter available at nontrad.siu.edu.
- **Family ID Card** provides opportunities for the spouse, domestic partner, or dependent children of enrolled students to participate in designated campus programs and activities.

Phone (618) 453-7521 or nontrad.siu.edu.

Saluki Cares

Saluki Cares facilitates and coordinates a university-wide program of care and support for students in distress. By working closely with faculty, staff, students and their families, SIU Carbondale displays a culture of caring by demonstrating to our students and families that they are an important part of the community.

Saluki Cares is an early alert initiative composed of professionals from different areas of campus life who work with students on a regular basis: Academic units, Student Life & Intercultural Relations, New Student Programs, International Programs & Services, Counseling Center, Public Safety, University Housing, University College, Wellness Center, and others. All concerns remain confidential. Referrals are made from faculty, staff, parents, other students or by the student him/herself.

HOW CAN WE HELP?

We are here for you. Saluki Cares offers students a supportive and encouraging partnership by linking them with appropriate resources. This partnership affords students opportunities to overcome personal and educational barriers encountered on their path to success.

TO NOTIFY SALUKI CARES OF A CONCERN PLEASE CONTACT:

Phone: 618-453-1492

Email: siucares@siu.edu

Website: salukicare.siu.edu

For emergencies, please call 911 and/or contact the SIU Dept. of Public Safety at 618-453-3771

SUPPORT

The Saluki Cares team can help students with issues surrounding, but not limited to:

- Adjustment Issues
- Academic Performance Concerns
- Homesickness
- Financial Stress
- Deaths (Student/ Family)
- Extended Illnesses
- General Welfare Concerns
- Other Signs of Stress

Student Involvement (SI)

The Office of Student Involvement actively strives to provide opportunities for students to enhance their leadership capacity and strengthen their campus engagement. Through environments that are socially just, culturally engaged, and civically involved, the office will enrich the students overall educational experience. Student Involvement is located in the Student Life Office, (third floor of the Student Center). Phone (618)453-5714.

The office supports over 400 Registered Student Organizations (RSOs), which offer opportunities for involvement in many different categories, (i.e. Club sports, government, Greek letter, academic, and more). Students interested in joining an existing RSO or creating a new one should visit www.getinvolved.siu.edu. **SI Programs:**

1. Involvement Fair each semester.
2. Annual SIU Leadership Conference- A student lead

conference during the fall semester.

3. Leadership and Involvement Celebration- Annual celebration in the spring semester that recognizes the amazing work of our student community.
4. President's Leadership Academy - Leadership development program for RSO Presidents.
5. Leadership development programs for all SIU students.

SILD Services:

1. Training and workshops for RSOs and classes.
2. Online support for RSO registration.

Students' Legal Assistance Office

The services of the Students' Legal Assistance Office are available without charge to all fee-paying undergraduate and graduate students. Students must pay any court costs or fees incurred outside of this office. The two lawyers and second and third year law students advise clients, and in certain situations, will represent them in court. The office may not handle criminal cases, contested domestic cases, bankruptcy and other fee-generating cases. The lawyers may not draft wills or represent clients in probate, real estate or business matters. Additionally, they may not represent one student against another student, against the State of Illinois, or against SIU. The office is located on the fourth floor of the Student Services Building. Students should call (618) 536-6677 to make an appointment between the hours of 8:00 a.m. to 4:30 p.m., Monday through Friday. Visit the Students' Legal Assistance website for information on services provided: <http://www.studentlegal.siu.edu/>.

Student Rights and Responsibilities

The Office of Student Rights and Responsibilities (SRR) serves as a resource for the University community in understanding and applying the Student Conduct Code. The office strives to enhance a sense of community, accountability and responsibility. This is accomplished through educational outreach, one-on-one interactions with students and the enforcement of educationally based sanctions to address violations of the Student Conduct Code and other university policies. SRR works to balance the individual needs of each student with the needs of the academic community to find positive outcomes for all involved parties. If you have questions about the Student Conduct Code, your rights as a student, or if you believe a student has violated the Student Conduct Code or another policy, please call our office at 618-536-2338 or visit us online at <http://srr.siu.edu>. All students are responsible for knowing and following the Student Conduct Code which is available on our website.

Veteran's Services

Our Mission is to make Veterans' transition from the military to SIU a seamless, simple and stress-free process. The Veterans Services office will assist with the application and reporting process to take advantage of veteran educational benefits including Illinois Veterans Grant, National Guard Grant MIA/POW scholarship, and GI Bill programs. We have information and checklists to help veterans, active duty military members, members of the National Guard and Reserve and dependent family members transition to the university. If you have any questions about the process for admission, enrollment or use of

military benefits please contact the veterans' services office. After enrollment, we continue to provide assistance through peer support and referrals to on- and off-campus service providers. We are fortunate to have two US Department of Veterans Affairs personnel available on campus under the Veterans Integrated to Academic Leadership (VITAL) program. If you have any issue or question we'd love to help. Contact the Veterans Center by phone (618) 453- 1335 or visit the website at <http://www.veterans.siu.edu/>.

ENROLLMENT MANAGEMENT

Bursar

The office of the Bursar is committed to excellence in providing financial services to students and the Southern Illinois University community. We are responsible for billing, collecting, re-funding, and accounting of students' tuition and loan accounts, as well as other institutional receivables, and also provide the means to help understand basic aspects of an account with Southern Illinois University. Our mission is to provide these services in the most efficient, friendly, effective and customer-oriented fashion possible. Please contact us by telephone: (618) 453-2221, e-mail: bursar@siu.edu, or visit our website at <http://www.bursar.siu.edu>. Additional student information is also available through SalukiNet: <http://salukinet.siu.edu>.

Center for International Education (CIE)

CIE is responsible for developing and supporting faculty, staff, and students in international education. The office administers International Students and Scholars, Study Abroad Programs, and International Development. Units of CIE are located in the Northwest Annex B. Phone (618) 536-7771.

International Students and Scholars

This division provides comprehensive programs and services for international students and scholars from pre-arrival correspondence to post-graduate concerns. These programs and services include processing of admission applications, serving as liaison with foreign governments and sponsoring agencies, providing certification for foreign currency exchange, and other needs. This office has been designated by the United States Citizenship and Immigration Services (USCIS) as having the official responsibility for interpretation and adherence to laws and regulations as they apply to non-immigrant students and faculty. Also, designated responsible officers administer proper compliance with the State Department's Exchange Visitor Program for the University. Assistance with regulations, forms, and procedures is provided to all non-immigrants related to University and broader community affairs.

Integral educative services include orientation programs, arrival and housing assistance, personal counseling and referral, a *Handbook for International Students and Faculty*, a newsletter, *The International Dateline*, advisement of international student associations, and numerous workshops and seminars on topics of importance for students.

Special programs, which promote an international dimension of cross-cultural exchange to the broader community, are provided. An annual International Festival and various national day celebrations are held. The Community Programs sub-divi-

sion in cooperation with the International Friends Club coordinates a Host Family Program, International Speakers' Bureau, English in Action, Language Exchange, American and International Cooking Exchange, an International Spouses Group and a Loan Closet.

The International Students and Scholars division is located on the first floor of the Northwest Annex B. (618) 453-5774.

International Development

This division provides University-wide leadership, coordination, and support for a wide variety of international activities. These activities include international recruitment and enrollment management, research and dissemination of information on external funding opportunities, maintenance of an international projects database and a resource library, development of grants and projects, administration of international projects, linkages and agreements, promotion of women in international development activities, sponsorship of international development forums, and assistance with international visitors and protocol. Assistance also is provided in the exploration of project ideas, identification of funding sources, development of proposals, negotiation of contracts, and administration of externally funded activities.

International Development is located in the Northwest Annex, Building B. Phone (618) 453-3070.

Study Abroad Programs

Coordinates overseas services for American students, including international grant programs, exchanges and study abroad programs. It is the central referral point for information on the student Fulbright program, National Security Education Program and The British Marshall Program. Graduate students may also participate in inter-university international exchange programs and in travel/study programs offered during the summer and intercession period under the auspices of this division. Study Abroad Programs is located on the second floor of Northwest Annex, Building B. Phone (618) 453-7670. New programs are developed regularly so please check our website: www.cie.siu.edu/sa.

International Studies in Austria. Consists of one or two semesters of study in German, Austrian life and culture, political science, business, fine arts and communications at the SIU program in cooperation with Salzburg College in Salzburg, Austria. All courses, except German, are taught in English and will vary from term to term. No prior German is required, although it is recommended.

University Veritas. Consists of one month intensive Spanish modules up to a full semester. A variety of classes are offered depending on the term. No prior Spanish is required. The program is offered in cooperation with Universidad Veritas in San José, Costa Rica.

University of Wales Swansea. Consists of one or two semesters at Swansea, Wales, Great Britain. The pre-session course British Life and Culture is required. Beyond that, students have a wide number of classes available in a variety of subjects. Swansea is considered one of the best places to live in the United Kingdom.

International Student Exchange Program. This exchange program is multilateral and involves one-year placements at 100

study sites worldwide. It is a one-for-one exchange plan under which students pay their normal tuition and fees, including room and board, and apply credit earned toward their degrees. There are study sites in Africa, Asia, Australia, the British Isles, Canada, Europe, and Latin America. Applicants must be mature, have a minimum grade point average of 2.75, and possess the appropriate foreign language skills. Acceptance into the program is considered an honor bestowed in lieu of a scholarship. Most forms of financial aid can be used for this program.

Short-Term Program. Short-term courses are offered during intersession as well as during the summer months. Students must register two to four months prior to the start of the course and may earn graduate or undergraduate credit depending upon the nature of the course. Approximately ten offerings are available during each academic year, ranging in length from one week to two months. Full-time faculty of Southern Illinois University teach the courses and most do not require a specialized foreign language background.

Utrecht Network. The University participates in an exchange program with a consortium of European Community universities coordinated by Utrecht University in the Netherlands. There are currently possible exchange sites in Austria, Belgium, Czech Republic, Denmark, France, Germany, Greece, Iceland, Ireland, Italy, Malta, Netherlands, Norway, Portugal, Slovenia, Spain and Sweden.

Council on International Educational Exchange. The University is an institutional member of this organization, which sponsors study abroad programs around the world, and various work abroad programs.

Bi-Lateral Exchange Program

Bi-Lateral Exchanges. The university offers a number of bi-lateral exchanges with individual universities around the world. These currently include options in Australia, Austria, France, Germany, Japan and Switzerland. Please contact Study Abroad Programs for the latest listing and further information.

Individual Opportunities

Credit might be earned through **(a)** a department's independent study courses such as readings, individual research, practicum or related types of courses with prior departmental approval; or **(b)** a department or college's travel/study course where offered.

Other Programs

Southern Illinois University Carbondale may also grant credit for programs not sponsored by the University. A student may enroll in a travel/study program conducted by a regionally accredited United States institution and transfer the credit to this university. Credits earned in this manner will be evaluated as electives unless a department, program, or the Registrar's Office approved the courses in advance to apply toward specific requirements. Additional information may be obtained from Study Abroad Programs.

A student may enroll in either a foreign institution or an independent location of a foreign institution. It is important that the student check with International Admissions before registering since many foreign institutions are not accredited. Graduate students should check with the Graduate School. Credits earned in this manner will count as electives only un-

less a department or program approves them to apply toward specific requirements.

Financial Aid

The Financial Aid Office administers federal, state, and institutional financial aid programs for SIU undergraduate, graduate and professional students. In Fiscal Year 2013, 17,815 students received \$282,488,206 in financial aid awards. Besides financial aid and scholarship processing, Financial Aid includes Student Employment Services. See additional information in Chapter One of this catalog or visit the website at www.fao.siu.edu.

Registrar's Office

The Office of the Registrar is the official academic records office at SIU. We provide administrative services and academic support to currently enrolled students and the campus community, as well as to prospective and former students. The primary goals of the Registrar's Office are to assist students in the registration process, assess tuition and fees, monitor students academic progress, and determine eligibility for degree. The Registrar's office also provides many specialized services for student such as schedules classes and examinations into appropriate facilities, registers students for classes, academic record adjustments and updates, and assists with the coordination of graduation. The Registrar's Office guides academic departments in complying with SIU's policies and procedures pertaining to the observance of the academic calendar, examinations and grading practices. The Registrar's Office maintains timely and accurate academic records, and ensures the privacy and security of those records. The Registrar's Office acts to facilitate, implement and enforce academic policy in a manner that is sensitive to the needs of those that SIU seeks to serve.

The Registrar's Office places service to students, faculty, administrators, and alumni first among its priorities, recognizing these persons as the Office's primary constituency. As a primary information resource for students and faculty, this office actively seeks ways to effectively communicate and to inform students about academic policies and procedures, and to provide prompt access to information. The office also seeks ways to continuously improve the quality of service provided, and to anticipate ways to better meet the changing needs of the Campus Community. The Registrar's Office strives to be a leader in the use of technology based solutions including database development and a web presence to better meet customer needs. For more information about the services provided by the Registrar's Office, visit our website at <http://registrar.siu.edu>.

Transitional Programs

Transitional Programs conducts exit interviews for all undergraduate students contemplating withdrawal from the University and reviews requests for credit/refund of tuition and fees. Students contemplating withdrawal from the University are encouraged to contact Transitional Programs prior to leaving the campus. Phone (618) 453-7041.

Student Absence notifications provide a method of notifying instructors of the reasons for student absences from class. This is only for emergency situations.

Transitional Programs serves as the official office of record regarding all student deaths, including those of former stu-

dents, and provides special assistance to surviving parents or family members by notifying appropriate University offices so that institutional records may be adjusted to remove the name of the deceased student.

Powers of Attorney arranges to act for a student to negotiate a campus check to pay any outstanding bills owed to SIU in cases where the student may be unable to be on campus to claim the check because of graduation, internship, practicum experiences, or student teaching assignment. (618) 453-7041.

Intercollegiate Athletics

Excellence on the field of competition and in the classroom remains the standard for Southern Illinois University Carbondale's athletics program, which provides 18 sports for men and women. All intercollegiate sports compete at the NCAA Division I level, with football competing in the Football Championship Subdivision (FCS). Students only need to bring their valid student ID for admission into Saluki sporting events.

Sports are offered in basketball, baseball, cross country, football, golf, softball, swimming and diving, tennis, track and field, and volleyball. All Saluki sports compete within the Missouri Valley Conference (MVC), except for football, which belongs to the Missouri Valley Football Conference (MVFC), and men's swimming and diving, which competes in Mid-American Conference (MAC). The proud Saluki tradition includes many former professional and Olympic athletes as well as recent NCAA post-season appearances by men's basketball, football, softball, men's swimming and diving and men's and women's track and field. Women's track and field student-athletes have brought home five individual national championships in recent years.

Student-athletes routinely gain high marks in the classroom. During the 2013-2014 academic year, over 60 percent of the University's varsity sports participants earned a term grade-point average of 3.0 or above (4.0 scale). Almost nine of every ten student-athletes who complete their athletic eligibility at SIU earn their Baccalaureate degrees.

Newspaper

The Daily Egyptian, campus and community newspaper, is published when the University is in session Monday through Thursday, spring and fall semesters and Wednesday and Thursday during the summer session, as well as Wednesdays during intersession periods. It serves as a morning daily newspaper for the University and local communities. The Daily Egyptian is produced under professional supervision, using student editors and staff. About 75 students work at news-gathering, editing and layout, production, advertising and distribution. The circulation is about 7,800 copies per day. Students do not have to be enrolled in journalism to be employed in the newspaper departments of news, photography, digital design and imagery, advertising, business, printing, and circulation.

SIU Arena

The SIU Arena was built in 1964 and most recently renovated in 2010 at a cost of \$20M. SIU Arena has a capacity of 8,339 for basketball games and is equipped to provide tenants with almost unlimited flexibility for a variety of events. SIU Arena has hosted all genres of concerts, trade shows, family events, and other special events. The facility is operated by Intercol-

legiate Athletics and is home to all Saluki Men's and Women's basketball games.

Shryock Auditorium

Located on the old campus of Southern Illinois University Carbondale, Shryock Auditorium stands as the finest performing arts center in southern Illinois.

Constructed in 1917 and named after University president Henry William Shryock, the facility was renovated in 1970 at a cost of 1.5 million dollars. Upon re-opening in January 1971, guests were pleased and surprised to find a new decor of opulent grand opera splendor, while the original motif of the building had been retained.

As the largest auditorium on campus, seating 1,215, Shryock Auditorium is well equipped to handle almost any type of event, from the performing arts on a grand scale to large group meetings and conferences. Facilities include dressing rooms capable of accommodating up to 70 performers, modern stage rigging, lighting and sound systems, and air conditioning throughout the audience areas.

Shryock Auditorium annually presents the finest in touring musicals, plays, ballet, modern dance, opera, international entertainment, and big bands. In addition, the Auditorium is utilized by recognized student organizations and by non-student on-campus groups when the event is of educational, cultural, or social significance.

The beautiful decor and appointments of Shryock Auditorium, with the nostalgic memories surrounding this old campus landmark, make it one of the places to which students and alumni return and proudly show campus visitors year after year. For more information, visit www.shryock.siu.edu.

University Museum

The University Museum, now located in Faner Hall, has been a repository of artifacts since its first director, Dr. Cyrus Thomas, was commissioned to begin collecting for a museum by the Board of Trustees of Southern Illinois Normal University some time before 1871. The museum formally opened to the public in 1874. Today, the University Museum, with 75,000 artifacts, is the largest encyclopedic museum in southern Illinois. The Museum provides leadership and assistance for museums throughout southern Illinois. The American Alliance of Museums has accredited the University Museum since 1977.

The University Museum, a public steward and educational resource, serves the University and the larger community by collecting, preserving, researching, and exhibiting an encyclopedic range of artifacts illuminating the arts, humanities, and sciences. Changing exhibits include regular series of shows by graduate students, faculty and others beyond the campus. As a teaching institution, the museum offers in-depth, practicum classes and opportunities in the practice of Museology through its undergraduate Museum Studies minor. 400- and 500-level courses in museum studies are offered through the Department of Anthropology, Department of History, Department of Political Science, and the School of Art and Design.

WSIU Public Broadcasting

WSIU Public Broadcasting is licensed to the Board of Trustees of Southern Illinois University and is an integral part of the College of Mass Communication & Media Arts on the Carbondale campus. WSIU's mission is to improve the quality of life of the people they serve. The WSIU stations partner with other community organizations to promote positive change and to support the academic and public service missions of Southern Illinois University Carbondale (SIU).

WSIU Television and WSIU Radio are member stations of PBS and NPR. WSIU reaches more than three million people across five states and beyond through digital television channels WSIU-TV 8.1, 8.2, 8.3 / WUSI-TV 16.1, 16.2, 16.3; radio stations WSIU 91.9 FM/HD, WUSI 90.3 FM, WVSI 88.9FM; an interactive website at wsiu.org; and a nationally-recognized education and community outreach department.

WSIU Radio also operates the Southern Illinois Radio Information Service (SIRIS), a radio reading service for individuals who are blind or have other physical disabilities that make reading difficult or impossible. WSIU also offers professional development opportunities for students seeking experience in the broadcast industry. Each year hundreds of students receive hands-on training in broadcast news, program production, station operations, graphic design, promotions, marketing, accounting, office systems, and more. Former students represent WSIU and SIU with distinction at media organizations such as CNN, ESPN, ABC, NBC, and Fox, and at radio, television, cable, and satellite outlets in the U.S. and abroad.

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7 / University Policies



Determination of Residency Status

[The following has been reorganized and edited for undergraduate students. The full text appears as SIU Board of Trustees 3 Policies A.]

Establishment of Residency

Southern Illinois University Carbondale Board of Trustee policy requires students to establish residency in Illinois six consecutive months immediately preceding the beginning of the term.

Bona Fide Residence

For tuition purposes a *bona fide residence* is a domicile of an individual, which is the true, fixed, permanent home, and place of habitation. It is the place to which, whenever absent, the individual has the intention of returning.

Criteria to determine this intention include but are not limited to year around residence, voter registration, place of filing tax returns (home state indicated on federal tax return for purposes of revenue sharing), property ownership, driver's license, car registration, vacations, and employment.

Except for those exceptions clearly indicated in these regulations, in all cases where records establish that the person does not meet the requirements for resident status as defined in these regulations, the non-resident status shall be assigned.

Procedure for Review of Residency Status or Tuition Assessment

A student who takes exception to the residency status assigned or tuition assessed shall pay the tuition assessed but may file an application with the Registrar's Office for a reconsideration of residency status and an adjustment of the tuition assessed.

The application and supporting documents must be filed within thirty (30) school days from the date of assessment of tuition or the date designated in the official university calendar as that upon which instruction begins for the academic period for which the tuition is payable, whichever is later, or the student loses all rights to a change of status and adjustment of the tuition assessed for the term in question.

If the student is dissatisfied with the ruling in response to the application made within said period, the student may appeal the ruling to the chancellor's designee by filing a written request with that official within twenty (20) days of the notice of the ruling.

Definitions of Terminology

To the extent that the terms *bona fide residence*, *independent*, *dependent*, and *emancipation*, are not defined in these regulations, definitions shall be determined by according due consideration to all of the facts pertinent and material to the question and to the applicable laws and court decisions of the State of Illinois.

The term *the State* means the State of Illinois.

Residency Determination

Evidence for determination of residence status of each applicant for admission to the university shall be submitted to the Admissions Office at the time of application for admission. A student may be reclassified at any time by the university upon

the basis of additional or changed information. However, if the university has erroneously classified the student as a resident, the change in tuition shall be applicable beginning with the term following the reclassification; if the university has erroneously classified the student as a nonresident, the change in tuition shall be applicable to the term in which the reclassification occurs, provided the student has filed a written request for review in accordance with these regulations. If the university has classified a student as a resident based on false or falsified documents, the reclassification to nonresident status shall be retroactive to the first term during which residency status was based on the false or falsified documents.

Adult Student

For the purpose of these regulations an *adult* is considered to be a student 18 years of age or over; a *minor* student is a student under 18 years of age. An adult, to be considered a resident, must have been a *bona fide* resident of the State for a period of at least six consecutive months immediately preceding the beginning of any term for which the individual registers at the university; and must continue to maintain a *bona fide* residence in the State, except that an adult student whose parents (or one of them if one parent is living or the parents are separated or divorced) have established and are maintaining a *bona fide* residence in the State and who resides with them (or the one residing in the State) or elsewhere in the State will be regarded as a resident student.

Minor Student

The residence of a minor shall be considered to be and to change with and follow:

1. that of the parents, if they are living together, or living parent, if one is dead; or
2. if the parents are separated or divorced, that of the parent to whom the custody of the person has been awarded by court decree or order or, in the absence of a court decree or order, that of the parent with which the person has continuously resided for a period of at least six consecutive months immediately preceding registration at the university; or
3. that of the adoptive parents, if the person has been legally adopted and, in the event the adoptive parents become divorced or separated, that of the adoptive parent whose residence would govern under the foregoing rules if that parent had been a natural parent; or
4. that of the legally appointed guardian of the person; or
5. that of the *natural* guardian, such as a grandparent, adult brother or adult sister, adult uncle or aunt, or other adult relative with whom the person has resided and by whom the student has been supported for a period of at least six consecutive months immediately preceding registration at the university for any term, if the person's parents are dead or have abandoned said person and if no legal guardian of the person has been appointed and qualified.

Parent or Guardian

No parent or legal or natural guardian will be considered a resident of the State unless said person

1. maintains a *bona fide* and permanent place of abode within the State, and

2. lives, except when temporarily absent from the State with no intention of changing the legal residence to some other State or country, within the State.

Emancipated Minor

If a minor has been emancipated, is completely self-supporting, and actually resides in the State, the minor shall be considered to be a resident even though the parents or guardian may reside outside the State. An emancipated minor who is completely self-supporting shall be considered to *actually reside in the State of Illinois* if a dwelling place has been maintained within the State for a period of at least six consecutive months immediately preceding term registration at the university. Marriage or active military service shall be regarded as effecting the emancipation of minors, whether male or female, for the purposes of this regulation. An emancipated minor whose parents (or one if only one parent is living or the parents are separated or divorced) have established and are maintaining a bona fide residence in the State and who resides with them (or the one residing in the State) or elsewhere in the State will be regarded as a resident student.

Married Student

A nonresident student, whether male or female, or a minor or adult, or a citizen or non-citizen of the United States, who is married to a resident of the State, may be classified as a resident so long as the individual continues to reside in the State; however, a spouse through which a student claims residency must demonstrate residency in compliance with the requirements applicable to students seeking resident status.

Persons Without United States Citizenship

A person who is not a citizen of the United States of America who meets and complies with all of the other applicable requirements of these regulations may establish residence status; unless the person holds a visa, which on its face precludes intent to reside in the United States.

Armed Forces Personnel

A person who is actively serving in one of the Armed Forces of the United States and who is stationed and present in the State in connection with that service and submits evidence of such service and station, shall be treated as a resident as long as the person remains stationed and present in Illinois.

If the spouse or dependent children of such member of the Armed Forces also live in the State, similar treatment shall be granted to them.

A person who is actively serving in one of the Armed Forces of the United States and who is stationed outside the State may be considered a resident only if the individual was a resident of the State at the time of entry into military service, except as otherwise specified by board policy.

A person who is separated from active military service will be considered a resident of Illinois immediately upon separation providing this person:

1. was a resident of the State at the time of enlistment in the military service; became treated as a resident while in the military by attending school at SIU while stationed in the State; or

2. has resided within the State for a period of six months after separation.

State and Federal Penitentiary

A person who is incarcerated in a State or Federal place of detention within the State of Illinois will be treated as a resident for tuition assessment purposes as long as said person remains in that place of detention. If bona fide residence is established in Illinois upon release from detention, the duration of residence shall be deemed to include the prior period of detention.

Minor Children of Parents Transferred Outside the United States

The minor children of persons who have resided in the State for at least six consecutive months immediately prior to a transfer by their employers to some location outside the United States shall be considered residents. However, this shall apply only when the minor children of such parents enroll in the university within 5 years from the time their parents are transferred by their employer to some location outside the United States.

Dependents of University Employees

For purposes of tuition assessment, all faculty, staff (including civil service employees), and graduate assistants, as well as their spouses and dependent children, shall be considered as resident students. The non-resident portion of tuition is waived for the spouses and dependent children of fellows, assistants and trainees who are appointed as fellows, assistants and trainees to the fullest extent permitted by their appointment.

Contractual Agreements

The chancellors, with the approval of the president, may enter into agreements with other institutions in or out of state under the terms of which students at the other institutions are defined as residents of the State of Illinois.

Policy on the Release of Student Information and Access to Student Records at Southern Illinois University Carbondale

I. Purpose

Southern Illinois University Carbondale ("the University") maintains records and information about its students for the purpose of providing educational, vocational, and personal services to the student. The University is committed to complying with the Family Educational Rights and Privacy Act of 1974 (20 U.S.C. 1232g) and the regulations promulgated thereunder ("FERPA"). For the purpose of complying with FERPA, the following Policy has been enacted.

II. Definitions

- A. "Student" means any individual who is or has been enrolled at Southern Illinois University Carbondale in a course of study either on campus or off campus. The term "enrolled" is defined as having registered and paid fees into a course of study.
- B. "Student Education Records" or "Education Records" means those records, files, documents, and other materials

which contain information directly related to the student and are maintained by the University or by any party acting for the University. The term does not include:

1. Personal records of instructional, supervisory, and administrative personnel which are kept in the sole possession of the maker, are used only as personal memory aids, and are not accessible or revealed to any other person except a temporary substitute for the maker of the record; or
 2. Employment records relating to an individual who is employed by the University provided that the individual's employment is not as a result of his/her student status and the records are made and maintained in the normal course of business, related exclusively to the individual in his/her capacity as an employee, and not available for use for any other purpose.
 3. Records made or maintained by a physician, psychiatrist, psychologist, or other recognized professional or paraprofessional acting in his or her professional capacity or assisting in a paraprofessional capacity provided; however, that such records can be personally reviewed by a physician or other appropriate professional of the student's choice and provided that the record is:
 - i. Made, maintained, or used only in connection with treatment of the student; and
 - ii. Disclosed only to individuals providing the treatment. For purposes of this definition, "treatment" does not include remedial educational activities or activities that are part of the program of instruction at the University.
 4. Records that only contain information relating to an individual after that individual is no longer a student at Southern Illinois University Carbondale.
 5. Records of the Department of Public Safety are not educational records and thus not subject to the provisions of this Policy provided the records are:
 - i. Created by the law enforcement unit for a law enforcement purpose;
 - ii. Maintained by the Department of Public Safety; and
 - iii. Not disclosed to individuals other than law enforcement officials of the same jurisdiction.
- C. "Student Information" means any information contained in an educational record as defined in II.B.
- D. "Legitimate Educational Interest" means the need to review an education record in order for a University official to carry out his/her responsibilities in regard to performing an administrative task outlined in the official's duties, or performing a supervisory or instructional task directly related to the student's education.
- E. "Personally identifiable information" means any information that would make the student's identity easily traceable and includes but is not limited to:
1. The name of a student or family member of the student including but not limited to the names of the student's parents or spouse;
 2. The address of the student;
 3. A personal identifier such as the student's social security number, Dawg Tag number, or other student number; or

4. A list of personal characteristics which would make the student's identity easily traceable.

F. "Directory information" means:

1. Student name;
2. Student local and permanent address and telephone number;
3. Student email address (SIU-issued only);
4. Current and past term status (full-time, part-time);
5. Classification (freshman, sophomore, undergraduate, graduate, etc.);
6. Expected graduation date;
7. Academic unit;
8. Major;
9. Dates of attendance;
10. Degrees and honors earned and dates;
11. The most recent educational agency or institution attended prior to enrollment at Southern Illinois University Carbondale;
12. Participation in officially recognized activity or sport and the weight, height, pictures, and date of birth of athletic teams members;
13. Picture; and
14. For students appointed as fellows, assistants, graduate or undergraduate hourly employees, the title, appointing department, appointment dates, duties, and percent time of the appointment.

III. Policy on Disclosure of Student Educational Records.

- A. General Policy: Except as otherwise provided in this Policy, all requests for student educational records, other than directory information, shall not be disclosed absent a written authorization by the student for the release of those records. The appropriate recordkeeping office shall obtain this written consent prior to disclosing personally identifiable information. Written authorizations must be:
1. Signed and dated by the student giving the consent;
 2. Identify the specific record(s) to be disclosed;
 3. Identify the party or parties to whom the disclosure may be made; and
 4. State the purpose of the disclosure.
- B. When the disclosure of student educational records are made, the appropriate recordkeeping office shall, upon request, provide a copy of the records which are disclosed to the student. The University may disclose personally identifiable information from the education records of a student only on the condition that the party to whom the disclosure is made will not further disclose the information without the student's written consent, except in the case of disclosure of directory information pursuant to paragraph III(c)(i), responses to subpoenas or court orders pursuant to paragraph III(c)(Xii), or disclosures related to disciplinary proceedings pursuant to paragraph III(c)(x). For purposes of this policy, the Southern Illinois University Carbondale's Department of Public Safety shall be treated as an outside agency and will therefore be required to comply with regulations relating to the disclosure of information from students' educational records, as set forth in the policy.
- C. Disclosure to Parents (including legal guardians). Parents may not have access to student records except as follows:

1. The student signs a consent form that meets the requirements of this Policy; or
2. The parent sends a statement in writing certifying that the student is a dependent as defined Section 152 of the Internal Revenue Code of 1954. The statement must be accompanied by a copy of the last income tax form filed by the parent(s). Once this statement and attachment is received, parents may have the same access to the student's record as the student.

D. Exceptions to Prior Consent Requirements.

The University may disclose personally identifiable information from the education records of a student in the following circumstances without the prior consent of the student. Except for disclosures pursuant to (i), (x), (xii), or (xiii) below, disclosures of records under this subsection shall be on the condition that the party to whom the disclosure is made will not further disclose the information without the student's written consent.

1. Directory information in accordance with subsection D below.
2. University personnel who have a legitimate educational interest as defined above;
3. Officials of other schools or school systems in which the student seeks or intends to enroll, if there is a legitimate need as determined by the head of the unit from whom the records are sought;
4. Faculty or students conducting student characteristic research providing the research project has written approval of the academic unit executive officer sponsoring the research and providing guarantees are made that no personally identifiable information will be published or released;
5. Certain state and federal representatives specified by law for the sole purpose of the evaluation and auditing of governmentally funded programs in which the University participates, with the guarantee that the identity of the students will be protected;
6. State and local officials as directed by the State Statute adopted prior to November 19, 1974, as approved by University General Counsel;
7. Organizations conducting studies for, or on behalf of, state or federal educational agencies or institutions for the purpose of developing, validating, or administering predictive tests, administering student aid programs, and improving instruction, with the guarantee that the identity of the student shall be protected;
8. In connection with financial aid for which the student has applied or received if the information is necessary to determine eligibility for the aid, determine the amount of aid, determine the conditions for aid, or enforce the terms and conditions of the aid;
9. Accrediting organizations to carry out their accrediting function, with the guarantee that the identity of the student shall be protected;
10. The final results of a disciplinary proceeding, if the University determines the student is an alleged perpetrator of a crime of violence or non-forcible sex offense and the student has committed a violation of the school's rules or policies with respect to the allegation made against him/her. Victims of an alleged perpetrator of a crime of violence or a non-forcible sex offense may be provided with the final results of the disciplinary proceeding, regardless of the finding;
11. Appropriate individuals in connection with an emergency, if knowledge of such information is necessary to protect the health or safety of a student or other persons;
12. In compliance with a judicial order or subpoena provided that the University shall make a reasonable effort to notify the student in advance of compliance unless such notification requirement is otherwise exempted by law. All such orders or subpoenas shall be sent to the Office of General Counsel upon receipt for handling; and
13. Parents of a student who is under 21 years of age at the time of disclosure when the University has determined that the student has committed a violation of any federal, state, or local law or any rule or policy of the University related to the use or possession of alcohol or controlled substance.

E. Disclosure of Directory Information.

Directory information pertaining to students may be released by the University without the prior consent of the student unless the student has provided a written notification to Admission and Records that he/she does not wish for his/her directory information to be released without his/her prior consent. Upon receipt of this request, Office of the Registrar shall identify all information which the student desires not to be released outside the University and shall inform all University recipients of that information that the information is not to be released. The notification shall remain in effect until the student requests that the information no longer be restricted. All recipients of student information will be bound by this Policy.

F. Record of Disclosures.

Records custodians shall maintain a written record of each request for access to and disclosure of records containing personally identifiable information of a student with the records that were accessed. The record must identify the parties who requested and received a student's record(s) and their basis for such request. This record shall be maintained in the file for as long as the educational record is maintained. Records of disclosure are not required to be kept in the record of a student when the disclosure is initiated by the student, is to University officials with a legitimate educational interest, or is to a party seeking directory information.

IV. Identification and Description of Student Information.

A. Academic Records

The Office of the Registrar retains the official academic record of a student. It is a cumulative history of a student's academic participation and performance. Certain biographic and demographic information is also kept for identification for enrollment and research-related purposes. For information concerning these records contact the University Registrar. Academic records may also be maintained in academic units, departments, and divisions. For information concerning these records contact

the head of the academic unit, department, or division in question. Institutional Research also maintains some academic records. Admissions records are maintained by Undergraduate Admissions for undergraduate students and the Graduate School for graduate students.

B. Financial Records

Offices within the business area maintain certain financial records which relate to the payment and accounting of tuition, fees, and other charges. They also maintain records which record student loans and grants. For information concerning these records, contact the Bursar's office. For billing purposes, the Office of the Registrar maintains a record of financial aid received and tuition and fees paid. For information concerning these records, contact the the University Registrar. Financial Aid maintains records of students receiving loans, grants, and aid along with scholarship information and some academic information. It also maintains records pertinent to student employment including the family financial statement. For information concerning these records, contact the director of Financial Aid. Housing maintains records of housing accounts. For information concerning these records, contact the director of Housing.

C. Medical/Counseling/Clinical Center Records

The Health Service Clinic maintains medical records of students who have required medical assistance through the student health program. Only information pertinent to the health of the individual is contained therein. For information concerning these records, contact either the director of Student Health Programs or the medical chief of staff of the Health Service Clinic. The Counseling Center maintains records pertinent to services rendered by that office. For information concerning these records, contact the coordinator of the Counseling Center. The Clinical Center maintains records pertinent to services rendered by that office. For information concerning these records, contact the director of the Clinical Center.

D. Disciplinary Records

Student Rights and Responsibilities maintains records of disciplinary action which has been taken against a student with documentation pertaining thereto. That office also maintains only the academic information necessary to permit its functioning. For information concerning these records, contact the Director of Student Rights and Responsibilities.

E. Placement Records

University Career Services creates a record for those persons who wish to avail themselves of its services, with student's voluntary participation. This information is distributed to potential employers. It consists of self-completed resumes and various personal references. For information concerning these records, contact the director of University Career Services.

V. Student Rights related to Review and Inspect Educational Records.

A. Right to Inspect or Review Educational Records

A student has the right to review his/her educational records (except those records identified below) in the presence of a designated University representative. Students

who wish to review an educational record shall submit his/her written request for review to the appropriate office. That office shall comply with the request within a reasonable time, but in any case, compliance shall be no more than 45 days after the receipt of the request. If a student needs an explanation or interpretation of a record, he/she shall make that request for an explanation or interpretation to the University representative participating in the review. Upon receipt of a reasonable request(s) for an explanation or interpretation of a record, a qualified University representative shall provide such explanation or interpretation. This request shall be fulfilled within a reasonable time after the request is made. A student may not remove original records from the University's premises. The University shall provide a copy to the student only if not providing a copy would preclude review of the educational records by the student. Reasonable copying charges shall be assessed to the student. Copies of transcripts from other educational institutions will be provided only if the original source of those transcripts is no longer available or going to the original source would cause undue hardship as determined by this University.

B. Records exempted from student inspection or review. A student may not inspect or review the following records:

1. Financial records and statements of the student's parents;
2. Confidential letters or materials placed in records before January 1, 1975 so long as they were solicited with an understanding of confidentiality and are used only for the purpose for which they were written;
3. Confidential letters of recommendation and confidential statements of recommendation placed in the education records of the student after January 1, 1975, are subject to the student's right to inspect and review unless the student has signed a written waiver;
4. Any portion of a reports that involves two or more students unless that may be censored to protect the identity of the other students(s).

C. Waiver of Right to Review or Inspect Educational Records.

A student may waive his/her right to inspect and review education records. Any waiver must be in writing and signed by the student. The University (or each appropriate recordkeeping office) may not require a waiver of rights but it may request such a waiver. If a student has waived his/her right to see confidential letters of recommendation placed in his/her record after January 1, 1975, the waiver will be effective only if (i) the applicant or student is, upon request, notified of the names of all individuals providing the letters or statements; (ii) the letters or statements are used only for the purpose for which they were originally intended, and (iii) the waiver is not required by the University as a condition of admission to or receipt of any other service or benefit from the University. A waiver may be revoked but the revocation must be in writing and signed by the student. Revocation of waiver will affect only documents received after its execution.

D. Effects of an Administrative Hold.

When the University has placed an administrative hold on a student's ability to request a transcript, to register for a

subsequent term, to reenter the University after a period of attendance interruption, or to be officially graduated, the student may view such records but will not be able to obtain a copy of the record(s) until the administrative hold is removed through the appropriate University channels.

VI. Student Rights to Request Amendment of Educational Records.

A student has the right to request an amendment to the contents of an educational record on the ground that he/she believes it is inaccurate, misleading, or otherwise in violation of his/her privacy or other rights and to have inserted in the record his/her written explanation of its contents. Academic grade review procedures are covered in the University catalog and/or the particular academic unit, department, or division.

A. Request for a Review

A student who believes that an educational record is inaccurate or misleading may submit a written request for review and modification of the record to the University official responsible for the record. The written request shall clearly identify the part of the record the student wants changed and each and every basis for the allegation or belief that the record is misleading or inaccurate. Within 30 days following receipt of such request, the University official, or his/her representative, shall provide a written decision on the request to the student.

B. Hearing

If the student disagrees with the decision of the University official, he/she may submit a written request for a hearing on the matter to the Chancellor. The written request shall include the original written request, the decision of the hearing officer on that request, and an explanation/justification for the request for a hearing. No hearing shall be held if a hearing or the opportunity for a hearing is available through some other University process. The existing hearing processes (capricious grading, student disciplines) already provide for an opportunity to add, correct, or otherwise modify that record. The Chancellor or his/her designee shall appoint a hearing officer who does not have a direct interest in the outcome of the hearing. The hearing officer shall provide written notice of the hearing date and location to the student, sent to his/her last known address, not less than 10 days in advance of the hearing. The student and University official responsible for the record shall have the right to attend the hearing, to be advised by an individual of his/her choice at his/her own expense, including an attorney, and to call witnesses in his/her behalf. Hearings shall not be open to the public. The hearing officer shall issue a decision on the matter within ten (10) days following the hearing. A copy of the decision shall be provided to the student and the University official responsible for maintaining the record. The decision reached shall be based solely upon the evidence presented at the hearing and shall include a summary of the evidence and reasons for the decision. The hearing officer's decision is final.

VII. Destruction of Records.

The University may destroy education records when they are no longer necessary provided that educational records may

not be destroyed if there is an outstanding request to inspect or review them. Explanations of educational records placed in the record by the student and records of disclosure shall be maintained as long as the educational record to which they pertain is maintained.

VIII. Annual Notification to Students.

The Dean of Students or his/her designee shall provide a notification of rights and any other notifications required by law to students currently in attendance at the University of their rights under the Family Educational Rights and Privacy Act of 1974 (20 U.S.C. 1232g). All such notices shall be provided in a means that is reasonably likely to inform the students of their rights.

IX. External Complaints.

If a student believes that his/her rights have been violated, he/she should first file a complaint with the head of the office which maintains the records in question. After exhausting all remedies available within the University, the student may file a written complaint within one hundred eighty (180) days of the alleged violation to:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue Washington, D.C.
20202-4605

Policy Accommodating Religious Observances of Students

Admissions/Registration

The University's admissions process provides ample opportunity for admission and registration activities without conflicting with religious holidays and observances. However, students may receive another appointment when an appointment for admission counseling, or an appointment for academic advisement, or an appointment for registration for classes falls on a date or at a time that would conflict with the student's observances of major religious holidays. The individual student must notify in writing the appropriate admissions officer or academic advisor of the conflict with the student's observance of the religious holiday. That notification shall be made immediately after the student's receipt of the appointment or at least five work days prior to the appointment time, whichever is later.

Class Attendance

Students absent from classes because of observances of major religious holidays will be excused. Students *must notify the instructor at least three regular class periods in advance of an absence from class for a religious holiday* and must take the responsibility for making up work missed.

Examinations

Instructors are requested not to schedule class examinations on dates that would conflict with major religious holidays. In the event an examination must be scheduled on a date that conflicts with a student's required observance of a religious holiday, the student should be given reasonable opportunity to make up the examination. It is the student's responsibility to notify the instructor of the class when the examination will be

missed. That notification must occur at least three regular class meeting periods in advance of the absence or at the time the announcement of the examination is made, whichever is later.

Grievance Procedure

A student who believes he or she has been unreasonably denied an educational benefit due to his or her religious belief or practices may petition in writing as follows:

Cases involving class attendance or class examinations that are unresolved at the class instructor level may be appealed by the student by filing a petition in writing, within thirty (30) calendar days of the incident being appealed, to the chair or coordinator of the department or program in which the course is offered. In the event the case is not resolved to the student's satisfaction at the department/program level within five (5) working days after the chair's receipt of the petition, the student may petition in writing to the dean of the school or college to which that teaching department or program reports. The student's petition to the school or college level must be filed with the dean within five (5) working days of the decision at the department level. Should the case not be resolved to the student's satisfaction at the school or college level within five (5) working days of the petition filing at that level, the student may petition the Provost. If the student is still not satisfied at that level within the five (5) working day time period, he or she may petition to the Chancellor within another five (5) working days.

Decisions of the Chancellor may be appealed to the President, and to the Board of Trustees if necessary, in accordance with Bylaws of the Board of Trustees.

In cases involving admissions, *the grievance process should follow the time frames described above*, with the initial petition being filed with the Director of Admissions, which is the only filing point prior to the Provost.

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