1991-1992
UNDERGRADUATE CATALOG
PEGASUS was the winged horse of the muses in Greek Mythology. He carried their hopes, their aspirations, and their poetry into the skies. PEGASUS is as futuristic as tomorrow's space exploration in our solar system and into the universe beyond. The seal also bridges the gap between the humanities and space technology.

Accent on the Individual
and on Excellence
Policy Statement

The University of Central Florida, under applicable rules of the Administrative Procedures Act, may change any of the announcements, information, policies, rules, regulations, or procedures set forth in this catalog. The catalog is published once a year and cannot always reflect new and modified regulations. Statements in this catalog may not be regarded in the nature of binding obligations on the institution or the State of Florida. While every effort will be made to accommodate the curricular needs of students, limited resources may prevent the University from offering all required courses in each semester or in day and evening sections.

Students will be held accountable for the requirements, policies, and procedures described in this catalog. Additional information or clarification of any policy or procedure may be obtained from the specified office.

The University of Central Florida values diversity in the campus community. Accordingly, discrimination on the basis of race, sex, national origin, religion, age, handicap, marital status, parental status, or veteran's status is prohibited.

Sexual harassment, a form of sex discrimination, is defined as unwelcome sexual advances, requests for sexual favors, or verbal or physical conduct of a sexual nature when:
1) submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or enrollment;
2) submission to or rejection of such conduct by an individual is used as the basis for employment or enrollment decisions affecting such individual, or
3) such conduct has the purpose or effect of substantially interfering with an individual's work performance or enrollment, or creating an intimidating, hostile, or offensive working environment.

Sexual harassment is strictly prohibited and will be dealt with in accordance with University rule.

Employees, students, or applicants for employment or admission may obtain further information on this policy, including grievance procedures, from the Equity Coordinator. The Director of the Office of Equal Opportunity and Affirmative Action Programs is the campus Equity Coordinator responsible for concerns in all areas of discrimination. The office is located on the main campus, in Administration 329, Orlando, Florida 32816-0030. The phone number is (407) UCF-1EEO.

Drug-Free Workplace/Drug-Free Schools Policy Statement

The University of Central Florida, in accordance with legislation passed by the federal government as part of the war on drugs program, has adopted the policy statement, DRUG-FREE WORKPLACE/DRUG-FREE SCHOOLS. Information regarding this policy may be obtained in the Office of Personnel Services (AD 230) or the Division of Student Affairs (AD 282).
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This publication was produced at an annual cost of $54,372.00 or $1.36 per copy to inform prospective students of the educational opportunities available at the University of Central Florida and to inform enrolled students of undergraduate academic degree program requirements.

Reader comments and suggestions for improving the usefulness of this catalog may be sent to: Catalog, Office of Undergraduate Studies, AD 210/208B, UCF, Orlando, FL 32816-0125, Phone (407) 823-5907.
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Provost and Vice President for Academic Affairs ...................... Richard Astro
Associate Vice President for Academic Affairs ........................ Frank E. Juge
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<tr>
<td>Associate Vice President</td>
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<td>Associate Vice President and Director, Brevard</td>
<td>Robert W. Westrick</td>
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<td>Associate Vice President and Director, Daytona</td>
<td>Sarah Pappas</td>
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<tr>
<td>Auxiliary Programs</td>
<td>Thomas A. Shostak</td>
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<tr>
<td>Coordinator for Special Projects</td>
<td>Robert L. Arnold</td>
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<td>Director, International Studies and Programs</td>
<td>Denise Young</td>
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<td>Director, Project for Humanities</td>
<td>Stuart Omans</td>
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<td>Dean of Undergraduate Studies</td>
<td>Stuart A. Lilie</td>
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<td>Associate Dean, Undergraduate Studies</td>
<td>Paul R. McQuillkin</td>
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<td>C. Barth Engert</td>
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<td>Chair, Aerospace Studies (AFROTC)</td>
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<td>Director, Community College Relations</td>
<td>Ralph C. Boston</td>
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<td>Director, Cooperative Education</td>
<td>Sheri E. Dressler</td>
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<td>Director, Honors Program</td>
<td>Mark Stern</td>
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<td>Cecelia H. Rivers</td>
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<td>Director, Special Programs</td>
<td>Cecelia H. Rivers</td>
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<td>Director, Student Academic Resource Center</td>
<td>Mary Helen Callarman</td>
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<td>Director, Student Academic Support Systems</td>
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<td>Director of Records and Registration</td>
<td>Renee K. Simpson</td>
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<td>Dean, Extended Studies</td>
<td>John B. O'Hara</td>
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<td>Director of Libraries</td>
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<td>Dean of Graduate Studies</td>
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### Office of the Vice President for Research

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<tr>
<td>Vice President for Research</td>
<td>Michael Bass</td>
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<tr>
<td>Director of Research</td>
<td>Rusty Okoniewski</td>
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<td>Contracts and Grants Manager</td>
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<tr>
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<td>Julie Voorhees</td>
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<td>James E. Robertson</td>
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### Office of the Vice President for Administration and Finance

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<tr>
<td>Vice President for Administration and Finance</td>
<td>John R. Bolte</td>
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<tr>
<td>Associate Vice President</td>
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<td>Assistant Vice President, Facilities and Safety</td>
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<td>Director, Budget Office</td>
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Director, Personnel Services ................................................................. Mark A. Roberts
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Associate Dean ...................................................................................... TBA
Assistant Dean .......................................................................................... Bruce A. Whisler
Assistant Dean .......................................................................................... TBA
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Chair, Mathematics ................................................................................ Lokenath Debnath
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Acting Chair, Philosophy and Humanities ............................................ John Riser
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| Chair, Political Science                           | Elliot Vittes |
| Chair, Psychology                                  | Richard D. Tucker |
| Chair, Sociology and Anthropology                  | David A. Fabianic |
| Chair, Statistics                                  | Mark Johnson |
| Chair, Theatre                                    | Harry W. Smith, Jr. |

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| Associate Dean                                      | Harvey S. Lewis |
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| Chair, Finance                                      | Ronnie J. Clayton |
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| Coordinator, Undergraduate Programs                 | Helen Y. Hill |

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| Director, Extended Studies and Teacher Education Center | Margaret Miller |

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| Assistant Dean                                      | Richard N. Miller |
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| Chair, Computer Engineering                         | Christian S. Bauer |
| Chair, Electrical Engineering and Communication Sciences | Nicolaos S. Tzannes |
| Chair, Industrial Engineering and Management Systems | William W. Swart |
| Chair, Mechanical and Aerospace Engineering         | David W. Nicholson |
| Acting Chair, Engineering Technology                | James D. McBrayer |

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| Chair, Criminal Justice/Legal Studies                | N. Gary Holten |
| Interim Chair, Health Sciences                       | Thomas S. Mendenhall |
| Interim Chair, Hospitality Management                | Ady Milman |
| Chair, Molecular Biology and Microbiology           | Robert N. Gennero |
| Chair, Nursing                                      | Jean C. Kijek |
| Interim Chair, Public Administration                 | Peter Colby |
| Chair, Social Work                                   | Kenneth J. Kazmerski |
| Director, Dick Pope Institute                        | Abraham Pizam |
ACADEMIC CALENDAR

FALL SEMESTER 1991

*March 15
March 15
August 14 (1 p.m.)
August 15-20
August 15-20
August 21
August 22-27
August 27
August 27
August 27
August 27
August 28
August 30
September 2
September 6
September 14
September 17
October 5
October 5
October 12
October 18
October 19
October 26
November 2
November 11
November 15
November 28-29
December 6
December 7
December 7
December 9-14
December 14 (4 p.m.)
December 14
December 16
December 18 (12 noon)

Priority application deadline
Readmission application deadline
Residence Halls open for Fall Semester
Orientation and advisement
Registration by appointment
Classes begin
Add/Drop
Last day to submit Grade Forgiveness Request
Last day to adjust class schedule
Last day of late registration—$25 late fee
Last day for refund/fees due
Audit registration
Graduation application deadline
Labor Day Holiday (University-wide)
Registration deadline for October 5 CLAST
MCAT
Last day for removing temporary student status
LSAT
CLAST
GRE
Withdrawal deadline
GMAT
FTCE
Homecoming
Veterans’ Day Holiday (University-wide)
Last day to remove an “I” earned last semester
Thanksgiving Holidays (University-wide)
Classes end for Fall Semester
LSAT
Prep day for final exams
Final Examination period
Residence Halls close
GRE
Commencement
Grades due in Registrar’s Office

*The University of Central Florida reserves the right to modify this deadline subject to funding and the number of applicants.

If possible, examinations should not be scheduled on days or during the times of religious holidays. Students are expected to notify their instructor in advance if they intend to observe a holy day of their religious faith. The times and dates of major religious holidays are available from the Office of Undergraduate Studies.
ACADEMIC CALENDAR

SPRING SEMESTER 1992

*October 15
October 15
January 1 (1 p.m.)
January 2
January 2-3
January 6
January 8-9
January 9
January 10
January 20
January 24
January 25
February 1
February 4
February 8
February 22
February 28
March 9-14
March 21
April 3
April 13
April 18
April 24
April 27-May 2
May 2 (4 p.m.)
May 4
May 5 (12 noon)

Priority application deadline
Readmission application deadline
Residence Halls open
Orientation and advisement
Registration by appointment
Classes begin
Add/Drop
Last day to adjust class schedule
Last day to submit Grade Forgiveness Request
Last day of late registration—$25 late fee
Last day for refund/fees due
Audit registration
Graduation application deadline
GMAT
Martin Luther King Day. (University Holiday)
Registration deadline for February 22 CLAST
FTCE
GRE
Last day for removing temporary student status
LSAT
CLAST
Withdrawal deadline
Spring Holidays
GMAT
Last day to remove an "I" earned last semester
GRE
FTCE
Classes end for Spring Semester
MCAT
Final examination period
Residence Halls close
Commencement
Grades due in Registrar’s Office

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ACADEMIC CALENDAR
SUMMER "C" SEMESTER 1992
(See also Summer "A" and "B")

*February 15
April 1
May 8
May 10 (1 p.m.)
May 11
May 11-12
May 13
May 14-15
May 15
May 15
May 15
May 15
May 15
May 18
May 22
May 25
June 6
June 6
June 10
June 20
June 26
July 3
July 10
August 1
August 7
August 7 (4 p.m.)
August 10
August 11 (12 noon)

Priority application deadline
Readmission application deadline
Registration deadline for June 6 CLAST
Residence Halls open for Summer Semester
Orientation and advisement
*Registration by appointment
Classes begin
Add/Drop
Last day to adjust class schedule
Last day to submit Grade Forgiveness Request
Last day of late registration—$25 late fee
Last day for refund/fees due
Audit registration
Graduation application deadline
Memorial Day Holiday (University-wide)
CLAST
GRE
Last day for removing temporary student status
GMAT
Withdrawal deadline
Independence Day Holiday (University-wide)
Last day to remove an "I" earned last semester
FTCE
Classes end
Residence halls close
Commencement
Grades due in Registrar's Office

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ACADEMIC CALENDAR

SUMMER "A" TERM 1992

*February 15
April 1
May 8
May 10 (1 p.m.)
May 11
May 11-12
May 13
May 14-15
May 15
May 15
May 15
May 15
May 18
May 22
May 25
June 5
June 6
June 10
June 24
June 24 (4 p.m.)
June 30 (12 noon)
August 1
August 10
Priority application deadline
Readmission application deadline
Registration deadline for June 1 CLAST
Residence Halls open for Summer "A" term
Orientation and advisement
Registration by appointment
Classes begin for Summer "A" Term
Add/Drop
Last day to adjust class schedule
Last day to submit Grade Forgiveness Request
Last day for refund
Last day for late registration—$25 late fee
Audit registration
Graduation application deadline
Memorial Day Holiday (University-wide)
Withdrawal deadline
CLAST
Orientation and advisement
Classes end
Residence Halls close
Grades due in Registrar's Office
FTCE
Commencement

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If possible, examinations should not be scheduled on days or during the times of religious holidays. Students are expected to notify their instructor in advance if they intend to observe a holy day of their religious faith. The times and dates of major religious holidays are available from the Office of Undergraduate Studies.
ACADEMIC CALENDAR

SUMMER "B" TERM 1992

*February 15
April 1
May 9-10
May 14-15
May 22
June 24 (5 p.m.)
June 25
June 26
June 29
June 29
June 29
June 29
June 29
June 29
June 29
June 29
June 29
July 3
July 10
July 24
August 1
August 7
August 7 (4 p.m.)
August 10
August 11 (12 noon)

Priority application deadline
Readmission application deadline
Registration (see also June 25)
Add/Drop (see also June 29)
Graduation application deadline
Residence Halls open
Orientation and advisement
Registration by appointment
Classes begin
Add/Drop
Last day to adjust class schedule
Fees Due
Last day of late registration — $25 late fee
Last day for refund/fees due
Last day to submit Grade Forgiveness Request
Audit Registration
Independence Day Holiday (University-wide)
Withdrawal deadline
Last day to remove an "I" earned last semester
Last day for removing temporary student status
FTCE
Classes end
Residence Halls close
Commencement
Grades due in Registrar's Office

'The University of Central Florida reserves the right to modify this deadline subject to funding and the number of applicants.

If possible, examinations should not be scheduled on days or during the times of religious holidays. Students are expected to notify their instructor in advance if they intend to observe a holy day of their religious faith. The times and dates of major religious holidays are available from the Office of Undergraduate Studies.

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EMERGENCY: Police 9-1-1

CAMPUS SERVICES DIRECTORY

AD 3rd Floor
Bookstore, Student Services 3-2665
AD 124 3-2361
Bookstore, Student Services 3-2665

Registrar/Records AD 1st Floor 3-2531
Registrar AD 1st Floor 3-2531
PC-1 102 3-5130
Registrar AD 1st Floor 3-2531
(or Academic Advisor in College)
Registrar/Records (Class Schedule lists dates for current term)
Registrar/Records AD 1st Floor 3-2531
Admissions AD 1st Floor 3-3000
Registrar/Records AD 1st Floor 3-2531
(Student Academic Resource Center,
PC1-102 3-5130
Counseling & Testing Center 3-2811
RS 203 3-2811
PH 210 3-2667

Academic Advisor (Degree Program Advisor)
Admissions AD 1st Floor 3-3000
Counseling & Testing Center 3-2811
RS 203 3-2811
Career Resources Center
AD 124 3-2811
Counseling & Testing Center 3-2811
RS 203 3-2811
Campus Ministry SC 208 3-2468
Dept. Chair within appropriate College
Credit Union, Student Services 3-2855
Police Department 3-5812

Fire, Police, Ambulance 9-1-1
Research Pavilion/Research Park
AD 120 3-3200
Admissions AD 1st Floor 3-3000
Student Affairs AD 282 3-2177
Undergraduate Studies AD 210 3-2691
Registrar/Records AD 1st Floor 3-2531
AD 146 3-2766
Graduation Desk/Registrar 3-2842
Handicapped Student Coordinator
AD 282 3-2371
Wellness Center 3-5841
Registrar/Records AD 1st Floor 3-2531
Housing Office SC 137 3-4663
Business Services AD 362 3-2624
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<td>Dean of Students AD 282</td>
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UNIVERSITY OF CENTRAL FLORIDA

The University of Central Florida, a member institution of the State University System, was formerly Florida Technological University. The name was changed by action of the Florida Legislature on December 6, 1978.

STATEMENT OF PURPOSE

The University of Central Florida is a general-purpose state university which serves the needs of the immediate community and the larger region in which it is located. UCF serves its national and international constituents through its quest for new knowledge, the enrichment of the imagination, and the preservation of the knowledge and learning gleaned from previous generations and civilizations.

The University offers educational and research programs in such diverse fields as aerospace, banking, electronics, health, and tourism. UCF's programs in communication and the fine arts help to meet the cultural and entertainment needs of a growing metropolitan area.

UCF's general education program produces well-rounded men and women with a balance of communicative and mathematical skills; historical, social, and scientific knowledge; and ethical, aesthetic, and artistic sensitivity.

In brief, the University's purpose is to provide its students with an enhanced opportunity to lead productive and meaningful lives.

INSTITUTIONAL PHILOSOPHY

The University of Central Florida philosophy is based upon two tenets: Accent on the Individual and Accent on Excellence. The University believes in the individual worth of each person and especially encourages the responsible individual who strives for excellence in every activity.

Research is considered an important part of advanced study, and UCF provides students with opportunities for research projects and independent study. Many projects involve community service and opportunities for students to experience real situations while receiving individual guidance from faculty.

UCF adheres to the principle that the University is primarily a community of national and international scholars, in pursuit of knowledge and active in teaching, learning, and doing research. The presence of international students on the campus contributes substantially to the quality of the educational experience for everyone. International students bring to the classroom unique viewpoints and perceptions which would otherwise be lost to the U.S. students. Effective personal contact across cultures can reduce errors in understanding another's problems and can foster a climate of international peace and cooperation among people of the world today.

In order to serve the community better, the University of Central Florida makes higher education easily available to the citizens of East Central Florida by operating off-campus centers and offering off-campus credit courses to citizens of the area.

ACCREDITATION

The University of Central Florida is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools as a Level IV, general post-secondary institution. The following scientific, professional, and academic bodies also confer accreditation in the listed disciplines and groups of disciplines.

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<tr>
<th>College/discipline</th>
<th>Accrediting Body</th>
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<tr>
<td>Arts and Sciences</td>
<td>American Chemical Society</td>
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<td>Chemistry</td>
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<td>Music</td>
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<tr>
<td>Business Administration</td>
<td>American Assembly of Collegiate Schools of Business (AACSB)</td>
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<td>(all disciplines)</td>
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<tr>
<td>Education (all disciplines)</td>
<td>Florida State Department of Education National Council for Accreditation of Teacher Education (NCATE)</td>
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<td>Mechanical Engineering</td>
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<td>Information Systems Engineering Technology</td>
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<td>Operations Engineering Technology</td>
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<tr>
<td>Health and Public Affairs</td>
<td>American Registry of Respiratory Therapists (ARRT)</td>
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<tr>
<td>Cardiopulmonary Science</td>
<td>Council on Allied Health Education Accreditation Committee on Allied Health Education and Accreditation</td>
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<tr>
<td>Medical Record Administration</td>
<td>National Accrediting Agency for Clinical Laboratory Services</td>
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<tr>
<td>Medical Technology</td>
<td>National League for Nursing (NLN)</td>
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<td>Nursing</td>
<td>Council on Allied Health Accreditation</td>
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<tr>
<td>Radiologic Technology</td>
<td>Council of Social Work Education</td>
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<td>Social Work</td>
<td>American Speech Language and Hearing Association (ASHA)</td>
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<td>Speech Pathology</td>
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UCF is listed in *Transfer Credit Practices on Designated Educational Institutions* with the highest level of credit acceptability. This handbook is published by the American Association of Collegiate Registrars and Admission Officers, and lists the acceptability of transfer credits based upon the reporting institutions in the states, commonwealths, territories, and selected international institutions.

**EAST CENTRAL FLORIDA AREA**

UCF is located in East Central Florida, a region with a population of about two million. Known principally for its tourist attractions, the area is one of the fastest growing regions in the nation. East Central Florida is noted for its many lakes. Atlantic beaches are an easy hour drive from the main campus. The area offers Walt Disney World and other attractions that draw more vacationers here than anywhere else. The area also offers the Florida Symphony Orchestra, Broadway productions, pop and classical music headliners, art festivals, a Shakespeare festival of UCF origin, the National Basketball Association's Orlando Magic and restaurants of every type and price.

**THE ORLANDO CAMPUS**

The 1,227-acre campus is located in the Orlando suburbs, 13 miles northeast of downtown. Forty-nine permanent buildings—valued at more than $100 million—radiate outwards from an academic core, where UCF's colleges, classrooms and library are located. More than $90 million in new construction, including a 700-bed residence hall and $11 million student union, is planned over the next three years. An $8.6-million art complex is slated to open during the 1991-92 year, following the completion last year of a 6,500 seat field house. UCF recreational facilities include lighted tennis and raquetball courts, an outdoor swimming pool, golf driving range, volleyball and basketball courts and ball fields.
UCF AREA CAMPUSES

In addition to the academic programs offered on the Orlando campus, the University of Central Florida offers a number of upper-division programs and graduate programs at Area Campuses in Cocoa, Daytona Beach and South Orlando. Times and dates for all courses are listed in the regularly published schedule of classes.

UCF Brevard Area Campus
Clark Maxwell, Jr. Lifelong Learning Center
1519 Clearlake Road
Cocoa, FL 32922

Associate Vice President and Campus Director:
Robert W. Westrick
(407) 632-0067 UCF Ext. 2815

Associate Director, Academic Affairs
James O. Hill
(407) 632-0067 UCF Ext. 2815

Assistant Director, Academic Support Services
(Admissions, Registration, Records, Financial Aid)
James L. Nelson
(407) 632-4127 UCF Ext. 2102 or 2104

Advising Coordinator/Counselor
Doyce Walter
(407) 632-4129 UCF Ext. 2604 or 5557

The University of Central Florida, Brevard Campus, is housed in the Clark Maxwell, Jr. Lifelong Learning Center on the Cocoa campus of Brevard Community College. The University offers junior, senior, and graduate-level courses and programs. Freshman and sophomore-level courses are provided by Brevard Community College. Students who have completed the Associate of Arts Degree are able to select from 20 baccalaureate programs offered by the University in Brevard. Newly admitted or currently enrolled UCF students may also register in selected upper division elective courses presented at UCF-Brevard. Graduate programs are offered in Education, Business, Public Administration, and Engineering.

The coordination between the University of Central Florida and Brevard Community College for the 2+2 baccalaureate degree has become a model for other institutions of higher education in the State of Florida.
College of Arts & Sciences (407) 632-4129
Computer Science (Minor)
Psychology (course work only)

College of Business (407) 632-0098
Accounting (coursework only)
General Business Administration

College of Education (407) 631-5339
Elementary Education
Exceptional Education
Science Education
Vocational/Technical Education

College of Engineering (407) 631-5366
Computer Engineering Technology
Design Engineering Technology
Electronics Engineering Technology
Information Engineering Systems Technology
Operations Engineering Technology

College of Health and Public Affairs (407) 631-5440
Criminal Justice
Legal Studies
Nursing
Public Administration

Liberal Studies Program (407) 632-4127
Liberal Studies (B.A.)
Liberal Studies (B.S.)

GRADUATE PROGRAMS
Masters of Business Administration (MBA)
Masters of Education Administration & Supervision (MEd)
Masters of Education Elementary Education (MEd)
Master of Education Exceptional Education (MEd)
Masters in Public Administration (MPA)
Engineering (coursework only)
FEEDS/ITV Graduate Engineering
(Courses on videotape)

For information concerning the campus contact the Admissions Office at the University of Central Florida-Brevard.
The Daytona Beach Campus of the University of Central Florida is located in the $3.8 million Higher Education Center it shares with Daytona Beach Community College. A second building has recently been completed. The faculty and staff at the new facility have a strong commitment to serve the residents of Volusia and Flagler counties. In Daytona Beach, UCF offers junior, senior, and graduate level courses and programs. Freshman and sophomore level courses are provided by Daytona Beach Community College. Together, the two institutions provide the "2 + 2" Baccalaureate Degree. Additional courses and programs will be added as needs are identified.

At present, undergraduate and graduate-level degree programs are offered in the following academic disciplines:

**College of Arts & Sciences (904) 254-4412**
- Psychology

**College of Business Administration (904) 254-4412**
- General Business Administration
- Finance (partial)
- Management (partial)
- Marketing (partial)
Located on Lake Ellenor Drive in the middle of Orlando Central Park (west of South Orange Blossom Trail between Oak Ridge and Sand Lake Roads), the South Orlando Campus of the University of Central Florida operates as a joint-use facility with Valencia Community College. It offers upper division evening courses in business administration and the arts and sciences, a graduate engineering program, and a number of undergraduate and graduate vocational education courses, at a location convenient to students who live or work in southwest Orange County and north Osceola County.

A television studio is available to faculty, and several courses are videotaped here for distribution to other University sites. The campus also offers a variety of non-credit programs specifically designed to meet the needs of business and industry located in the area.
ENDOWED CHAIRS

Endowed chairs are established under terms of the 1980 Florida Eminent Scholars Act, which provides $420,000 in state funds to match $600,000 in contributions from private sources within a 6-year period. UCF presently has four fully funded endowed chairs and five others fully pledged:

**Phillips-Schenck Chair in American Private Enterprise**—Created in 1980 as the focal point for a continual dialog on major economic issues, comparative economic systems, and economic decision-making in business. The Chair: Dr. David F. Scott, Jr.

**Charles N. Millican Chair in Computer Science**—Created in 1983 and dedicated to probing the frontiers of computer science, with emphasis on the direction that the discipline will take over the next decade. The Chair: Dr. Narsingh Deo.

**William and Alice Jenkins Chair in Community Arts**—Created in 1986 to enable UCF to design and oversee programs covering art administration, art therapy and art education within the Central Florida community. The Chair: Dr. Kristin G. Congdon.

**Cobb-L.J. Hooker Chair in Optical Sciences and Engineering**—Created in 1988 as the largest academic gift ever received by UCF. The gift supports the work of an internationally recognized scholar in laser and optical sciences. The Chair: Dr. George I.A. Stegeman.

**Carl H. Galloway Chair in Business Administration**—in progress

**Sun Bank Chair in Banking**—in progress

**Al Burnett/Contemporary Cars Chair in Accounting**—in progress

**General Mills Chair in Restaurant Management**—in progress

**Bert Fish Memorial Chair in Nursing Education**—in progress

INTERNATIONAL STUDIES AND PROGRAMS

**Director:** Denise L. Young, HFA 209, Phone (407) 823-5375

**Coordinator, Study Abroad Programs:** A. V. Cervone, HFA 209, Phone (407) 823-5375

The University of Central Florida offers a number of programs which give students an opportunity to gain first-hand information on the language, customs, economy, geography, politics, and the arts of societies abroad. Such programs involve travel abroad or study concentration on campus.

The Office of International Studies and Programs coordinates efforts of the various international programs on UCF's campus and provides students, faculty, and the community with information concerning both these programs and opportunities for study abroad. The office:

- promotes student and faculty exchange programs with universities abroad;
- cooperates with the directors and faculty of the Area Studies Programs to develop new courses and areas of concentration dealing with foreign cultures;
- assists any department in the University that wishes to internationalize its curriculum;
- assists individual faculty and departments in their application for grants to develop foreign language and culture teaching techniques;
- assists and promotes the development of extracurricular activities related to foreign cultures, both on campus and in the community;
- encourages public and private enterprise to explore and pursue those areas of common interest that will be of mutual benefit to students and companies involved;
- cooperates with the International Student Office to promote international students' participation in campus and community life.

The office is also a repository of faculty resource capabilities, programs, and research efforts in the field of international studies. These resources are available to the University and the community.

Ten to 15 semester credits may be earned through study abroad programs. Credit earned in these programs may be applied toward satisfying the summer credit requirement and the 30-hour residency requirement. Financial aid may be used on all UCF programs. All programs are approved by the Board of Regents and are open to all students in the State University System.

The primary purpose of study abroad programs is to improve the linguistic and cultural proficiency of the participants. Previous knowledge of the foreign language is advised but not required. Study abroad programs feature intensive language courses at the elementary, intermediate, and advanced levels. Students are placed in language classes according to their previous training. Admission requirements are a grade point average of 2.0 or better and evidence of good health, emotional stability, maturity, and adaptability.
Cambridge Program

This program consists of two, three, or four-week sessions at the International Summer School in Cambridge, England. Courses in English Literature and Arts History are available through this program. The number of credits varies according to length of stay. Contact: Dr. Gerald Schiffhorst, FA 450, (407) 823-2279.

Florida-Tilburg Program

The Florida-Tilburg Program is operated by UCF, FSU, and Tilburg University, The Netherlands. The four-course sequence addresses the economic issues of the European Community, combining academic study with travel to points of interest in the political and economic institutions of the European Community. All the classes are taught in English. Contact: Dr. Thomas Martin, CB II 322 (407) 823-5549.

INSA Program in Lyon, France

The program is based on an agreement between UCF and the Institut des Sciences Appliquees de Lyon which gives engineering students from these institutions an opportunity to do one year of internship. Two years of French are required for UCF students.

Jerusalem—One Year of Science and Research at the Hebrew School

The Rothberg School for Overseas Students offers visiting research opportunities for English-speaking students in the Arts and Sciences. The program is open to students with a B.A. degree or an equivalent in the field they wish to research. Other programs for undergraduate or graduate students are also offered. Many Scholarships and loans are available. Please contact the Office of International Studies for further information. Contact: Dr. Moshe Pelli, FA 550 (407) 823-5039

Lyon Exchange Program

This program provides for an even exchange of students between UCF and the University of Lyon, France. Two years of college French are required. This program is open to students from any college, except the College of Engineering (see INSA Program). The unique feature of this program is that qualified students are able to study for one academic year in Lyon for approximately the same amount of money that would be required for them to attend UCF, plus air transportation. Contact: Dr. Anthony Cervone, FA 209, (407) 823-5375.

Madrid-El Escorial

The Department of Foreign Languages is offering a summer program in Spain from June 28 — August 7. Students will have daily access to vibrant Madrid and quaint El Escorial, as well as travel to many cities of historic and cultural value. Contact: Dr. Nadia Patrone, FA 214, (407) 823-2466.

Paris Internship Program

FULL SEMESTER—The University of Central Florida Paris Internship Program offers students who have at least four semesters (or equivalent) of college-level French the opportunity to study and gain international work experience in one of the world's great cities. The program combines a full semester of academic coursework with a nine-week internship in a wide variety of French and multinational institutions and businesses. The seventeen-week, sixteen-credit Paris Internship Program combines intensive French language coursework with an elective course and a nine-week internship. The first eight weeks of the semester are devoted to orientation and intensive language work to prepare students for their internships and to familiarize them with Paris and French society. In the classroom, students participate in an intensive language course (eight semester-hour credits) designed to give them as much exposure as possible to all uses of the language—written and oral.

The internship assignment depends primarily on the student’s language ability, past work experience, and professional interests and goals. Internships are available in a variety of areas. Sample placements include: Media, PR and Advertising, Government, Financial Institutions, Food Products, Tourism and Entertainment, Fashion and Cosmetics, Publishing, and the Arts. Contact: Dr. Anthony Cervone, FA 209, (407) 823-5375.

Study and Research in the Andes

Study and research in Merida, Venezuela for six weeks in the summer. The first session
is May 13-June 24 while the second session is June 24-August 5. Fall and Spring semesters are also available, with the Fall Program beginning on August 30 and continuing until December 4. Students have an option of taking intensive Spanish classes or doing research studies and internships. Included in the program are weekly conferences about folklore, architecture, the latest archaeological discoveries in the Andean region, literature and other topics. Participants have the opportunity to tour the sites of Merida and participate in sports. Contact: Dr. Anthony Cervone, HFA 209, (407) 823-5375.

Urbino, Italy
The Fourteenth Annual summer study program in Urbino is being offered from July 1 through August 7. Visits to Urbino, Rome, Tivoli, Pompeii, Florence, and Padua are part of the curriculum. Also, courses in intensive Italian and the history of Italy are offered in this city that is rich in Roman and Medieval history. For further information direct questions to Dr. Anthony Cervone, HFA 209, (407) 823-5375 or Dr. Nadia Patrone, FA 443, (407) 823-2466.

Other Programs
The Office of International Studies also makes available summer, semester, or year-long programs to the following countries: Austria, Brazil, Canada, Denmark, Germany, Israel, Mexico, and the USSR. All programs carry UCF credit unless otherwise noted. Contact: Dr. Anthony Cervone, FA 205, (407) 823-5375.

Asian Studies
This program offers a minor, but not a major, in Asian Studies. The program is interdisciplinary and is administered by the Department of Philosophy and Humanities. For further information, contact Dr. Kassim, FA 467, (407) 823-2273.

See additional international studies and programs under these listings:
Foreign Study Centers
Canadian Studies Program
Judaic Studies Program
Latin American Area Studies
Soviet Area Studies
Center for Multilingual, Multicultural Studies

UNIVERSITY LIBRARIES
Director: Anne Marie Allison, LR 512, Phone (407) 823-2564
Associate Director: Orlyn B. LaBrake, LR 512, Phone (407) 823-2564

The University Library, housed in a new facility of 200,000 square feet, has a collection of over 750,000 volumes with approximately 6,700 subscriptions (journals, newspapers, and other serials). The Library is a partial depository for US and Florida documents, and US Patents. The Library on-line catalogs may be accessed through terminals in the Library, at other Campus locations, or from personal computers at home. Catalog and circulation records for these materials are available, so library users can determine whether the UCF Library owns a particular item, and the location and availability of the item. On-line access to catalogs of all state university libraries in Florida is also available.

During school terms the University Library is open approximately 95 hours each week, including evenings and weekends. A shortened schedule is maintained during vacation periods, and hours are extended during the last few weeks of each semester. A staff of professional librarians and support personnel is available to assist and advise those using the Library. Arrangements may also be made for class or small group instruction. Interlibrary loan service is available for faculty, staff, and students to obtain materials not available in the Library's collections. Computerized literature searching is available.

Special services are provided for the handicapped. By using a computer terminal, handicapped students can determine the availability of the books they need, and telephone
the Library to request that books be brought to them at a convenient location on campus. A
tKurtzwell reading machine is available in the Library for the visually impaired: students or
faculty may arrange for instruction in its use. Through the cooperation of the University's
Office of Handicapped Student Services and the Florida Bureau of Blind Services, the
library staff can aid handicapped students in obtaining special equipment they may need to
use Library resources.

Students enrolled in the University's extended campus centers in Daytona Beach and
Brevard County receive a full range of services from the Daytona Beach Community
College Library and the Brevard Community College Library. Students at the South Orlando
Campus have access to a small reference collection and "electronic" library. On-line access
to the catalog of the main library collection is available from all branch campus locations
and materials are delivered through a regular courier service.

UNIVERSITY OF CENTRAL FLORIDA PRESS

THE UCF Press is a member of UNIVERSITY PRESSES OF FLORIDA. The UCF Press
actively solicits clearly-written scholarly manuscripts and original unpublished manuscripts
of poetry for its Contemporary Poetry Series. Current submission guidelines may be
obtained from: Director, UCF Press, Office of Graduate Studies, University of Central
Florida, Orlando, FL 32816. The UCF Press selects a limited number of outstanding
manuscripts for publication each year as UCF Press books. The printing, binding, distribu­
tion, and ordering of these books are handled through the central office of University
Presses of Florida. A complete catalog may be obtained by writing to: University Presses of
Florida, 15 NW 15th St., Gainesville, FL 32603.

UNIVERSITY OF CENTRAL FLORIDA FOUNDATION, INC.

The UCF Foundation, Inc. is a non-profit, tax-exempt corporation directed by a 60
member community based Board of Directors that encourages, solicits, receives, and
administers private gifts and bequests of property and funds for scientific, educational, and
charitable purposes. All gifts to UCF are received and processed through the Foundation
for support of the University.

OFFICE OF INSTRUCTIONAL RESOURCES

Instructional Resources provides UCF faculty with graphic, photographic, radio and
television production; a full range of audiovisual and classroom support services; and a
wide range of instructional development assistance and consultation. Instructional Re­
sources also administers the Center for Faculty Support, the University Learning Center,
the Listening Lab, Cable TV-Channel 35, Brevard Educational Cable Network, and WUCF-FM.

Instructional Resources, through the Division of Sponsored Research, provides design,
production, and presentation support to University-affiliated organizations, other educational
institutions, educational non-profit organizations which have UCF faculty or staff as mem­
bers, and local non-profit public service organizations.

UNIVERSITY BOOKSTORE

The University Bookstore is owned and operated by the University of Central Florida. The
University Bookstore is conveniently located in the Student Services Building and is open to
the public. In addition to textbooks and school supplies, this facility offers a complete line of
UCF insignia clothing and gift items. A brochure of UCF items is available for mail order
purchases. Please call (407) 823-2665 to request a brochure or inquire about store hours.

INTERCOLLEGIATE ATHLETICS

Programs in Intercollegiate Athletics are coordinated by athletic department coaches and
staff under the general supervision of the Director of Athletics.

The University of Central Florida is a member of the National Collegiate Athletic
Association (NCAA), Division I. Intercollegiate athletic contests are governed by the rules of
play published by NCAA and all established eligibility standards are observed.

UCF's current intercollegiate sports for men include baseball, basketball, cross country,
golf, football, soccer, track, and tennis. Women's sports include basketball, cross country,
golf, soccer, track, tennis, and volleyball. Crew and waterskiing are intercollegiate club
sports for both men and women.
PROJECT FOR THE DEVELOPMENT OF THE HUMANITIES AND FINE ARTS

The Project for the Development of the Humanities and Fine Arts serves as a cultural bridge between the University and the community. Leading Renaissance and Elizabethan scholars, musicians, theatre professionals, and dancers offer community-wide lectures and demonstrations and conduct seminars for community college and high school humanities and arts faculty. The Project holds an annual festival in the spring. Volunteer positions are available within the festival. For further information, contact: Orlando Shakespeare Festival, 605 East Robinson Street, Suite 100, Orlando, Florida 32801, 407/423-6905

CENTRAL FLORIDA RESEARCH PARK

The Central Florida Research Park, abutting the main UCF campus, is a university related research park established as a result of legislation passed by the Florida Legislature in 1978. The Park is a cooperative effort between the University of Central Florida, the Orange County Research and Development Authority, and the Orange County Board of County Commissioners (who appoint the members of the Authority). The governing body of the Park is the Orange County Research and Development Authority.

The objectives of the Central Florida Research Park are in keeping with the legislative action which enabled its creation… "to encourage and promote the establishment… of research and development activity combining the resources of… institutions of higher learning, private sector enterprise involved in pure or applied research, and state or federal governmental agency research."

The ultimate goal of university-related research parks is to establish an academic/industry community resulting in a unique approach to the creation of a more effective cooperative academic/industrial endeavor. The University and officials of the Central Florida Research Park believe that the potential for the establishment of close ties between the University and industry will create an attractive environment conducive to the location of research-oriented industry in the Park. This activity will enrich and support the academic, teaching, and research programs of the University. The University, in turn, as a community of scholars, reservoir of knowledge past and present, and creator of new knowledge and discovery, can provide the necessary expertise and human resources to enhance the research and development activities required and planned by Park residents.

Totally planned to provide a campus-like environment for business adjacent to UCF, the Central Florida Research Park consists of over 1,000 acres of land. Businesses which desire a "university relationship" can purchase or lease land in the Research Park on which to construct a facility or can lease space for office, office/lab, or light manufacturing activities.

Four University organizations—the Institute for Simulation and Training, the Center for Research in Electro-Optics and Lasers (CREOL), the Sinkhole Institute, and the Small Business Development Center—are located in the Research Park. The U.S. Naval Training Systems Center, the focal point of the nation's simulation and training industry, has its headquarters in the Research Park. Nearly a billion dollars a year in federal contracts is granted by NTSC each year.

Currently over 65 companies are located in the Research Park pursuing activities in simulation and training, lasers, optical filters, behavioral sciences, diagnostic test equipment, and oceanographic equipment. Almost 4,000 employees currently work in the Research Park including many students and faculty.

Research Park tenants are involved with the University of Central Florida through sponsored research, using faculty as consultants, and using graduate and undergraduate students for intern programs and part-time employment. Research Park tenants can also contract with the University for the use of the library computer resources and laboratory facilities. Cooperative projects range from technical research to developing business plans and employee training programs.
INTRODUCTION

The term "student affairs" is used collectively to refer to the Student Affairs Division and its many functional departments responsible for the administration and management of programs, services, facilities, and activities designed to support the educational mission of the University. The Division of Student Affairs exists primarily to enhance the teaching and learning process through its many programs and services. The Division, headed by a Vice President for Student Affairs, administers programs involving orientation, personal counseling, testing, housing, health services, international student services, recreational services, career planning and placement, student organizations, veterans' affairs, and other special activities. Students are invited to consult the staff of Student Affairs concerning any aspect of campus life.

Personal development may be enhanced through informed, experienced, and dedicated participation in University and community activities. Frequently, activities are referred to as "extracurricular," but at the University of Central Florida student activities are regarded as a part of the total educational program—a supplement to the individual student's academic program. The University sponsors a variety of cultural and entertainment programs which contribute to the student's social, cultural, recreational, and academic development. Students can become better acquainted with fellow students and faculty members through participation in student activities. The University provides ample opportunity to become a member of occupational, professional, social, and honorary organizations.

OFFICE OF DEAN OF STUDENTS

The University provides services to facilitate learning and supplement academic instruction. The staff in the Office of the Dean of Students helps students in their attempts to become familiar with these services and programs and to become involved in educational experiences beyond the classroom. The Deans plan and assist in the development of University programs which provide for the personal, social, and academic adjustment of students. They counsel students confronted by personal, academic, financial, and social problems, and refer students to specialized professional services as necessary. In addition, the Deans supervise the judicial affairs process. Students are urged to take advantage of the many services and educational programs available beyond the classroom. The Deans are the primary source for students seeking information or assistance in non-academic areas of University operations.

The Division of Student Affairs annually publishes a student handbook called The Golden Rule which contains more detailed information on student life. Copies may be obtained from the Student Center Main Desk or from the Student Affairs Suite, Room 282, Administration Building.

STUDENT PRIVILEGES

Confidentiality of Student Records

The practices and procedures at the University of Central Florida for the confidentiality of student records are based upon Florida state regulations and the federal Family Educational Rights and Privacy Act of 1974. Students who have questions concerning the confidentiality of records or have specific requests concerning their records should write or call the Office of the Dean of Students. Details of the University practices for confidentiality are presented in The Golden Rule.

Student Government

The purpose of the Student Government is to represent student opinion, advance the cause of students both socially and academically, promote communication, cooperation, and understanding among students, and administer Activity and Service fees. Student Government represents students' needs and concerns at the state and federal level. Student Government provides many services to students, including discount movie and attraction tickets, tutor referral, consumer affairs education, carpool coordination, and vehicles for student organization use.
Every student enrolled at the University of Central Florida is a member of Student Government. The interests of students are represented through three branches of government: the executive branch, headed by an elected student body president and vice president, the student senate (legislative branch) composed of representatives of every college, and the Judicial Council (judicial branch). In addition to these offices, there are many openings for appointed offices and on Student Government and University committees. Students interested in working with Student Government may obtain information from the Student Government offices located in the Student Center.

STUDENT LEGAL SERVICES

Student Legal Services provides students with advice and consultation including court representation in selected areas of law such as landlord/tenant, consumer, simple wills, and non-criminal traffic. Each eligible student (an undergraduate enrolled in six UCF hours or graduate enrolled in four UCF hours) is entitled to consult with the Program Attorney about any legal matter not excluded by program guidelines, free of charge. Students in need of legal services should contact Student Legal Services at (407) 823-2538, or Student Center Room 210. This service is by appointment only, and no legal advice is given over the phone.

STUDENT RESPONSIBILITIES

Classroom Responsibility

Students are responsible for maintaining a classroom decorum appropriate to the educational environment. When the conduct of a student or group of students varies from acceptable standards to such an extent that it becomes disruptive to normal classroom procedures, the instructor has the authority to remove the offending party from the room.

Student Conduct

Students are subject to federal and state laws and local ordinances as well as regulations
prescribed by the University of Central Florida and the Florida Board of Regents. The breach or violation of any of these laws or regulations may result in disciplinary action. Detailed conduct regulations and procedures are presented in The Golden Rule.

A person applying for admission to UCF who has been charged with a criminal offense may have circumstances of the case reviewed by the appropriate Student Affairs administrator to consider eligibility for admission.

**SERVICES**

**Orientation**

Orientation sessions are available to all new students at the University of Central Florida. Important information is provided regarding advisement, registration, housing, the transition to college life, and the administration of placement tests. Faculty, administrators, and a specially trained group of students assist the sessions and are available to answer any questions. Information is mailed to each student accepted by the University regarding date, time, and location of the orientation sessions.

**University Counseling and Testing Center**

The University Counseling and Testing Center (Recreational Services Building, Room 203) offers a professional staff of psychologists and counselors to assist students through educational, vocational, and career counseling; and personal, social, relationship, marriage, and family counseling.

The Center administers the following national testing programs: GRE, LSAT, GMAT, and MCAT. In addition, the Center administers the College Level Academic Skills Test (CLAST), and a variety of interest, aptitude, career, occupational, and personality assessments.

The Center presents special programs throughout the year, including training in relaxation and coping skills, self-hypnosis training, stress reduction training, and group psychotherapy. All Center services are free to UCF students.

**Career Resource Center - Career Planning and Placement**

The Career Planning and Placement Office, located in Suite 124 of the Administration Building, is a career resource center for all University of Central Florida students and alumni. The Center provides individualized counseling about current and projected trends in the job market. Services also include: resume advice and critiquing, CHOICES—(computerized career guidance), career planning mini-classes, resume referrals at employers' request, on-campus interviews by employers, lists of full-time and part-time job vacancies, interviewing tips, and help in organizing a job search.

The Career Resource Center provides information about a broad cross section of employers.

Students just beginning studies at UCF are advised to begin preparing for a career. To make the most effective use of the Placement Service, seniors are urged to register with the office two semesters prior to graduation.

Further information may be obtained by visiting the Center or telephoning (407) 823-2361.

**Housing**

1. Regularly enrolled single students paying registration fees for a minimum of nine semester hours may apply for assignment to University residential units. Because of the limited amount of space in University housing facilities (444 spaces for females and 423 spaces for males), the University of Central Florida does not require any student to live on campus. **There are no on-campus accommodations for married students.**

Priority for assignment is given to incoming Freshmen who will occupy approximately 50 percent of the University's housing capacity, and current residents who will occupy most of the remaining space. The spaces set aside for incoming Freshmen are limited by the University's overall housing capacity. Therefore, those desiring to reside on campus should apply for admittance to the University as soon as possible.

Applications for housing can be accepted only from those applicants who have been admitted to the University. Priority for room assignments for new applicants is based on the date of receipt of the completed housing application in the Housing Office. Applicants should CAREFULLY READ the application before submitting it to the Housing Office along with the Letter of Acceptance to the University and the $150.00 prepayment.

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2. Housing contracts, when issued for Fall Semester occupancy, serve as a two-semester (Fall AND Spring) obligation between the applicant and the Housing Office. Housing contracts issued for the Summer Semester are a one-semester (Summer Only) obligation, and do not extend to include an assignment to Fall housing accommodations.

3. Applicants have the option of choosing one of several Meal Plans available at the University. Specific information concerning University Meal Plans is available from Marriott Corporation, P. O. Box 26029, UCF, Orlando, FL 32816-0222.

Applications and other information concerning University housing may be obtained by consulting the Department of Housing and Residence Life, P. O. Box 26000, UCF, Orlando, FL 32816-0222.

Off-Campus Housing

Collegiate Village Inn is a privately owned and operated 520 bed off-campus food and lodging facility within walking distance of the campus. For information call or write: Collegiate Village Inn, 11850 University Blvd., Orlando, FL 32817; Phone: (407) 380-6000.

Within two miles of the campus are numerous apartment and duplex communities. Sidewalks, bike paths, and Tri-County Transit hourly bus service connect many of these facilities with the University. Students living off-campus are invited to participate in one of the University meal plans.

Student Health Services

Recognizing the importance of lifestyle in health and the prevention of disease, the Student Health Service combines quality care for illness and accidents with an aggressive health education and lifestyle enhancement program. A Student Wellness Advocate Team enhances the health promotion efforts of the Student Health Center.

The Student Health Center (SHC) is staffed by medical doctors, a certified nurse practitioner, physician's assistant, Registered Nurses, and a full complement of other medical support personnel. Full referral service to Orlando area specialists is established. Charges incurred outside the Student Health Center are the responsibility of the student. A variety of laboratory and x-ray tests are available at the Student Health Center. Testing for HIV (AIDS virus) is not done in our laboratory. Referral arrangements may be made for anonymous AIDS testing by contacting the Chief Nurse at the Student Health Center at (407) 823-2701, ext. 5275.

When the Student Health Center is not open, students can use the "Hot Line" phones at the front and back doors of the building to obtain help for urgent needs.

By Board of Regents regulation, each student must demonstrate Rubella and Rubeola immunity prior to registration. The Student Health Center cannot provide immunization services to meet this requirement. It is a pre-registration requirement and prospective students are not eligible for services at the SHC. A routine health history form is also completed prior to registration, and this information is used for background purposes in providing medical care services. Medical records are held in the strictest confidence.

Each health fee paying student is entitled to the benefits outlined in the SHC brochure; faculty and staff can only be seen on an emergency basis, and then for a fee (except Worker Compensation cases). Optional health and accident insurance may also be purchased by contacting the office of Student Affairs or Student Government (please note optional health and accident insurance is not part of the Student Health Center program and will provide a variety of coverages for health needs beyond the scope of Student Health Services).

Blood drives are held several times annually by the Central Florida Blood Bank. Students, faculty, and staff are eligible for credits from the blood bank upon demonstrating need.

Student Center

Student life at the University of Central Florida emanates from the Student Center. As the focal point for campus activities, the Student Center serves students, faculty, staff, patrons, alumni, and guests with its many programs, services, and facilities. The Student Center is funded through Activity and Service fees as allocated by Student Government.

Several student organizations flourish in the Student Center. The Campus Activities Board sponsors a wide variety of educational and entertaining programs for the UCF
The Student Government Association provides for active leadership experiences through the Senate and committees working for student rights. The Orientation Team coordinates the orientation programs. Greek Council promotes membership in, and operation of, Fraternities and Sororities.

The Student Center provides other services for students as well. The Game Room offers billiards, ping pong and video games. Student Government Association operates a Macintosh computer lab. There are four food services facilities, an information desk, conference and meeting rooms, and the Student Center Auditorium. Reservations for university facilities can be made at the Student Center Information Desk. The Student Center Director is located in SC 198. For more information regarding the Student Center, call 823-2633.

Student Organizations

Student Organizations play a vital role in enhancing student life at the University of Central Florida. Academic, pre-professional, honorary, military, minority/international, religious, service, social, special interest, and sports are the ten categories of the over 150 organizations available. The Student Organizations Office publishes a Student Organization Handbook listing all of the organizations at UCF and their purposes.

For further information regarding clubs and organizations, call (407) 823-5107 or visit the Student Organizations Office, Student Center, Room 215.

Recreational Services

The Office of Recreational Services offers a wide variety of sports and recreational opportunities to the students of UCF and their immediate families and some opportunities to UCF faculty, staff, and the surrounding community. These opportunities include intramural sports leagues and tournaments, organized recreation and fitness programs, unstructured open recreation, sports-related special events, screen printing and racquet stringing. Equipment may be checked out for use on and off campus.

The Office of Recreational Services is located next to the pool. The phone number is (407) 823-2408.

Office of Student Information and Evening/Weekend Student Services

The Office of Student Information and Evening/Weekend Student Services is a one-stop communications network and information center committed to gathering and disseminating information to students. The office is also responsible for the administrative supervision of student affairs functions for all University students taking evening and weekend classes and for the administration and programming for the 24-hour Student Services Information and Events Hotline, (407) 823-5479. The office phone number is: (407) 823-3111.

Information Booth & Evening Student Services

9:00 a.m. to 9:00 p.m. Monday through Thursday—second floor Administration Building, Education Building Lobby, and College of Business Information Booth

9:00 a.m. to 5:00 p.m. Friday (same locations as above)

Weekend Student Services

10:00 a.m. to 2:00 p.m. Saturday at SG Kiosk (407) 823-2060

2:00 p.m. to 5:00 p.m. Sunday at SG Kiosk (407) 823-2060

International Student Services

The International Student Office provides services for all international students and resident aliens. Its central role is to assist International students and scholars attending UCF to adjust to the changing lifestyle in order to achieve their educational goals and gain a meaningful living experience in the United States. A wide range of special services is provided to the UCF international community, such as issuance of immigration forms I-20 A/B and IAP-66, assistance in locating off-campus apartments, counseling on personal, financial, academic, and cross-cultural communication matters, advisement in immigration and tax matters, promotion of social activities, and home visits in Central Florida. Further
Handicapped Student Services

Handicapped Student Services provides information and orientation to campus facilities and services, assistance with classroom accommodations, assistance with course registration, handicapped parking decals, counseling, and referral to campus and community services for students who are handicapped.

Services are available to students whose disabilities include, but are not limited to, hearing impairment, manual dexterity impairment, mobility impairment, specific learning disability (such as dyslexia), speech impairment, visual impairment, or other disabilities which require administrative or academic adjustments.

The University application for admission contains no question regarding disability. Therefore, students who have a disability or handicap which may require special assistance are requested to voluntarily contact the Office of Handicapped Student Services. All information is confidential and will be used only to assist the student.

Information and assistance are available for faculty members working with students who are handicapped.

A Telecommunication Device for the Deaf (TDD) is available for hearing-impaired or speech-impaired persons with TDD's to contact the University (phone (407) 823-2116 TDD calls ONLY).

Further information may be obtained from the Handicapped Student Services Office, Administration Building Suite 282, Phone (407) 823-2371.

Creative School for Children

The Creative School for Children provides an educational program, including kindergarten, for children two through five years old. The daily program is planned and conducted by Florida-certified teachers. The program provides a wide variety of experiences in art, music, language, motor skills, science, math, social studies, perceptual development, socialization, and self-discovery. Planned and spontaneous field trips and special family programs are a part of the yearly schedule. Experiences in observation and training in academic areas are also made available to University students. Opportunities for educational research are available to University faculty and graduate students.

The school conducts a Summer Day Camp for elementary school children during Summer "B" semester.

For further information, call the Creative School for Children, (407) 823-2726.

Office of Veterans' Affairs

The Office of Veterans’ Affairs (OVA) is a center for all veterans, including students who are using VA educational benefits to further their education. The office, located in the room 132 of the Student Center, has a professional staff augmented by student veterans to assist in providing information concerning entitlements, filing claims to the Department of Veterans Affairs (DVA), and certifying enrollment at the University. The office also provides counseling for personal and academic concerns, tutorial assistance, and referral to various community agencies. Veterans and eligible dependents must be certified through the Office of Veterans’ Affairs to receive DVA educational benefits. The office monitors the academic progress of all those receiving DVA educational benefits.

All veterans and eligible dependents are urged to consult the Office of Veterans’ Affairs early in the process of applying for admission to UCF.

Veterans’ Benefits

Students who are entitled to DVA educational benefits must make initial contact with the Office of Veterans’ Affairs.

Undergraduates must carry at least 12 semester hours for full-time DVA benefits, 9 semester hours for three-quarter time benefits, and 6 semester hours for half-time benefits. Five semester hours or less will be reimbursed at cost of tuition and fees only. Students with a baccalaureate degree who are classified by the University as post-baccalaureate must meet the same semester hour requirements as undergraduates and will be paid at the undergraduate rate, regardless of the course level.

Veterans and eligible dependents who are fully accepted in a graduate degree program,
or post-baccalaureate students pursuing a Florida Teaching Certificate, are required to
carry 6 semester hours in courses numbered 5000 and above for full-time benefits; 4 to 5
semester hours in courses numbered 5000 and above for three-quarter time benefits; and 3
semester hours in courses numbered 5000 and above for half-time benefits.

Students intending to enroll simultaneously at UCF and another institution have the
option of receiving DVA benefits, but first must consult with the Office of Veterans’ Affairs
and obtain a Transient Permission Form from the Registrar’s office. Veterans and eligible
dependents who wish to change their major, or pursue a double major or add a minor may
also receive VA benefits but must first make arrangement through the Office of Veterans’
Affairs before taking any of the new courses.

In order to receive veterans’ educational benefits, students must maintain satisfactory
academic progress. Accordingly, benefits will be terminated for individuals who are disqualified
or excluded from the University. If reinstated by the University following disqualification or
exclusion, the veteran or eligible dependent must contact the Office of Veterans’ Affairs to
have their DVA educational benefits re-started. Individuals placed on academic probation
will continue to receive benefits as long as a 2.0 or higher GPA is earned each semester.
Benefits will terminate once the required semester hours of course work for the program
of study are completed, regardless of the GPA or eligibility for graduation.

Veterans and eligible dependents may also draw VA benefits during the periods of
eligibility while on cooperative education assignments. The recipient may choose to receive
benefits at the “co-op rate” which is approximately 80 percent of the entitled monthly DVA
benefit. Payment is received during both the on-campus semesters and the off-campus
work terms. Contact the Office of Veterans’ Affairs at (407) 823-2707 for more specific
benefit information on Cooperative Education.

See also:
 Minority Student Services
 Student Academic Resource Center
APPLICATION FOR ADMISSION

HOW TO APPLY: Applicants should complete the State University System application for admission, and include a 15-dollar non-refundable application fee. Applicants should also request official transcript(s) from each educational institution attended to be forwarded directly to the Admissions Office. Students are encouraged to apply several months in advance. Applications will be accepted up to one year prior to the start of the term desired. The application deadlines are March 15 for the Fall semester, October 15 for the Spring semester, and February 15 for the Summer term. Applications should be mailed to the Admissions Office, University of Central Florida, Orlando, FL 32816-0114.

The University encourages applications from qualified persons of both sexes from all cultural, racial, religious, and ethnic groups. The University does not discriminate on the basis of handicap in admission or access to its programs and activities.

A summary of the general requirements for admission or readmission to the University is as follows:

- A satisfactory academic record. Each applicant must furnish a complete chronological record of educational institutions previously attended. Official transcripts must be submitted in accordance with instructions on the application form.
- Satisfactory scores on the Scholastic Aptitude Test (SAT) or the American College Test (ACT). Students whose native language is not English must also submit a Test of English as a Foreign Language (TOEFL) score. The required minimum TOEFL score is 550.
- A satisfactory conduct record.

NOTE: Furnishing false or fraudulent statements or information in connection with an application for admission or residence affidavit may result in disciplinary action, denial of admission, and invalidation of credits or degrees earned.

Applicants should understand that minimum requirements are given and that admission to the University is a selective process. The satisfaction of minimum requirements does not automatically guarantee admission. Conversely, Florida Board of Regents policy allows the University to admit students to any semester as exceptions to the minimum requirements. The Admissions Office and the Admissions and Standards Committee are responsible for the admission of undergraduate students under this policy.

See also: International Students, p.43.

ADMISSIONS AND STANDARDS COMMITTEE

The Admissions and Standards Committee is composed of representatives from the University: representatives from the Faculty Senate, Minority Student Services, Student Affairs, Undergraduate Studies, the Student Body, and the Admissions Office. This committee normally meets on a regular schedule to review marginal cases and to consider the appeals of applicants. A letter of explanation to the Chair, Admissions and Standards Committee is recommended in establishing the basis for an appeal. Students have the option of appealing a decision in person before the Admissions and Standards Committee.

REACTIVATION

A student who has submitted an application for admission to UCF but never attended may reactivate his original application by submitting a reactivation form within two years of the date of the original application. The deadline date for reactivation is the same as the deadline for new applications for admission. (This date appears in the academic calendar.)

READMISSION

Students not in attendance for two consecutive academic semesters (exclusive of a summer term) must submit an application for readmission and such other information as may be required, including transcripts of courses attempted in the interim.

Readmission of a suspended (disqualified or excluded) student is never automatic. Students who have been disqualified or excluded must complete a readmission application. The student is also encouraged to write a letter of appeal to the Chair of the Admissions
and Standards Committee describing the particular circumstances since the time of disqualification or exclusion. Students may make a personal appearance before the committee if they desire.

Any former student readmitted whose all-college or UCF cumulative grade point average was less than 2.0 ("C") at the time of withdrawal will be readmitted on academic probation.

LIMITED ACCESS PROGRAMS

A limited access program uses selective admission to limit program enrollment. Limited access status is justified when student demand exceeds available resources, such as faculty, instructional facilities, or equipment, or when specific accrediting requirements apply. Criteria for selective admissions include indicators of ability, and indicators of performance creativity or talent to complete required work within the program. Community college transfer students with Associate of Arts degrees from Florida community colleges are given equal consideration with UCF students. Admissions to such programs are governed by 6A-10.24(8), the Articulation Agreement, and by 6C-6.01, FAC, of the Board of Regents rules.

RECORDS

Validity of Documents

All supporting admissions documents must be received directly from the issuing institution or testing agency. If the University finds that an applicant has made a false or fraudulent statement or a deliberate omission on his application, residency affidavit, health report, or any accompanying document or statement, that applicant may be denied admission. Should the student be enrolled when such fraud is discovered, he may be immediately withdrawn (with no refund), further enrollment denied, and credit earned and any degree based upon such credit invalidated.

Medical History Report

Each student accepted for admission shall, prior to registration, submit a Medical History Report provided by the University. Documentation of appropriate immunization for measles and rubella is required. Proof of immunization must be provided. This proof is a minimum requirement, and the University may require, in addition, such other evidence of examination as may be determined necessary. Where physician examinations or certificates are required, they must be signed by a doctor of medicine or a doctor of osteopathy.

Students 40 years of age or over are exempt from the Immunization Requirement but are required to submit the Medical History Report.

The University reserves the right to refuse registration to any student whose health record or report of medical examination indicates the existence of a condition which may be harmful to members of the University community.

The Medical History Report form will be mailed to the applicant with receipt for the Application for Admission. Applicants should return the Medical History report to the Registrar’s/Records Office.

Deadline

All supporting admissions documents, such as official transcripts and test scores should be received by the Admissions Office no later than 20 days after the first day of classes. In some cases applicants may be allowed to register on a temporary basis without all records if eligibility for admission can be determined from available records or consultation with the student.

A Transfer Summary Report (TSR) will be prepared on a priority basis for students from whom final transcripts from each educational institution attended have been received by the 20th class day. Those students who have not submitted completed records by the 20th class day will be placed on administrative hold and will be changed to non-degree seeking status and will not be permitted to pre-register. Students with incomplete records will not be permitted to register for a future term until all transcripts and other required documentation have been received.

FRESHMAN APPLICANTS

Any student who meets the minimum admission requirements and is interested in attending the University of Central Florida is urged to submit an application. The University
will do everything possible to accept all qualified applicants who apply before the application deadline date. If the number of qualified applicants exceeds the number the University is permitted to enroll, admission will be on a selective basis. An applicant's total high school record including grades, test scores, educational objective and pattern of courses completed, school recommendation, and personal record will be considered in the selection process. An application pool will be maintained when the number of applicants exceeds the number of qualified students to whom admission may be offered. Based on the number of cancellations received, selections will be made from the applicant pool approximately two months prior to the first day of classes.

The University reaffirms its Equal Educational Opportunity (EEO) commitments and seeks to increase the enrollment of minority students.

High School Diploma

Beginning freshman students who are applying for admission to the University are normally required to have a diploma from a Florida public high school or an accredited out-of-state high school. Foreign diplomas must meet the requirements specified in Florida Statutes, section 229.814 and must be evaluated by World Education Services, Inc. (WES). Students admitted under acceleration mechanisms are exempted from this requirement.

Entrance Examination Scores

All applicants for admission must submit test scores from the Scholastic Aptitude Test (SAT) or from the American College Testing (ACT) program.

A total score of at least 840 on the Scholastic Aptitude Test (SAT) is required with a minimum verbal score of 340, a minimum quantitative score of 400, and a minimum score of 30 on the Test of Standard Written English (TSWE). On the American College Test (ACT), a composite score of 19 is required. These are minimum scores to meet Board of Regents requirements; however, UCF gives priority consideration to students who earn a 1000 SAT or 24 ACT. Should space permit, others will be considered for admission, provided their grades are superior.

High School Academic Units and Grade Point Average

All applicants must have earned a minimum number of high school academic units (year-long courses which are not remedial in nature) as shown in the table below to be considered for admission. The academic grade point average (GPA) will be computed only on these units. Grades in honors courses, International Baccalaureate, and College Entrance Examination Board (CEEB) Advanced Placement (AP) courses will be given additional weight in the computation of the academic grade point average.

The high school academic unit requirements are as follows:

<table>
<thead>
<tr>
<th>ACADEMIC SUBJECT</th>
<th>UNITS REQUIRED</th>
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<tbody>
<tr>
<td>English</td>
<td>4</td>
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<tr>
<td>Mathematics</td>
<td>3</td>
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<tr>
<td>Natural Science</td>
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<td>Social Science</td>
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<td>Foreign Language</td>
<td>2</td>
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<tr>
<td>Additional</td>
<td>4</td>
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<tr>
<td>Academic electives</td>
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<td>from the above five subject areas and courses recommended by the Florida Association of School Administrators, or other groups, and courses recommended by the Articulation Committee, and approved by the Department of Education.</td>
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</table>

TOTAL

1. Three of which must have included substantial writing.
2. At or above the Algebra I level.
3. Two of which must have included substantial laboratory requirements.
5. Both credits must be in the same language.
Eligible Applicants

Eligibility for admission is subject to satisfactory receipt and review of all items required in the admission process.

*All applicants must meet the following State University System (SUS) minimum eligibility index standards:

<table>
<thead>
<tr>
<th>if the High School GPA in academic core courses is:</th>
<th>One of the following composite admission test scores must equal or exceed:</th>
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<tbody>
<tr>
<td>HSGPA</td>
<td>SAT or ACT</td>
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<td>2.0</td>
<td>1050  25</td>
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<td>2.1</td>
<td>1020  24</td>
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<td>2.2</td>
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<td>3.0</td>
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* The University may establish higher admissions requirements beyond these state standards.
** Academic eligibility for admission is determined by a 3.0 or better grade point average and submission of admissions test scores.

A student applying for admission who does not meet these requirements may bring to the University other important attributes or special talents and may be admitted if, in the judgement of the Admissions and Standards Committee, the student can be expected to do successful academic work. The University will provide an individual learning plan for each student admitted under this alternative.

Any student admitted without two years of one foreign language in high school or the equivalent (minimum 8 semester hours) of such instruction at the post-secondary level, must satisfy the admission requirement prior to graduation.

TRANSFER APPLICANTS

Applicants with Fewer Than 60 Credit Hours

All college transfer applicants with fewer than 60 semester hours of acceptable credit must be in good standing and eligible to return to the last institution attended as a degree-seeking student, meet freshman high school unit entrance requirements with at least a 3.0 high school academic grade point average and a minimum SAT total score of 1000 or an ACT composite of 23/24 enhanced, and have at least a B average for all college-level academic courses attempted.

Applicants with an A.A. Degree from a Florida Public Institution

All college transfer applicants with at least 60 semester hours of acceptable credit must be in good standing and eligible to return to the last institution attended as a degree-seeking student, and have a grade point average of at least 2.0 on a 4.0 system on all college-level academic courses attempted.

Transfer applicants are encouraged to review the current edition of UCF's TRANSFER STUDENT COUNSELING MANUAL available in Florida community college counseling offices. The manual gives the recommended community college course requirements for all majors as well as other helpful information.

Admission of Associate of Arts (A.A.) degree graduates from Florida public community colleges and Florida state universities will be governed by the Articulation Agreement between the state universities and public community colleges of Florida, as approved by the Board of Regents and the State Board of Education. The agreement states that within curriculum, space, and fiscal limitations, admission as a junior to the upper division of the
University shall be granted to any graduate of a state-approved Florida community college or State University System institution who has completed the university parallel program and who has received the Associate of Arts degree which included all of the following:

- At least 60 semester hours of academic work exclusive of occupational courses and basic required physical education courses.
- An approved general education program of at least 36 semester hours.
- A grade point average of at least 2.0 on a 4.0 system on all college-level academic courses attempted. (Only the final grade received in courses repeated by the student shall be used in computing the average.)
- One year of college instruction in a single foreign language. (This requirement applies to those students without the required two units of foreign language in high school.) Students who receive an Associate of Arts degree from a Florida public community college or university but have not met the foreign language requirement and do not qualify in one of the exempt groups defined below may only be admitted to the lower division of the University. Admission to the upper division will be granted when the foreign language requirement is satisfied.

Two groups of students are exempt from the foreign language portion of the admission requirement. These groups are:

A. Students who received an Associate of Arts degree prior to September 1, 1987.
B. Students who enrolled prior to August, 1989 in an Associate of Arts program at a Florida public community college and maintain continuous full-time enrollment through the completion of the A.A. degree and their transfer to UCF. Continuous enrollment is enrollment for a minimum of one term every 12-month period beginning with the student’s first enrollment at a community college and continuing until the student enrolls in the University.

Applicants who have not met the above requirements may only seek admission into the lower division, and consequently must meet lower-division admission requirements (a 3.0 GPA for the academic subjects completed in high school, the required high school units, a 1000 SAT or 24 ACT score, and a “B” average (3.0) for all college work attempted, in addition to meeting requirements which apply to all transfer applicants.

Applicants with an A.A. Degree from a Private or Out-of-State College

Applicants with an Associate of Arts degree from a regionally accredited private or out-of-state institution must meet freshman admission requirements.

Any student who received an Associate of Arts degree prior to September 1, 1987 is exempt from the foreign language portion of the admission requirements.

Any student admitted without two years of one foreign language in high school or the equivalent (minimum 8 semester hours) of such instruction at the post-secondary level, must satisfy the admission requirement prior to graduation.

In addition to meeting the requirements which apply to all transfer applicants, undergraduate transfer students who wish to be admitted to UCF as upper division students must have met all of the following requirements:

- A minimum of 60 semester hours of academic coursework.
- The English and mathematics requirements of the Gordon Rule.
- Passing scores on three of the four parts of the College Level Academic Skills Test.
- Eight to 10 semester hours of college instruction in a single foreign language. (This requirement applies to those students admitted to the University without the required two units of foreign language in high school.)

Applicants who have not met the above requirements may only seek admission into the lower division, and consequently must meet lower-division application requirements (a 3.0 GPA for the academic subjects completed in high school, the required high school units, a 1000 SAT or 24 ACT score, and a “B” average (3.0) for all college work attempted, in addition to meeting requirements which apply to all transfer applicants.

Applicants with an A.S. Degree

Applicants who have received an Associate of Science degree in Engineering Technology from a Florida public college or university will be admitted only to the Bachelor of Science in Engineering Technology program.

All other A.S. degree applicants must meet the appropriate admission requirements defined in this section.
The A.S. degree does not certify the student as having completed General Education requirements.
In addition to meeting the requirements which apply to all transfer applicants, undergraduate transfer students who wish to be admitted to UCF as upper division students must have met all of the following requirements:
• A minimum of 60 semester hours of academic coursework.
• The English and mathematics requirements of the Gordon Rule.
• Passing scores on three of the four parts of the College Level Academic Skills Test.
• Eight to 10 semester hours of college instruction in a single foreign language. (This requirement applies to those students admitted to the University without the required two units of foreign language in high school.)

Applicants who have not met the above requirements may only seek admission into the lower division, and consequently must meet lower-division application requirements (a 3.0 GPA for the academic subjects completed in high school, the required high school units, a 1000 SAT or 24 ACT score, and a "B" average (3.0) for all college work attempted, in addition to meeting requirements which apply to all transfer applicants.

Applicants—More Than 60 Hours, Have Not Received an A.A. Degree from a Florida Public Institution
In addition to meeting the requirements which apply to all transfer applicants, undergraduate transfer students who wish to be admitted to UCF as upper division students must have met all of the following requirements:
• A minimum of 60 semester hours of academic coursework.
• The English and mathematics requirements of the Gordon Rule.
• Passing scores on three of the four parts of the College Level Academic Skills Test.
• Eight to 10 semester hours of college instruction in a single foreign language. (This requirement applies to those students admitted to the University without the required two units of foreign language in high school.)

Applicants who have not met the above requirements may only seek admission into the lower division, and consequently must meet lower-division application requirements (a 3.0 GPA for the academic subjects completed in high school, the required high school units, a 1000 SAT or 24 ACT score, and a "B" average (3.0) for all college work attempted, in addition to meeting requirements which apply to all transfer applicants.

Applicants from Unaccredited Institutions
Transfer applicants who otherwise meet all requirements, but who enter from a "regionally" unaccredited college or university will be considered on an individual basis. Admission may be granted on a probationary and/or non degree-seeking basis, depending upon the applicant’s record including high school units, entrance examination scores, and high school GPA. The "Transfer Credit" portion of this section provides information relating to transfer of credit for courses taken at unaccredited colleges or universities.

TRANSFER CREDIT
All grades earned at a regionally accredited college or university in transfer courses that are normally a part of a baccalaureate degree program are shown on the student’s permanent record. Credits earned in courses transferred with "D" grades will count toward the credits required for the baccalaureate degree; however, the department or college offering the major determines whether courses with "D" grades in the major may satisfy requirements in the major field.

No credit will be awarded for college-level General Education Development (GED) tests, for courses given without a grade, or for courses carrying grades but not credit hours.

Military Service School Courses
Completed military service school courses may be evaluated on the basis of the recommendations of the American Council of Education (A.C.E.) when official credentials have been properly presented. Credit may be granted when courses are equivalent to those offered by the University. However, recommendations by the A.C.E. are not binding upon the University.

Military credit is not accepted through transfer. Even though military records may have
been evaluated by another regionally accredited institution, it is important to have official credentials sent to the University for evaluation.

Credit is not awarded based on job descriptions, for Basic training, DANTES credit, CLEP scores below the 50th percentile, life experience, or coursework that is non-academic.

General Education Credits Transfer

Transfer students from Florida public community colleges or universities may satisfy the General Education Program requirements of UCF by completing the general education program prescribed by the previous community college or university. Transfer applicants with incomplete general education programs from state institutions will have their credits evaluated on a course-by-course basis.

Grade Forgiveness Transfer

UCF honors grade forgiveness if it has been awarded as part of an A.A. degree from a Florida public community college or university, with the exception of courses taken previously at UCF.

Credits from Private and Out-of-State Institutions

The credits of transfer applicants from private junior and senior colleges and out-of-state institutions will be evaluated on a course-by-course basis. Each student must submit the necessary petition(s) to the appropriate office(s) to determine which courses will transfer with regard to degree progress at UCF. Transfer courses which meet the requirements of the General Education Program and the Gordon Rule are determined through the process described in this catalog under "University Degree Requirements." Each College has different petition procedures, but generally the petitioning of transfer courses for satisfaction of college and major requirements should be done during the second full term of the student's residency at UCF so the accepted transfer courses are clearly understood by the student and the faculty advisor early in the student's program.

Credits from a Previous Baccalaureate Degree

Graduates from other accredited four-year U.S. institutions who apply for admission to work toward a second undergraduate degree must meet the regular requirements of the University (as defined in the "Undergraduate Degree Requirements" section of this catalog). A baccalaureate degree or higher from another accredited four-year U.S. institution satisfies the General Education Program requirements and also provides exemption from the foreign language requirements for admission and graduation.

ACCREDITED INSTITUTIONS

For the purposes of this catalog "Accredited Institutions" means those institutions accredited by any of the following six regional associations:

- New England Association of Schools and Colleges
- Middle States Association of Colleges and Secondary Schools, Commission on Institutions of Higher Education
- North Central Association of Colleges and Schools, Commission on Colleges and Universities
- Northwest Association of Secondary and Higher Schools, Commission on Higher Schools
- Southern Association of Colleges and Schools
- Western Association of Schools and Colleges, Accrediting Commission for Senior Colleges and Universities and Accrediting Commission for Junior Colleges.

Foreign institutions are evaluated through World Education Services, Inc.

COLLEGE PREPARATORY INSTRUCTION

State statutes require that new students be evaluated in terms of their potential to successfully complete required coursework at the University. Those students who are identified as likely to have difficulty in the areas of mathematics, writing, or reading may be required to take college preparatory courses prior to enrollment in college-level courses in those areas. Students must begin any required preparatory instruction during their first 12
semester hours and finish all such coursework within 3 semesters. New students will be notified of the need to take placement examinations during orientation, or of coursework that will be required. For further information, contact Dr. Mary Helen Callarman, Student Academic Resource Center, PC-102, Phone (407) 823-5130.

INTERNATIONAL STUDENTS

The University of Central Florida is authorized under Federal law to enroll non-immigrant alien students. Undergraduate applicants should refer to the "Admission" section of this catalog, and graduate applicants to the graduate catalog. In addition, the following is required for admission:

• International student applications and records required for admission must meet all applicant deadlines.
• Only those students with an Associate of Arts degree from a Florida public community college, or those who have completed their general education requirements (as defined in the Articulation Agreement), and at least three parts of the College Level Academics Skills Test (CLAST), or those students with superior academic records (i.e., upper 20th percentile or U.S. "B" average equivalent) will be considered for admission. Students who have attended any foreign institution(s) must provide an official course-by-course evaluation from World Education Services, Inc. (Evaluation applications may be obtained from the Admissions Office or by writing WES, P.O. Box 745, Old Chelsea Station, New York, NY 10011.)
• All applicants whose native language is not English must submit an official score report from the Test of English as a Foreign Language (TOEFL). Undergraduates who have not earned an Associate of Arts degree, or completed the general education requirements (as defined in the Articulation Agreement) from a Florida public community college and passed at least three parts of the CLAST must have a minimum TOEFL score of 550. Graduate applicants should consult the coordinator of their respective program to determine minimum TOEFL scores as well as any other requirements.
• All students who have not earned an A.A. degree from a Florida public institution must also submit an official SAT or ACT score and a high school transcript and WES evaluation, where applicable, in order to be considered for admission.
• Applicants must file a Confidential Financial Statement confirming availability of finances for each year of study.

The Admissions Office may require additional documents and/or transcripts before an admissions decision is made.

INTERNATIONAL STUDENT MANDATORY HEALTH AND ACCIDENT INSURANCE

Each international student accepted for admission shall, prior to registration, submit proof of compliance with the University’s mandatory health and accident insurance requirement (effective Fall semester 1990).

Minimum coverage required as follows:

Basic plan .......................................................... US $ 3,000.00
Supplemental .......................................................... US $30,000.00
Repatriation .......................................................... US $ 3,000.00
Evacuation .......................................................... US $ 3,000.00

Written proof of insurance must be provided to the International Student Services Office and must be valid for one calendar year from the date of first enrollment.

If insurance is issued by a foreign carrier or underwriter, a notarized statement must be provided, in English, insuring coverage is valid in the United States.

The University reserves the right to refuse registration to any international student who fails to comply with the insurance requirement or is unable to provide adequate proof of insurance.

TEMPORARY STUDENTS

Any student who applies before the application deadline date and is permitted to register and attend classes without a complete admission file is granted a maximum of 4 weeks (first 20 class days) to furnish all required records. Records indicating ineligibility may result in cancellation of the student’s registration.
TRANSIENT STUDENTS

Students in good standing with a 2.0 overall academic average in any accredited college or university who wish to enroll for one term at UCF may be considered for admission as transient students. Such enrollment terminates at the end of one term and does not presuppose regular acceptance by any college or department of the University. A transient student must be in good standing with a minimum "C" (2.0) grade point average and must submit an official transcript to support the application for admission. Transient student applications must be received by the appropriate deadlines.

AUDIT STUDENTS

To audit a class, a student must file a regular application and be accepted as a degree-seeking or non degree-seeking student, obtain an audit application at the records counter, and take it to the instructor for his/her signature of approval. Requests to audit a class will be processed the first working day following the add/drop period and will be approved on a space-available basis. No audit applications will be considered after the add/drop period. Finance and Accounting will bill students for audit classes separately from credit classes.

Students registering for credit during regular or late registration, or during add/drop may not change to audit status, but must remain in the course or withdraw through normal withdrawal procedures.

NON DEGREE-SEEKING STUDENTS

This classification allows qualified students to enroll in selected courses at the University without satisfying requirements for admission to degree-seeking status. Successful completion of courses while in this classification does not necessarily provide a basis for regular admission at a later date. Non degree-seeking status is granted in exceptional cases only, and will usually be reviewed by the Admissions and Standards Committee.

The following regulations will apply to non degree-seeking students:

1. Students are required to provide evidence of their educational qualifications for attending classes in order to meet the intent of this enrollment classification.
2. Non degree-seeking students are subject to the same rules and regulations as degree-seeking students.
3. Registration is permitted on a space-available basis. Students should consult the registration calendar in the Schedule of Classes or contact the Admissions Office for the appropriate registration time.
4. A maximum of 15 undergraduate baccalaureate semester hours earned as a non degree-seeking student may be applied toward a degree if a non degree-seeking student is later accepted as a baccalaureate student.
5. An applicant who has been denied admission or who has been disqualified or excluded may not register as a non degree-seeking student.
6. International students may not register as non degree-seeking since immigration regulations prevent foreign nationals from enrolling without admission to a degree or certificate program.

SENIOR CITIZENS

Senior citizens who are Florida residents and who are 60 years old or over may enroll as audit students by completing a specially-marked non degree-seeking student form at the Admissions Office. A Florida Residency Affidavit will be required in order to establish Florida residency. A completed Student Health History must be filed prior to registration.

Registration is scheduled during the last hour of the Add-Drop period. It is necessary to complete the required form at the Admissions Office prior to each term for which senior citizens wish to enroll as audit students.
TUITION AND FEES

SCHEDULE OF FEES
A student's basic expenses at the University will be for registration fees, room and board, textbooks, other instructional supplies, and miscellaneous items.

Required fees are established by the Board of Regents and the Florida State Legislature and are subject to change without notice. Fees are affected by residency status. Information on residency is contained in the “Admission” section of this catalog.

All University fees must be paid at or before the end of the add/drop registration period. Failure to pay fees on or before due date will result in cancellation of the current registration.

The following schedule applies to all University of Central Florida students:

**General Fees and Costs** (Subject to change without notice)
A. Application fee. Must be paid by U.S. check or money order (required with all applications for admission to the University and not refundable) .................................................. $15.00.
B. Registration Fees per semester for campus, centers, and continuing education courses. Minimum registration of one credit hour (at the level the student is classified) must be charged for students registering for zero hours (co-op student on work assignment, applicant for graduation during the semester that student is not registered).

<table>
<thead>
<tr>
<th></th>
<th>Fall, Spring and Summer Semester 91-92 Rates</th>
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<tbody>
<tr>
<td><strong>Undergraduate</strong></td>
<td>Florida Resident: $49.16 per hour</td>
</tr>
<tr>
<td></td>
<td>Non-Florida Resident: $187.11 per hour</td>
</tr>
<tr>
<td><strong>Graduate Level</strong></td>
<td>Florida Resident: 86.78 per hour</td>
</tr>
<tr>
<td></td>
<td>Non-Florida Resident: 289.19 per hour</td>
</tr>
</tbody>
</table>

1 Undergraduate courses are those courses numbered 0-4999
2 Graduate courses are those courses numbered 5000-7999

C. Room and Board (Based on accommodations and meal plan selected)
   - Dormitory Rooms (per semester) ............................................................... $810-$1,080
   - Board (meal plans, per semester) ........................................................... $548-$984
   - Charge for late payment ......................................................................... $25.00
D. Books and supplies (estimated) per semester ........................................... $230.00
E. Late Registration Fee—not refundable (for students who register during late registration periods or who fail to pay full fees by the established deadline) .................. $25.00
F. Vehicle Registration (required of everyone operating a motor-powered vehicle on campus) per calendar year for full-time, part-time students, and courtesy students from other institutions. Student's fee ........................................... $36.00
G. Student Health Fee—not refundable (per semester)
   - Assessed to all students except those enrolled exclusively in Continuing Education courses. This fee is also waived for senior citizens, for State employees under the fringe benefit plan, and for Intern Participation holders. University employees who use the Tuition Fee Waiver for class attendance may not elect to pay the Student Health Fee, regardless of the number of semester hours taken.
   - Fall & Spring Semesters .................................................................. $41.00
   - Summer Semester ............................................................................ $31.00
H. Intern Participation Holder ........................................................................ $4.76/hr.
I. I.D. Card replacement .................................................................................. $5.00
J. (Scientific Laboratory fees—fee per student on specific course(s) ...... $2.00 - $15.00
FLORIDA RESIDENCY FOR TUITION PURPOSES

To qualify as a Florida Resident for tuition purposes, students must:

Be a U.S. Citizen, Resident Alien, Parolee, Cuban National, Vietnamese Refugee, or other refugee or asylee so designated by the U.S. Immigration and Naturalization Service, AND

Have established a legal residence in this state and maintained that legal residence for 12 months immediately prior to the term in which they are seeking Florida resident classification. The student residence in Florida must be as a bona fide domiciliary rather than for the purpose of maintaining a mere temporary residence or abode incidental to enrollment in an institution of higher education, and should be demonstrated as indicated below (for dependent students, as defined by IRS regulations, a parent or guardian must qualify), AND

Submit the following documentation (or in the case of a dependent student, the parent must submit documentation) prior to the last day of registration for the term for which resident status is sought:

• Documentation establishing legal residence in Florida (this document must be dated at least one year prior to the first day of classes of the term for which resident status is sought). The following documents will be considered in determining legal residence:
  A. Declaration of Domicile.
  B. Proof of purchase of a home in Florida in which the student resides.
  C. Proof that the student has maintained residence in the state for the preceding year (e.g., rent receipts, employment records).

• Documentation establishing bona fide domicile in Florida which is not temporary or merely incidental to enrollment in a Florida institution of higher education. The following documents will be considered evidence of domicile even though no one of these criteria, if taken alone, will be considered as conclusive evidence of domicile:
  A. Declaration of Domicile.
  B. Florida voter registration.
  C. Florida vehicle registration.
  D. Florida driver license.
  E. Proof of real property ownership in Florida (e.g., deed, tax receipts).
  F. A letter on company letterhead from an employer verifying permanent employment in Florida for the 12 consecutive months before classes begin.
  G. Proof of membership in or affiliation with community or state organizations or significant connections to the State.
  H. Proof of former domicile in Florida and maintenance of significant connections while absent.
  I. Proof of reliance upon Florida sources of support.
  J. Proof of admission to a licensed practicing profession in Florida.
  K. Any other factors peculiar to the individual which tend to establish the necessary intent to make Florida a permanent home and that the individual is a bona fide Florida resident, including the age and general circumstances of the individual.

• No contrary evidence establishing residence elsewhere.

• Documentation of dependent/independent status (notarized copy of most recent IRS tax return).

OR

Become a legal resident and be married to a person who has been a legal resident for the required 12-month period,

OR

Be a member of the Armed Forces on active duty stationed in Florida, or a spouse or dependent,

OR

Be a member of the full-time instructional or administrative staff of a state public school, community college or university in Florida, a spouse or dependent,

OR

Be a dependent and have lived five years with an adult relative who has established legal residence in Florida,

AND

File a notarized residence affidavit with the Admissions Office.
The Admissions Office reserves the right to require additional documentation as seen necessary to accurately determine the resident status of any student.

APPEALS
Students who wish to appeal a late registration, late payment, or return check service charge fee may make their appeal to the "Committee for Resolving Fee Payment Questions" by initiating a student petition (Form 41-561). This form can be obtained from the Offices of Undergraduate Studies, Student Affairs, University Cashier, or the Student Accounts Section of Finance and Accounting. Students must submit their petitions to Student Accounts, Room 112, Administration Building, and may appear (not mandatory) before the committee which meets once each week.

CHECK CASHING
The University Bookstore cashes personal checks not exceeding $50.00. The University collects a $15.00 service fee, or five percent (5%) of the check amount, whichever is greater, for personal checks, drafts, or orders which are returned as uncollectible. Future check-cashing privileges may be denied.

PAST-DUE ACCOUNTS
All financial obligations to the University must be met if good standing is to be maintained. Failure to meet obligations can result in the withholding of grades and transcripts, and denial of registration and readmission to the University. The services of a professional collection agency and recourse to the courts may also be invoked if deemed necessary. All costs of collection, including attorney's fees, are borne by the debtor.

PAYMENT ON ACCOUNT
The University cashier will accept personal checks for accounts due to the University.

REFUND OF FEES
A refund of fees, or a reduction in fee liability for those students who have an authorized deferment, will be made upon presentation to the Student Accounts Office a Certification of Withdrawal issued by the Registrar. No refund or reduction in fee liability will be made under this policy except upon proper application.
1. A FULL REFUND will be made when:
   A. Withdrawal is made before the end of the add/drop period. Summer refunds will not be made until after Term B Registration and add/drop, except by written application to Student Accounts, Room 112 Administration Building.
   B. The course is cancelled by the University, or
   C. A student is denied admission to an offered course for any reason.
2. A PARTIAL REFUND (25 percent of the total fees paid, less building and capital improvement fees) will be made when complete withdrawal from the University is made prior to the end of the fourth week of classes, during a 16 (or 17) - week semester or at the end of the first quarter of classes during a mini-semester or summer semester (rounded to the end of the week in which the first quarter occurs).
3. Refunds up to 100 percent of tuition and registration fees will be made upon withdrawal from one or more courses when exceptional circumstances exist, as determined by the University. Exceptional circumstances include, but are not limited to illness, death, involuntary call to military service, and administrative error created by the University.
   Application for a full refund is made through the Office of Undergraduate Studies (AD 210) or the Office of Graduate Studies (AD 143).

TUITION FEE WAIVERS FOR STATE OF FLORIDA EMPLOYEES
State employees who utilize a tuition fee waiver for eligible coursework for up to six credit hours without payment of the registration fees register as provided in the class schedule. Employees who register prior to the prescribed time and date have an invalid fee waiver, and are liable for all applicable fees on courses enrolled. Employees register on a space-available basis. The tuition fee waiver can not be used for courses having increased costs (such as Thesis, Dissertation, and Directed Individual Study).
TUITION FEE WAIVERS FOR SENIOR CITIZENS

Persons 60 years of age or older who meet Florida residency requirements may register for credit classes without payment of application fee, registration fee, and health fee. Senior citizens register only on a space-available basis, and only during the last hour of the add/drop registration period prescribed in the class schedule. Academic credit is not awarded for completed courses. The fee waiver cannot be used for courses which have increased costs. These courses would include, but not be limited to Thesis, Dissertation, and Directed Individual Study.
The following Financial Aid policies and procedures are based upon federal, state and University regulations current for the 1991-92 academic year. Regulations are subject to change at any time.

DETERMINING ELIGIBILITY

In order to qualify for federal and state financial aid programs, a student must be a citizen or permanent resident of the United States, the Mariana Islands, or the Pacific Trust Territories.* In order to qualify for financial aid, students must be classified by the Admissions Office as degree-seeking. Some financial aid programs are available to part-time students; generally at least 6 credit hours enrollment per term is required.

The Financial Aid Office encourages all such students to apply for financial aid and to begin the process early. There are many grant, loan, and employment programs available as described below. Almost all programs require the determination of financial need.

Financial need is calculated by national processors who use a standardized formula: financial need equals the cost of education (specific to the school to be attended) minus the expected family contribution (specific to each applicant). Students or their parents provide detailed financial information on a need analysis form sent to the processor. The results are forwarded to the UCF Financial Aid Office.

*Eligible non-citizens include I-151, I-551 and I-688 cardholders as well as some I-94 classifications.

UCF APPLICATION DEADLINES

Pell Grants and Stafford Loans are available on a year-round basis. Students may apply for financial aid in advance of any term and receive aid from these programs if eligible.

To be considered for the full range of aid available for the academic year (beginning with the Fall Term), students must complete the application by March 15 of the preceding Spring.

Incoming students should not wait to be admitted to UCF before applying for financial aid.

Returning students must reapply yearly for financial aid.

APPLICATION PROCEDURES

The following steps can take 4 to 6 weeks to complete. Students should apply well in advance of the March 15 deadline or the term for which aid is being requested. Students who wish to enter UCF in Spring Term must apply by the March 15 deadline of the preceding spring in order to be eligible for the maximum aid available.

1. Complete a Need Analysis.

UCF requests students use the ACT Family Financial Statement* and makes this form available after January 1. The form can also be obtained from high school guidance offices and other post-secondary institutions.

It is crucial to follow the instruction booklet carefully. Errors, omissions, or submission without the filing fee can prevent students from receiving aid for which they would otherwise be eligible.

*A CSS need analysis will also be accepted.

2. Submit a UCF Financial Aid Application.

This one-page form is available from the Financial Aid Office.
3. Request Financial Aid Transcripts

The Financial Aid office must receive an official Financial Aid Transcript from every post-secondary institution a student has attended, even if financial aid was not received. UCF has transcript forms that the student can mail to such schools, or students can write a letter which includes their name, SS#, school ID#, the name used while attending that school, and the student's signature. Request that the school include your SS# on the transcript they mail to UCF. Allow 2 to 4 weeks for processing.

4. Follow-through.

Students' applications are not complete until all documents requested have been received and reviewed by the Financial Aid Office. Read and save any information and documents received regarding financial aid. It is to the student's advantage to respond promptly to requests for additional information—especially if required for Verification (see below).

Students receive a Student Aid Report (SAR) in the mail from the processor to confirm receipt and information on their need analysis. Students must bring this SAR to the Financial Aid Office, even if found ineligible for a Pell Grant.

Helpful Tips:
- Make a copy of tax return forms before submission to IRS.
- Start a folder NOW to save financial aid information and photocopies of all documents filed and received.
- Include student's name and SS# on all documents submitted to the Financial Aid Office.
- Maintain a current address in the REGISTRAR'S OFFICE; all financial aid correspondence is mailed to that address.
- Complete all items necessary to apply for both a Pell Grant and a Stafford Loan, even if it doesn't seem advantageous at the time. Law requires that students be considered for a grant before a loan is offered; choosing a lender now does not obligate the student to undertake a loan but will make it easier if additional funds are needed.

VERIFICATION

Federal regulations require that students be able to verify the information submitted on the need analyses. Students may be asked to provide additional information or documentation such as copies of tax returns, verification of household size, and independent status. Financial aid cannot be disbursed until the verification process is complete.

TRANSFER STUDENTS

The UCF Financial Aid Office must have on file a Financial Aid Transcript from every post-secondary school ever attended, whether or not financial aid was received. If determined eligible to receive aid at another institution for the academic year in question, please be aware that the only transferable programs are Pell Grants and Florida Student Assistance Grants.

To apply for financial aid at UCF, complete the application procedures listed above— with one exception. If a need analysis for the year in question has already been filed, the student need only request the processor forward a copy to UCF. (Refer to the Family Financial Statement Confirmation Report for instructions.) UCF's code number will have to be provided; it is 0735 for ACT or 5233 for CSS. Further information can be obtained from ACT at 1-319/337-1200 or from CSS at 1-215-750-8400.

To transfer the remainder of a Pell Grant, request the need analysis processor send a duplicate set of their Student Aid Reports (SAR's). These must be submitted to the UCF Financial Aid Office once the student has received them.

To transfer the remainder of an FSAG, send a copy of the state award letter and UCF's name and address to: State of Florida, Office of Student Financial Assistance, Department of Education, 1352 Florida Education Center, Tallahassee, FL 32399. Please do this before their stated deadline.

INDEPENDENT STUDENT STATUS

The financial resources of parents/guardians do not have to be included in the determination of students' financial need if they are:

- 24 years old
- an orphan or ward of the court
• a veteran
• legally responsible for dependents other than a spouse
• an unmarried undergraduate not claimed as an income tax deduction by anyone other than a former spouse for the previous two consecutive years AND if they can document that their annual income was at least $4,000 for the 2 years preceding that year in which they first received financial aid, beginning with 1987-88
• a married or a graduate/professional student who will not be claimed as an income tax deduction by their parents/guardians in the first year of the award year (1991 for academic year 91-92).

PROGRAMS AVAILABLE AT UCF
The programs listed with an asterisk (*) are Federally Funded Programs.

GRANTS
*Pell Grants form the basis of undergraduate financial aid packages; six credit hours enrollment required. $200 - $2,300 per academic year.
*Supplemental Education Opportunity Grants (SEOG) and Lottery Grant Awards are available to undergraduates in UCF's highest need category; 12 credit hours enrollment required. Amounts vary yearly.
Florida Student Assistance Grants (FSAG) are awarded to Florida residents who will attend college on a full-time basis; application must be completed in April. Please refer to the state application form for the specific deadline date and residency requirements. $400-$1,200 per academic year if 2.0 GPA is maintained in college.

LOANS
*Perkins Loans are low interest loans (currently 5%) awarded to high-need UCF students enrolled for at least 6 credit hours. Loans are deferred until 6 or 9 months after students graduate or drop below 6 hours enrollment; $2,000 per academic year.
*Stafford Loans, made through private lenders, are currently being offered at 8% interest (increases to 10% after fourth year of repayment). Students must be enrolled in UCF classes for a minimum of 6 credit hours at the time of disbursement to receive a Stafford Loan check. First-time borrowers at UCF must attend an Entrance Interview before a loan check will be released to them.
Freshmen and sophomores may borrow $2,625 per academic year; juniors, seniors and post-bac students may borrow $4,000 per academic year up to $17,250. Graduate students may borrow $7,500 per academic year up to $54,750 (including undergraduate total). Payment is deferred until students graduate or drop below 6 hours enrollment at UCF. Dual Enrollment Students who drop below 6 hours enrollment at UCF are not eligible for loans and must provide their lender with proof of total hours enrolled in order to maintain their deferment status.
Once eligibility has been determined by a need analysis, students must request a Stafford Loan by the dates printed below so that processing can be completed in time to receive funds during the term indicated.

October 1 — Fall Term Loan
February 1 — Spring Term Loan
May 1 — Summer Term Loan

EMPLOYMENT
*College Work-Study jobs are awarded as part of a student's financial aid package if need so indicates; a minimum of 6 hours enrollment is required. Jobs are on-campus and efforts are made to match job assignments with the student's academic program. Awards average $1,000 per semester paid as an hourly wage.
The Florida College Career Work Experience Program provides off-campus jobs related to the student's major to help fill unmet financial need established by a current need analysis. Six hours enrollment is necessary. This program is administered by the Office of Cooperative Education, (407) 823-2667.

LOANS AND EMPLOYMENT NOT BASED ON NEED
Supplemental Loans for Students (SLS) / Parent Loans for Undergraduate Students (PLUS) are not based on financial need and are available with 6 hours UCF
enrollment at the time of disbursement. SLS/PLUS interest rates are tied to the treasury bill, but are capped at 12%. Graduates and independent undergraduates may borrow $4,000 per academic year; parents may borrow $4,000 per academic year per dependent in college; aggregate total of all borrowers is $20,000. Repayment begins within 60 days unless a deferment has been agreed upon with the lender at the time of application. Research lenders carefully; policies differ on options for deferment and interest capitalization. Contact the Financial Aid Office for borrower restrictions.

Before receiving an SLS loan, students must have a need analysis on file in order to determine if they can first be offered a Stafford Loan. An Entrance Interview is required of all first-time borrowers at UCF before loan checks are released. An Exit Interview is required prior to departure from UCF.

Co-operative Education (Co-op) jobs related to students’ educational goals are available off-campus and are not related to financial need. Contact the Office of Cooperative Education, (407) 823-2667.

OPS (Other Personnel Services) jobs are available on-campus and are not related to financial need. Application is made directly to the Department advertising the position.

OTHER SERVICES

UCF Emergency Short Term Loans are available to currently-enrolled students for books and emergencies other than tuition and fee payment. A $5.00 non-refundable service charge will be assessed for processing the loan. This service charge, as are any other debts owed the University, will be deducted at the time of disbursement. If the loan is cancelled, or not picked up, the $5.00 service charge is still required to be paid. The normal repayment period is 30 to 60 days.

Food Service Loans are available to students who have already been awarded sufficient financial aid to cover all debts owed the University and who live on campus. Food Service Loans are processed by the Financial Aid Office. A $5.00 non-refundable service charge will be assessed at the time of processing.

Scholarships

Scholarships based on many different criteria are available to UCF students; please refer to UCF’s Scholarship brochure. Some scholarships are based on need and may actually be offered to students who have a current need analysis on file in the UCF Financial Aid Office. We therefore recommend that students considering applying for scholarships complete a financial aid application.

AWARD PACKAGES

An award letter offering a financial aid package will be mailed to students who are eligible to receive aid at UCF. This letter lists estimated awards by program (outlined above). Students may choose to accept or reject any or all of their financial aid awards by marking, signing, and returning the award letter. This decision must be made within 15 days.

Actual awards will be calculated once a student’s enrollment has been confirmed, as well as the student’s housing in the case of Pell Grant awards. Students who do not enroll for the number of credit hours required by each program may have those awards reduced or cancelled. See the chart below.

<table>
<thead>
<tr>
<th>Programs requiring 12 hours enrollment</th>
<th>Programs requiring 6 hours enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEOG</td>
<td>Pell*</td>
</tr>
<tr>
<td>FSAG</td>
<td>CWS</td>
</tr>
<tr>
<td>LGA</td>
<td>Stafford/Perkins</td>
</tr>
</tbody>
</table>

*Students who PGI is zero (indicated in the right-hand corner of the SAR) may receive a portion of their Pell Grant with less than 6 hours enrollment.
AUTOMATIC DEFERMENT

1. The fee invoice (class schedule) reflects the dollar amount of deferment. If the total amount of tuition and fees exceeds the amount of deferment, the difference must be paid by the due date on the fee invoice (class schedule). Different programs require different hours of enrollment for eligibility. Make sure that registered hours are equal or greater than required number of hours.

   *Student must be enrolled at least 12 hours to receive an SEOG, FSAG, and/or Lottery Grant award; 6 hours to receive a Pell, Stafford, SLS and/or Perkins award. (Note: A minimum of six hours at UCF is required for the Stafford/SLS loans.

2. Automatic Deferral means you are Fee-Liable. Simply not attending class will not cancel your debt to the University. You must go through the Add/Drop process or be held responsible for the payment of the original Fee assessment.

   *Student Loan Borrowers, please note! Federal Regulations have changed the way Stafford and SLS loans are disbursed. This may affect when you will receive your money. Refer to the "Disbursement" section.

DISBURSEMENTS

Financial aid disbursements are not available at the time of registration. (No checks, including Stafford and Short Term Loan checks, will be disbursed before the first day of classes.) Therefore, students should make themselves aware of the Automatic Deferral policies and procedures AND be prepared to use personal savings or a UCF Short Term Loan to pay for books and other expenses anticipated until about the 4th week of the term.

Award checks are disbursed for the award amount minus any debts owed the university, such as deferred tuition, fees, library and/or parking fines. In most cases checks will be mailed to the student at the address on file. Checks not handled through the Net Checking system (i.e., Stafford Loans and Perkins Loans will be disbursed at the Cashier’s Office (open 9:00 am to 5:00 pm M-F); a picture ID is required.

The verification process must be complete before financial aid funds will be released.
Stafford and SLS Loans:
1. First-time borrowers at UCF: Must attend an Entrance Interview before a check can be disbursed. Check with the Financial Aid Office for dates and times, and to schedule an appointment.
2. Two-term loans: To receive the second half of a two-term loan, you must complete at least 6 hours at UCF during the first term. If you did not complete the required 6 hours or if you did not accept your first term loan disbursement, you cannot receive the second term disbursement either. You must cancel the original loan request and reapply for a new loan.
3. One-term loans: Disbursement of a one-term loan will be divided into two payments. You must maintain eligibility throughout the term to be eligible for each disbursement. The second disbursement cannot be made until at least ½ of the term is over.
4. Students who have not successfully completed their first year of undergraduate study (i.e., 1F) will not receive their checks until 30 days after classes have begun.
5. SLS borrowers: Please contact the financial aid office concerning borrower restrictions.

REFUND AND REPAYMENT POLICIES
Students should be aware that if they withdraw from the University after having received financial aid, they may be liable for repayment of a portion of that aid. Students who received Stafford Loans should also know that the Financial Aid Office is required to notify lenders of student withdrawals.

Refunds
Financial aid recipients planning to withdraw from UCF should first consult the University's Withdrawal Policy published under Academic Policies and Procedures in this Catalog. If the student is due a refund according to this policy, the financial aid program(s) from which the student received aid will first be reimbursed. Any remaining balance after refunding all appropriate aid programs will be refunded to the student. In no case will the amount refunded to the aid program exceed the amount disbursed.

Repayment
A portion of the financial aid disbursed to the student for non-instructional costs must be repaid by the student to the University. The amount of repayment due from the student will be based upon the schedule printed below. A student who owes a financial aid repayment will not be allowed to receive further financial aid funds until the repayment is paid in full. In addition, academic and financial aid transcripts will be withheld until repayment is complete.

<table>
<thead>
<tr>
<th>Week of withdrawal</th>
<th>Amount of repayment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st week</td>
<td>100% of total aid* received</td>
</tr>
<tr>
<td>2nd or 3rd week</td>
<td>Total aid* - book allowance x 75%</td>
</tr>
<tr>
<td>4th or 5th week</td>
<td>Total aid* - book allowance x 50%</td>
</tr>
<tr>
<td>6th or 7th week</td>
<td>Total aid* - book allowance x 25%</td>
</tr>
<tr>
<td>8th week or after</td>
<td>No repayment due</td>
</tr>
</tbody>
</table>

Summer A, B, and C Terms

<table>
<thead>
<tr>
<th>Week of withdrawal</th>
<th>Amount of repayment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st week</td>
<td>100% of total aid* received</td>
</tr>
<tr>
<td>2nd week</td>
<td>Total aid* - book allowance x 75%</td>
</tr>
<tr>
<td>3rd week</td>
<td>Total aid* - book allowance x 50%</td>
</tr>
<tr>
<td>4th week or later</td>
<td>No repayment due</td>
</tr>
</tbody>
</table>

*Total excludes monies received from the following programs: College Work Study, Stafford Loans, Supplemental Loans for Students, and Parent Loans for Students.

REQUIREMENTS TO RECEIVE AID
* Financial aid funds cannot be disbursed until the student's financial aid file is complete and the verification process has been completed. Verification must be completed 45 days prior to the end of the enrollment period in order to have time to process a Stafford Loan application.
• Students must not be in default on any educational loan or owe repayment on a grant at UCF or any other post-secondary institution.
• It is necessary for students who have received financial aid to maintain UCF's standards for Satisfactory Academic Progress, as defined below. Upper-level students must also pass the CLAST in order to receive state aid.
• Students must notify the Financial Aid Office of any changes in housing, marital, or financial status.
• Application for financial aid must be made yearly.

Satisfactory Academic Progress
In order to remain eligible to receive financial aid, continuing students must meet the following standards for Satisfactory Academic Progress instituted by UCF in accordance with federal law.

UNDERGRADUATE STANDARDS

GPA: Acceptable academic standing is reserved for those students who achieve and maintain a GPA of 2.0 or higher. (Please refer to the complete guidelines under Academic Policies and Procedures.)

Hours Completed: Students receiving financial aid must successfully complete the following number of credit hours per term. Incompletes, Withdrawals, Failures, and audits are not considered completed courses.

<table>
<thead>
<tr>
<th>HOURS ENROLLED</th>
<th>HOURS REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 or more hours,</td>
<td>10 hours</td>
</tr>
<tr>
<td>9 - 11 hours</td>
<td>8 hours</td>
</tr>
<tr>
<td>6 - 8 hours</td>
<td>5 hours</td>
</tr>
</tbody>
</table>

Time Limits: Undergraduates must obtain their degree within 12 full-time semesters or the equivalent thereof for part-time students. Transfer students entering UCF with either an A.A. degree or 70 or more hours must complete their degree in 6 full-time semesters (or the equivalent thereof). A warning will be issued at the end of the 11th term or 5th term for the transfer student.

Graduate Standards

GPA: A GPA of at least 3.0 is required for the courses specified in the graduate student’s program.

Hours Completed: Full-time graduate students (9 or more hours) must complete at least 7 credit hours per semester; half-time students (6 or more hours) must complete at least 4 hours per semester. Incompletes, Failures, Withdrawals, and audits are not considered completed courses.

Time Limits: Graduate students receiving financial aid will be given 5 full-time semesters (or the equivalent thereof) to attain their Master’s Degree. Doctoral candidates may have 5 additional full-time semesters to earn their Ph.D. Cases will be reviewed on an individual basis when additional time is needed.

Cancellation

Time Limit: Students who fail to graduate within the required number of terms will be cancelled at the end of the term.

Hours Completed: Students who fail to complete the required number of hours for (Summer, Fall, Spring) will be cancelled at the end of the Spring term of each academic year.

GPA: Junior and Senior level students with an overall GPA of less than 2.0 will be placed on Cancellation at the end of each term.

Appeals

Probation or Cancellation will remain in effect unless overturned through the established appeals process. Students may file an appeal based upon extenuating circumstances. A student’s status is never overturned automatically; a Satisfactory Academic Progress Appeal must be initiated. Students who wish to pursue a denied appeal should refer to the procedures in The Golden Rule Handbook.

Grades/Hours Completed: The University has established academic standards for graduate students and a Grade Forgiveness policy for undergraduates, outlined in the
Academic Policies and Procedures section of this catalog. Students who improve their grades or make up deficit hours under the Grade Forgiveness Policy must still file a Satisfactory Academic Progress Appeal with the Financial Aid Office.

**Mitigating Circumstances:** Appeals may also be filed on the basis of extenuating circumstances. These might include death in the student's immediate family, accidents, personal tragedy, or medical emergencies as defined by the University of Medical Withdrawals (see below). Such appeals will be reviewed by the Financial Aid Committee. Documentation relating to the mitigating circumstances will prove beneficial to the student's appeal.

**Medical Withdrawals:** Once an appeal has been granted on the basis of a Medical Withdrawal, any subsequent requests based on Medical Withdrawal will be subject to review by the Financial Aid Committee.

**Cancellation:** Once the appeal process has been exhausted, cancellation from financial aid at UCF is permanent. Any student cancelled from financial aid who leaves UCF and later gains readmittance will not be eligible to receive financial aid unless a petition is filed and approved for Financial Aid Reinstatement.

**FINANCIAL AID FOR GRADUATE STUDENTS**

There are several sources of financial assistance available to UCF graduate students. Perkins and Stafford loans and the College Work Study Program, described above, require that financial need be established. Supplemental Loans for Students (SLS) are also available to graduate students. Though SLS loans are made by private lenders and do not require that financial need be established, applicants must have a current need analysis on file in our office.

**Out-of-state Tuition Waivers** are offered by each college and the Office of Minority Student Services to outstanding non-Florida residents. Some colleges give priority to graduate students in making award selections.

Eligibility and application guidelines for Teaching or Research Assistantships and Graduate Assistant Positions are established by the colleges or in some cases by departments, as are pay scales. To apply for an assistantship position, contact the Dean's Office in the Colleges of Business Administration and Education or the department's graduate coordinator in the Colleges of Arts and Sciences, Engineering, and Health and Professional Studies.

There are also scholarships available to graduate students. Please request a UCF Scholarship brochure.

**Student Rights and Responsibilities**

- Students have the right to complete information about the financial aid programs available at UCF, our application procedures and deadlines, and the criteria used to determine a financial aid package.
- Students have the right to appeal decisions made by the financial aid office.
- Students have the right to equitable treatment of their financial aid applications. Although each student's case is analyzed individually, eligibility standards are applied uniformly without regard to race, gender, religion, creed, national origin, or physical handicap.
- All student records are confidential.

It is the student's responsibility to review and understand all information and instructions, meet all deadlines, and provide all information and documentation accurately. Errors and omissions can cause delays and prevent students from receiving aid. Misrepresentation is a violation of the law.
ACADEMIC POLICIES AND PROCEDURES

ACADEMIC ETHICS
Policy
The faculty of the University of Central Florida is committed to a policy of honesty in academic affairs. Conduct for which students may be subject to administrative and/or disciplinary penalties up to and including suspension or expulsion include:
1. Dishonesty consisting of cheating of any kind with respect to examination, course assignments, or illegal possession of examination papers. Any student helping another to cheat is considered as guilty as the student assisted.
2. Plagiarism consisting of the deliberate use and appropriation of another's work without any indication of the source and the presentation of such work as the student's own. Any student who fails to give credit for ideas or materials taken from another source is guilty of plagiarism.

Procedure
In cases of cheating or plagiarism the instructor shall take whatever academic action he/she deems appropriate. This action may range from loss of credit for a specific assignment, examination, or project to removal from the course with a grade of “F.” The instructor should seek to resolve the problem with the student to their mutual satisfaction. In addition, the instructor may also request disciplinary action through the Dean of Students, if necessary, who shall proceed in accordance with provisions outlined in the APA Chapter 6C7-5.041.

STUDENT CLASSIFICATIONS
Students will be classified by level, on the basis of semester hours satisfactorily earned:
Freshman: Through 29 semester hours.
Sophomore: 30-59 semester hours.
Junior: 60-89 semester hours and have fulfilled CLAST and Gordon Rule requirements.
Senior: 90 or more semester hours, prior to completion of baccalaureate requirements.
Post-Baccalaureate: Any student enrolled in courses, regardless of course level (except one working toward another baccalaureate degree), who has a baccalaureate degree but has not been admitted to a graduate program.
Graduate: Any student enrolled in graduate courses who has been admitted to a graduate program.

Other student classifications:
Auditor: A student registered for any credit course who is not seeking credit.
Co-op Student: A student enrolled in the Cooperative Education Program remains a registered student during all off-campus assignment semesters. Furthermore, there is no lapse in continuity in the co-op school calendar: a co-op student is either on assignment or attending class during each school semester. (See Veterans' Benefits for co-ops.)
Special Student: A student of demonstrated academic ability who does not meet the regular requirements for admission (Early Admission, non degree-seeking, transient, and auditor).
Temporary: A student who applied before the deadline and is permitted to register and attend class pending completion of the admission file.
Transient: Students temporarily registered (for one semester) at the University of Central Florida with the approval of some other university or college where they are regularly enrolled, or a UCF
student temporarily in attendance at another university or college, with the approval of UCF. A UCF student may not be enrolled as a transient student in another institution during the term in which the baccalaureate degree or the Associate of Arts degree is to be awarded.

Non Degree-Seeking: A student earning credit, but not working on a degree program.

Provisional: A student entering from a regionally unaccredited high school, college, or university may be admitted on provisional status where appropriate. By obtaining a 2.0 GPA ("C" average) or better at the end of the first semester of attendance, the provisional status will be removed. Earning less than a "C" average the first term would result in disqualification.

SEMESTER HOURS EXPLAINED
The graduation credit value of each course of instruction is stated in terms of semester hours. A semester hour of credit represents one class hour of work (or two or more laboratory hours of work) per week for a semester.

Classes may be offered for a six-week period during the summer semester. During this shortened semester, two class hours of work (or four or more laboratory hours of work) per week are required to represent a semester hour of credit.

MAXIMUM COURSE LOAD
The University reserves the right to establish maximum course loads for students at any level. Course load limitations will be published in the term Class Schedule and made available prior to the beginning of the term.

GRADING SYSTEM
The University uses an alphabetic system to identify student grades and other actions regarding student progress or class attendance. This system, with a grade point equivalent per semester hour, is as follows:
### Grades

<table>
<thead>
<tr>
<th>Letter</th>
<th>Description</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>Average</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>Passing</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>Failure</td>
<td>0</td>
</tr>
</tbody>
</table>

### Other Actions

<table>
<thead>
<tr>
<th>Action</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>W—Withdrawn</td>
<td>0</td>
</tr>
<tr>
<td>WP—Withdrawn Passing</td>
<td>0</td>
</tr>
<tr>
<td>WF—Withdrawn Failing</td>
<td>0</td>
</tr>
<tr>
<td>WM—Medical Withdrawal</td>
<td>0</td>
</tr>
<tr>
<td>I—Incomplete</td>
<td>0</td>
</tr>
<tr>
<td>X—Audit (no credit)</td>
<td>0</td>
</tr>
<tr>
<td>S—Satisfactory (with credit)/Satisfactory Progress (Research, Thesis, or Dissertation)</td>
<td>0</td>
</tr>
<tr>
<td>U—Unsatisfactory (no credit)</td>
<td>0</td>
</tr>
<tr>
<td>T— (followed by grade)</td>
<td>0</td>
</tr>
<tr>
<td>R— (followed by grade)</td>
<td>0</td>
</tr>
<tr>
<td>N—No grade reported by professor</td>
<td>0</td>
</tr>
</tbody>
</table>

The grade point average (GPA) is the average number of grade points per semester hour attempted and is computed by dividing the total number of grade points assigned by the total number of semester hours attempted, less hours resulting from W, WP, and I grades. The grade point average for graduation requirement is 2.0 (“C”) and will be computed on both the student’s total academic program and the UCF program.

The designation of “N” will be temporarily assigned by the Records Office only in the case when a grade has not been submitted by the faculty by the “grades due” deadline. The designator will be replaced by the earned letter grade at the earliest opportunity in the semester which immediately follows. The “N” designator may not be assigned by faculty.

A request for grade change will be considered only during the term immediately following the one in which the grade was assigned, except that grades assigned during the spring semester may be changed during either the following summer or fall terms. Academic Actions do not change when an incomplete grade is completed nor when a course is repeated. A change in a grade must be approved by the dean of the college.

### Academic Standing

All Academic Actions are shown on grade reports and transcripts. The action is generated due to course completion. Changing a course grade does not necessarily change academic action. An exception can be made when an error is committed and is so stated on the Change of Grade request form by the professor.

<table>
<thead>
<tr>
<th>Semester Average</th>
<th>Grade Point Average on work attempted during any given semester.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UCF Average</td>
<td>Grade Point Average on all work attempted while in attendance at the University of Central Florida.</td>
</tr>
<tr>
<td>Overall Average</td>
<td>Grade Point Average on all work attempted since entering college, including work from all previously attended institutions.</td>
</tr>
<tr>
<td>Academic Warning</td>
<td>Some first-time-in-college applicants who do not meet University admission requirements may be admitted on Academic Warning. By obtaining a 2.0 GPA (“C” average) or better at the end of the first semester of attendance, Academic Warning will be removed. Earning less than a “C” average the first term will result in Academic Probation. A student may be on Academic Warning only once.</td>
</tr>
<tr>
<td>Academic Probation</td>
<td>Action taken when a Student’s UCF cumulative or overall GPA drops below 2.0. A student may also be admitted on Academic Probation. Academic Probation will continue until the current term, UCF cumulative, and overall GPA reach 2.0 or better.</td>
</tr>
</tbody>
</table>
**Disqualified (First Suspension)**

A student on Academic Probation is disqualified upon failure to achieve a 2.0 GPA during the subsequent semester. A student who is disqualified may not enroll at the University for two semesters following disqualification. *Readmission after two semesters is not automatic.* A disqualified student must submit an application for readmission supported by a letter indicating the reasons for previous academic difficulties and plans for achieving a GPA of 2.0 or better. The total record will be reviewed and action on readmission will be taken by the Director of Admissions. When the Director of Admissions can not make a favorable decision, cases will be referred to the Admissions and Standards Committee.

**Exclusion (Second Suspension)**

A student readmitted following disqualification who fails to achieve a 2.0 GPA is excluded from the University. Exclusion is most serious and readmission will not be considered prior to a minimum suspension period of one year.

**Readmission**

If a student has dropped out of the University *for any reason,* he or she must reapply on the appropriate form (see calendar for deadline).

First-time-in-college students may be admitted on Academic Warning (see above) or Academic Probation at the discretion of the Admissions Office or the Admissions and Standards Committee. Transfer students may be admitted on Academic Probation at the discretion of the Admissions Office or the Admissions and Standards Committee. Academic Probation is intended to inform students making unsatisfactory progress of their need to alter study habits and to seek additional counseling. Early recognition will indicate to the student the possible jeopardy to academic goals, and will also allow an opportunity to demonstrate acceptable performance.

**Earning Credit While Disqualified or Excluded**

Students disqualified or excluded while a Freshman or Sophomore who subsequently receive an A.A. degree with a "C" average (2.0 GPA) on all college work attempted from a Florida public community college may be readmitted to the University with credit earned in accordance with standard University policies.

Students who attend other colleges or universities following disqualification will be classified as transfer students and their readmission will be based on their total educational record.

**Incomplete Grade**

A grade of "I" (incomplete) is assigned by the instructor when a student is unable to complete a course due to extenuating circumstances, and when all requirements can be completed in a short time following the end of the term. The student is responsible to arrange with the instructor for the completion of the incomplete grade by the deadline published in the Academic Calendar for the next term. If the incomplete is not changed by the established deadline, it may become a part of the student's permanent record with no credit given for the class, or the instructor may assign a grade of "F." An "I" can not be removed by Grade Forgiveness. Academic actions are not affected by the change of an "I."

**INSTRUCTORS PLEASE NOTE:** A grade is assigned using the Change of Grade Form. After the form is signed by the Dean of the College offering the course, the Dean sends it to the Registrar's Office.

**Schedule Changes—Add/Drop Policy**

*Add:* A student may add a course during the official add/drop period (the first three to five days of each term, as listed in the academic calendar). After the add/drop period, no course may be added.

*Drop:* A student may drop a course during the official add/drop period. The fact that the student was enrolled in a class so dropped will not appear on the permanent record. For withdrawal after the add/drop period, the Withdrawal Policy must be consulted.

**Withdrawal Policy**

A student may withdraw from a class and receive the notation of "W" until the end of the eighth week of any regular semester or until the midpoint of any summer term by
completing a Course Withdrawal form available in the Office of Records and Registration, first floor of the Administration Building.

A student is never automatically withdrawn from a class for not attending, nor can an instructor withdraw a student from a class. Upon request, however, the instructor will provide the student with an assessment of the student's performance in the course prior to the last day of withdrawal.

No withdrawal is permitted after the deadline except in extraordinary circumstances such as serious medical problems. Unsatisfactory academic performance is not an acceptable reason for withdrawal after the deadline. Students who need to petition for a late withdrawal should consult the Office of Undergraduate Studies, Administration Building, Room 210. At the time of the request an Assistant Dean from the Office of Undergraduate Studies will ascertain from the instructor whether the student was passing or failing the course. If the student was passing, a "WF" will be recorded on the student's permanent record; if failing, a "WF" will be entered.

Students who seek a late withdrawal from class on medical grounds must apply for the withdrawal no later than that term following the one from which the withdrawal is sought. Students seeking a late withdrawal because of medical conditions must follow the medical withdrawal procedure. The student's physician provides the University physician with the appropriate medical information, using the forms available in the Office of Undergraduate Studies. The University physician evaluates this information and forwards a recommendation to Undergraduate Studies.

If a medical withdrawal is approved, a "WM" will be recorded for each course.

If a medical withdrawal is not approved, the request may be approved as a late withdrawal, and grades of "WP" or "WF" will be recorded.

A grade of "WF" will affect the calculation of the student's grade point average (the procedure used for calculating is further defined in the paragraph titled "Grading System" earlier in this section).

If a student withdraws from a course while an alleged academically dishonest act is under consideration, and the case is not subsequently resolved in favor of the student, the University reserves the right to assign the appropriate grade for the course.

TRANSIENT ENROLLMENT AT OTHER INSTITUTIONS

A UCF degree-seeking student who wishes to earn credit at another college or university for transfer back into a degree program must obtain prior approval for specific courses from the Dean or Department Chair of his respective college. Approval of courses for the General Education Program should be obtained from the Office of Undergraduate Studies. Credit earned without this transient approval may not be accepted. A student may not be enrolled as a transient student in another institution during the term in which the baccalaureate degree or the Associate of Arts degree is to be awarded. Transient forms are available in the Records Office. Transient credit cannot be used to reduce the last 30 semester hour residency requirement or be considered as continuous enrollment.

GRADE FORGIVENESS

Policy

Limits: Grade forgiveness is limited to two courses.

• Grade forgiveness can be used only for courses taken at UCF. Grade forgiveness is not retroactive, and therefore may not be used for a course repeated before Fall 1981.

• UCF does not honor grade forgiveness granted at other institutions unless it is part of an Associate of Arts degree transferred to UCF from a Florida public community college or university. Because of the two-course limit, a student who has used grade forgiveness twice at another institution, and has included those courses in the transfer of an Associate of Arts degree may not use grade forgiveness again at UCF.

• A course taken at UCF may not be repeated at another institution for forgiveness by UCF.

• Grade forgiveness may not be used twice for the same course.

• Registration for grade forgiveness must be completed by the end of the add/drop period in the term in which the course is repeated.

Exception: If a student who repeated a course at UCF before Fall 1981 did not use the previous forgiveness policy and wishes to repeat the course again to take advantage of the
forgiveness policy, he may do so. In this case, the lower of the previous two grades will be forgiven. This special circumstance is the only one in which a student will be allowed to repeat a course more than once.

**General Policy:** All grades will remain on the student's official transcript. The original course grade will be marked with a "T" to indicate that the course has subsequently been repeated, and the repeat course grade will be marked with an "R." The original grade will not be computed in the grade point average except in a case in which the student withdraws from a course he is repeating or takes a grade of incomplete.

With prior approval of the dean of the college in which the course is offered, the student may substitute a course different from the original one if (1) the substitute course has been changed in prefix, number, hours, or title, but not in substance, or (2) the substitute course replaces a course no longer offered by UCF.

Grade forgiveness awarded for repeated courses will not retroactively alter any previous academic action. For example, a Probation or Disqualification status will not be removed from the records of the quarter or semester in which the student originally took the course.

In addition, no academic records can be altered after a student graduates.

If it is determined that the student is ineligible for the forgiveness policy, neither a refund of fees nor automatic withdrawal from the course will be made.

**Procedure**

Students who wish to exercise Grade Forgiveness must complete the following steps before registering to repeat a course:

1. Complete a "Grade Forgiveness Request Form" from the Office of Records and Registration for each course to be repeated.
2. If the course is a substitution for the original one (see above), secure the signature of the dean of the college in which the course is offered.
3. Turn the completed form in to the Office of Records and Registration no later than the last day of add / drop. No petitions will be accepted after the deadline.

Any questions about Grade Forgiveness should be directed to the Office of Undergraduate Studies, Extension 2691.

**ACADEMIC HONORS**

1. **President's Honor Roll Certificate**

   The President's Honor Roll Certificate is awarded in recognition of scholastic honors to regular undergraduate students who register for and complete 12 or more hours, excluding pass-fail coursework, and maintain a 4.0 GPA with no incomplete or "U" grades for the given term or who complete 15 semester hours during any 2 consecutive terms at UCF with no more than 11 hours in any one term, excluding pass-fail work, and maintain a 4.0 GPA for the 2 terms.

   Hours utilized in the awarding of a President's Honor Roll Certificate may not be utilized in the determination of a subsequent certificate.

2. **Dean's List**

   The Dean's List is compiled in recognition of scholastic honors for students who earn a 3.4 GPA with no grade less than "C" and no incomplete or "U" grades during a term. To be eligible for the Dean's list students must register for and complete a minimum of 12 semester hours in a Fall or Spring semester or 9 semester hours in a Summer semester.

3. **Baccalaureate Honors**

   The University shall confer baccalaureate honors recognition on those students who have completed a minimum of 48 semester hours at UCF and who:

   A. Attain an overall grade point average which is in the upper 10% of the range established by all students graduating in the same college during the previous two years
   B. Attain at least a 3.2 overall grade point average
   C. Honors awarded will be

      1. **Summa Cum Laude** for those students in the upper 2.5%
      2. **Magna Cum Laude** for those students in the upper 5%, but not in the upper 2.5%
      3. **Cum Laude** for those students in the upper 10%, but not in the upper 5%

   Since records for the semester of graduation are incomplete at the time of graduation, that term is excluded in determining recognition in the commencement bulletin and at graduation. Identification of these students at graduation is therefore presumptive of honors and not conclusive since final term grades may result in changes in relative rankings.
TIME-SHORTENED DEGREE OPPORTUNITIES

The University of Central Florida provides a number of options by which students may shorten the time required to complete the baccalaureate degree. These options permit the University to recognize high levels of academic achievement and acquisition of knowledge prior to or during attendance at the University. Procedures which may be used include the Early Admission Program, the College Level Examination Program (CLEP), the Advanced Placement Program (AP), the International Baccalaureate, and University Course Credit by Examination.

Early Admission Program

Students who have demonstrated exceptional academic ability may be permitted to enroll as students at the University of Central Florida any time after completion of their junior year in high school. To be considered for Fall Semester Early Admission, applicants must have:

- Superior test scores (SAT 1100 or above, ACT 27 or above).
- "A"-"B" grades in high school.
- A recommendation from the student's high school counselor.
- A letter of permission from parents or guardian.
- A campus interview to ascertain the student’s maturity and ability to adjust to collegiate responsibilities.

Qualified students may enroll dually on a part-time basis, taking one or two courses while completing their high school programs. An interview and letters of recommendation from parents and principal are required in addition to a superior record.

Students desiring admission prior to high school graduation should contact the Admissions Office for an appointment.

College Level Examination Program (CLEP)

The University of Central Florida grants University credit for examinations taken under the CLEP program provided the score obtained is at the 50th percentile or above on the National Sophomore CLEP norms. The University of Central Florida will award up to 45 semester hours of University credit under the CLEP program.

CLEP credit may be earned by the following methods—CLEP general examinations, CLEP general examination subtests, and CLEP subject examinations. A student may earn a maximum of 45 semester hours of credit through this program. Successful completion of CLEP examinations means performance at or above the 50th percentile.

Awarding of CLEP credit is subject to the conditions listed below.

1. Credit may be awarded in the CLEP general examination area, CLEP general subtest area, or CLEP subject examination area, provided the student (a) is not within 60 semester hours of graduation, (b) has not previously received comparable college course credit in the CLEP examination area, (c) does not receive comparable college credit in the CLEP examination area in the same semester the examination is taken or in a subsequent semester, (d) has not previously completed nor received credit by UCF (transfer or otherwise) in a more advanced course in the examination area, and (e) does not complete nor receive credit by UCF (transfer or otherwise) in a more advanced course during the semester in which the CLEP examination is taken.

2. Partial credit may be awarded in Humanities and Social Science-History general examinations to students who have course duplication in one subtest area but not in the other subtest area. For example, a student who has completed Humanities but has not completed Introductory Literature or a more advanced literature course would be eligible to receive credit in the literature subtest area, provided that he receives a satisfactory total score and a satisfactory subtest score.

The following table provides information related to the CLEP general examination areas and subtest areas for which credit may be awarded. In addition, this table delineates the number of credit hours per examination, and the minimum qualifying score. A table is also provided which contains information about CLEP subject examinations. The table delineates CLEP subject examinations which are available, qualifying scores for each examination, the UCF course for which each examination can substitute, and semester hours which will be awarded.

It is important to note that a maximum of 45 semester hours in any combination of extension, correspondence, CLEP, Armed Forces Service School Credits, and University Credit by Examination will be accepted by the University for application toward an
undergraduate degree. In addition, CLEP credit cannot be used to reduce a grade point deficiency. For example, CLEP cannot be substituted for a grade awarded for a previously completed course. CLEP may not be used to fulfill the senior institution requirement.

**CLEP GENERAL EXAMINATIONS**

Qualifying scores on CLEP General Examinations earn only general (lower division) elective credit.

<table>
<thead>
<tr>
<th>CLEP General Examination</th>
<th>Qualifying Score</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition with Essay*</td>
<td>500</td>
<td>6</td>
</tr>
<tr>
<td>Humanities</td>
<td>489</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics</td>
<td>497</td>
<td>6</td>
</tr>
<tr>
<td>Natural Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biological Science</td>
<td>50</td>
<td>3</td>
</tr>
<tr>
<td>Physical Science</td>
<td>49</td>
<td>3</td>
</tr>
<tr>
<td>Social Science</td>
<td>488</td>
<td>6</td>
</tr>
</tbody>
</table>

*The General Examination in English Composition with Essay is not given in July or August.*

**CLEP SUBJECT EXAMINATIONS**

<table>
<thead>
<tr>
<th>CLEP Subject Exam</th>
<th>Semester Hours</th>
<th>Qualifying Score</th>
<th>UCF Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afro-American History</td>
<td>3</td>
<td>50</td>
<td>None</td>
</tr>
<tr>
<td>American Government</td>
<td>3</td>
<td>50</td>
<td>POS 2041</td>
</tr>
<tr>
<td>American History I***</td>
<td>3</td>
<td>49</td>
<td>AMH 2010</td>
</tr>
<tr>
<td>American History II***</td>
<td>3</td>
<td>49</td>
<td>AMH 2020</td>
</tr>
<tr>
<td>American Literature***</td>
<td>6</td>
<td>50</td>
<td>AML 3031 and AML 3051</td>
</tr>
<tr>
<td>Analysis and Interp. Lit.***</td>
<td>6</td>
<td>51</td>
<td>ENC 1101 and LIT 3000</td>
</tr>
<tr>
<td>Calculus w/Elem. Functions and</td>
<td>6</td>
<td>49</td>
<td>MAC 3311 and 3312</td>
</tr>
<tr>
<td>Calculus w/Anal. Geometry</td>
<td>6</td>
<td>49</td>
<td>MAC 3253 and 3254</td>
</tr>
<tr>
<td>Clinical Chemistry**</td>
<td>6.7</td>
<td>50</td>
<td>MLS 4630</td>
</tr>
<tr>
<td>College Algebra</td>
<td>3</td>
<td>48</td>
<td>MAC 1104</td>
</tr>
<tr>
<td>College Algebra &amp; Trigonometry</td>
<td>3</td>
<td>50</td>
<td>MAC 1104 or MAC 1114</td>
</tr>
<tr>
<td>(Duplicate CLEP Exam - Subj: Trig)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College Comp. w/Essay***</td>
<td>6</td>
<td>50</td>
<td>ENC 1101 and ENC 1102</td>
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<tr>
<td>(Duplicate CLEP Exam - Subj: Freshman Comp. w/Essay)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Computer and Data Processing</td>
<td>3</td>
<td>51</td>
<td>CGS 1060</td>
</tr>
<tr>
<td>Educational Psychology</td>
<td>3</td>
<td>49</td>
<td>None</td>
</tr>
<tr>
<td>English Literature***</td>
<td>6</td>
<td>49</td>
<td>ENL 3031 or ENL 3051</td>
</tr>
<tr>
<td>Freshman English w/Essay***</td>
<td>6</td>
<td>51</td>
<td>ENC 1101 and ENC 1102</td>
</tr>
<tr>
<td>General Biology****</td>
<td>6</td>
<td>49</td>
<td>BSC 1020</td>
</tr>
<tr>
<td>General Chemistry****</td>
<td>6</td>
<td>50</td>
<td>CHM 1020 and 1032 or CHS 1440</td>
</tr>
<tr>
<td>General Psychology</td>
<td>3</td>
<td>50</td>
<td>PSY 2013</td>
</tr>
<tr>
<td>Hematology**</td>
<td>6.7</td>
<td>51</td>
<td>MLS 3305</td>
</tr>
<tr>
<td>Human Growth and Development</td>
<td>3</td>
<td>51</td>
<td>None</td>
</tr>
<tr>
<td>Immunohematology**</td>
<td>6.7</td>
<td>50</td>
<td>ACG 3023 or ACG 3021</td>
</tr>
<tr>
<td>Introduction to Accounting</td>
<td>6</td>
<td>50</td>
<td>SYG 2000</td>
</tr>
<tr>
<td>Introduction to Business Law</td>
<td>6</td>
<td>51</td>
<td>BUL 3111</td>
</tr>
<tr>
<td>Introduction to Management</td>
<td>3</td>
<td>49</td>
<td>None</td>
</tr>
<tr>
<td>Introduction to Macroeconomics</td>
<td>3</td>
<td>50</td>
<td>ECO 2013</td>
</tr>
<tr>
<td>Introduction to Microeconomics</td>
<td>3</td>
<td>50</td>
<td>ECO 2023</td>
</tr>
<tr>
<td>Introduction to Marketing</td>
<td>3</td>
<td>50</td>
<td>MAR 3023</td>
</tr>
<tr>
<td>Introduction to Sociology</td>
<td>6</td>
<td>50</td>
<td>SYG 2000</td>
</tr>
</tbody>
</table>
Languages: French 6/9/12 44/49/56 Corresponding
    German 6/9/12 43/52/55 1120 and 1121, 2200* and 2201*,
    Spanish 6/9/12 45/48/55 2230 and 2231* language courses

Microbiology (Clinical)** 6 49 MLS 4405
Programming - Fortran IV 3 48 COP 1200
    (Duplicate CLEP Exam - Subj: Comp. and Data Proc.)
Trigonometry 3 54 MAC 1114
    (Duplicate CLEP Exam - Subj: College Alg & Trig)
Western Civilization I*** 3 49 EUH 2000
Western Civilization II*** 3 48 EUH 2001

* Those students receiving six or nine hours are allowed to complete these courses.
** Each student must also satisfactorily complete a lab and an essay exam. Both exams
will be given by the College of Health.
*** Satisfactory completion of these exams does not reduce the 24,000 word requirement
of the Gordon Rule.
****Does not satisfy General Education Program science laboratory requirement.

Advanced Placement Program (AP)
Students who have participated in the Advanced Placement Program in high school and
received a score of three, four, or five on the national examinations will receive college credit
in the appropriate subject areas. Students should consult their high school guidance counselor
or write to the Educational Testing Service, Princeton, NJ 08540, for additional information.

ADVANCED PLACEMENT EXAMINATIONS

<table>
<thead>
<tr>
<th>Examination</th>
<th>Passing Scores</th>
<th>Semester Hours Awarded</th>
<th>UCF Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology*</td>
<td>3-4 3</td>
<td>General Elective</td>
<td>BSC 1020 + 3 hours general elective</td>
</tr>
<tr>
<td></td>
<td>5 6</td>
<td></td>
<td>BSC 1020</td>
</tr>
<tr>
<td>Chemistry*</td>
<td>3 3</td>
<td></td>
<td>CHM 2045</td>
</tr>
<tr>
<td></td>
<td>4-5 7</td>
<td></td>
<td>CHM 2045 and 2046</td>
</tr>
<tr>
<td>Computer Sci A</td>
<td>3-4 3</td>
<td></td>
<td>General Elective</td>
</tr>
<tr>
<td>Computer Sci A</td>
<td>5 3</td>
<td>COP 2000</td>
<td></td>
</tr>
<tr>
<td>Computer Sci AB</td>
<td>3-5 3</td>
<td>COP 2000</td>
<td></td>
</tr>
<tr>
<td>Language &amp; Composition**</td>
<td>3-5 3</td>
<td></td>
<td>ENC 1101</td>
</tr>
<tr>
<td>Literature**** &amp; Composition**</td>
<td>3-5 3</td>
<td></td>
<td>ENC 1101</td>
</tr>
<tr>
<td>Microeconomics</td>
<td>3-5 3</td>
<td></td>
<td>ECO 2023</td>
</tr>
<tr>
<td>Macroeconomics</td>
<td>3-5 3</td>
<td></td>
<td>ECO 2013</td>
</tr>
<tr>
<td>French</td>
<td>3-4 3</td>
<td></td>
<td>FRE 1120 + 3 hours general elective</td>
</tr>
<tr>
<td></td>
<td>5 6</td>
<td>FRE 1121 + 3 hours general elective</td>
<td></td>
</tr>
<tr>
<td>German</td>
<td>3-4 3</td>
<td></td>
<td>GER 1120 + 3 hours general elective</td>
</tr>
<tr>
<td></td>
<td>5 6</td>
<td>GER 1120 + 3 hours general elective</td>
<td></td>
</tr>
<tr>
<td>History (AM)***</td>
<td>3-4 3</td>
<td></td>
<td>AMH 2010 + 3 hours general elective</td>
</tr>
<tr>
<td></td>
<td>5 6</td>
<td>AMH 2010 + 3 hours general elective</td>
<td></td>
</tr>
<tr>
<td>History (EUR)***</td>
<td>3-4 3</td>
<td></td>
<td>EUH 2000 + 3 hours general elective</td>
</tr>
<tr>
<td></td>
<td>5 6</td>
<td>EUH 2000 + 3 hours general elective</td>
<td></td>
</tr>
<tr>
<td>Psychology</td>
<td>3-5 3</td>
<td></td>
<td>Psy 2013</td>
</tr>
<tr>
<td>Subject Area</td>
<td>Qualifying Score</td>
<td>Credit Awarded</td>
<td>UCF Course</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------------</td>
<td>----------------</td>
<td>------------</td>
</tr>
<tr>
<td>Applied Chemistry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher Level</td>
<td>4,5,6,7</td>
<td>3</td>
<td>CHM 1032</td>
</tr>
<tr>
<td>Subsidiary Level</td>
<td>4,5,6,7</td>
<td>3</td>
<td>CHM 1032</td>
</tr>
<tr>
<td>Art/Design</td>
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<tr>
<td>Higher Level</td>
<td>4,5,6,7</td>
<td>3</td>
<td>*</td>
</tr>
<tr>
<td>Biology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher Level</td>
<td>4,5,6,7</td>
<td>3</td>
<td>*</td>
</tr>
</tbody>
</table>

International Baccalaureate Program

Students who have participated in the International Baccalaureate program in high school may receive a maximum of thirty hours of credit for scores of 4 or higher in the subsidiary and higher level program areas.

* DOES NOT SATISFY GENERAL EDUCATION PROGRAM SCIENCE LABORATORY REQUIREMENT

** MAY BE USED TO SATISFY THREE HOURS OF GORDON RULE COMPOSITION REQUIREMENT

*** DOES NOT SATISFY GORDON RULE COMPOSITION REQUIREMENT

****STUDENTS WHO RECEIVE CREDIT FOR BOTH OF THE AP ENGLISH EXAMS WILL RECEIVE CREDIT FOR ENC 1101 AND SUBSTITUTE A JUNIOR-LEVEL WRITING CLASS FOR ENC 1102
<table>
<thead>
<tr>
<th>Subject</th>
<th>Higher Level</th>
<th>Subsidary Level</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry</td>
<td>4,5,6,7</td>
<td>3</td>
<td>CHM 1032</td>
</tr>
<tr>
<td>Computer Science</td>
<td>4,5,6,7</td>
<td>3</td>
<td>No direct equivalent, will satisfy GEP computer science requirement</td>
</tr>
<tr>
<td>Economics</td>
<td>4,5,6,7</td>
<td>3</td>
<td>No direct equivalent</td>
</tr>
<tr>
<td>English</td>
<td>4,5,6,7</td>
<td>3</td>
<td>*</td>
</tr>
<tr>
<td>Experimental Psychology</td>
<td>4,5,6,7</td>
<td>3</td>
<td>*</td>
</tr>
<tr>
<td>Foreign Languages</td>
<td>4,5,6,7</td>
<td>3</td>
<td>FRE 3420, SPN 3420, GRE 3420</td>
</tr>
<tr>
<td>Geography</td>
<td>4,5,6,7</td>
<td>3</td>
<td>GEO 1200 &amp; GEO 3370</td>
</tr>
<tr>
<td>History</td>
<td>4,5,6,7</td>
<td>3</td>
<td>No direct equivalent</td>
</tr>
<tr>
<td>Mathematics with Further Studies</td>
<td>4,5,6,7</td>
<td>3</td>
<td>*</td>
</tr>
<tr>
<td>Mathematics</td>
<td>4,5,6,7</td>
<td>3</td>
<td>MAC 3311</td>
</tr>
<tr>
<td>Music</td>
<td>4,5,6,7</td>
<td>3</td>
<td>*</td>
</tr>
<tr>
<td>Organizational Studies</td>
<td>4,5,6,7</td>
<td>3</td>
<td>No direct equivalent</td>
</tr>
<tr>
<td>Philosophy</td>
<td>4,5,6,7</td>
<td>3</td>
<td>PHI 2010</td>
</tr>
<tr>
<td>Physics</td>
<td>4,5,6,7</td>
<td>8</td>
<td>PHY 3053C &amp; PHY 3054C</td>
</tr>
<tr>
<td>Psychology</td>
<td>4,5,6,7</td>
<td>3</td>
<td>PSY 2013</td>
</tr>
<tr>
<td>Social Anthropology</td>
<td>4,5,6,7</td>
<td>3</td>
<td>ANT 2003</td>
</tr>
<tr>
<td></td>
<td>5,6,7</td>
<td>3</td>
<td>ANT 3422</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>3</td>
<td>ANT 2003</td>
</tr>
<tr>
<td></td>
<td>5,6,7</td>
<td>3</td>
<td>ANT 3410</td>
</tr>
</tbody>
</table>

* - to be determined by department review
Credit by Examination

Regularly enrolled* undergraduate students at the University of Central Florida may obtain credit for specific university courses through departmental examinations. Those who feel they have acquired the knowledge and/or skills of a specific University course should consult their advisor and the chair of the department in which the course is offered to arrange for an examination. Degree credit will be awarded for those courses successfully completed by departmental examination. Credit by examination may not be attempted in a course in which the student has previously enrolled and may not be used to reduce the last 30 semester hours residency requirement. Credit by examination will not be given for any course lower in content than courses in the same discipline (i.e., with the same rubric) in which students are currently enrolled or which they have already completed. Permission to take an examination is approved by the chair of the department and the Dean of the college in which the course is offered.

*Excludes transient and non degree-seeking students.

TRANSCRIPT REQUESTS

Transcripts of a student's UCF academic record may be requested by the student through the Office of the Registrar. A student’s academic record can be released only upon written authorization by the student. Include in the request the full name and social security number. Indicate names and addresses to whom transcripts are to be sent. If grades or degree statements for the current term are needed, indicate that the transcript request is to be held until the final semester reports are posted. No charge is assessed for transcripts at the present time. Students requesting transcripts may do so in person or by writing to: Office of the Registrar, Transcript Request, University of Central Florida, Orlando, FL 32816-0114.
UNDERGRADUATE DEGREE REQUIREMENTS

REQUIREMENTS FOR GRADUATION

Students must fulfill both the requirements for a major and University graduation requirements to receive a degree from the University of Central Florida.

To earn a bachelor's degree from UCF, students must:
• Fulfill the requirements for the chosen major
• Earn a minimum of 120 unduplicated semester credit hours with at least a "C" average (2.0 GPA, both UCF and overall) for coursework attempted. Some majors require more than 120 hours.
• Earn a minimum of 60 of these 120 semester credit hours from a senior institution (an institution which offers baccalaureate degrees).
• Earn at least 48 of these 120 semester credit hours in 3000-level courses or above.
• Earn the last 30 semester hours in regular courses at UCF. Credit by examination may not be used to satisfy this requirement.
• Earn a minimum of 30 semester hours in residence at UCF.
• Earn at least 48 of these 120 semester credit hours from a senior institution (an institution which offers baccalaureate degrees).
• Earn at least 48 of these 120 semester credit hours in 3000-level courses or above.
• Earn the last 30 semester hours in regular courses at UCF. Credit by examination may not be used to satisfy this requirement.
• Earn a minimum of 30 semester hours in residence at UCF.
• Earn a minimum of 60 semester hours after CLEP credit has been awarded.
• Apply no more than 45 semester hours in any combination of extension, correspondence, CLEP, University Credit by Examination and Armed Forces credits toward an undergraduate degree.
• Fulfill the General Education requirements defined elsewhere in this section.
• Fulfill the Gordon Rule requirements defined elsewhere in this section.
• Fulfill the Foreign Language Proficiency requirement defined elsewhere in this section.
• Fulfill the CLAST requirement defined elsewhere in this section.
• Earn a minimum of nine semester hours during summer terms, if applicable.
• Complete an Intent to Graduate form by the end of the first full week of classes of the term of graduation.

CHOICE OF CATALOG AND CONTINUOUS ENROLLMENT

A student must graduate under the provisions of any UCF catalog in effect since the student began continuous enrollment at UCF. However, students transferring from Florida public community colleges or state universities may use the UCF catalog in effect at the time they began the most recent period of continuous enrollment in academic good standing at any of the Florida public institutions. Continuous enrollment is defined as being enrolled in classes without a break of two or more consecutive regular semesters (i.e., Fall and Spring). Continuous enrollment is automatically broken when a student moves from one transfer institution to another following academic disqualification or exclusion.

Students must use a single catalog and not a combination of catalogs for graduation. In cases when required courses are no longer taught by the university, the appropriate department, college, or university office may designate a reasonable substitute.

If students should wish to change their catalog for graduation, they should first discuss with their advisors how such a change would affect university, college, and major requirements. If students should decide to request a change, they should fill out a catalog change form in the Student Academic Support Services (SASS) Office, Phillips Hall, Room 202.

GENERAL EDUCATION PROGRAM

The General Education Program (GEP) is designed to provide insight into the major areas of knowledge at the University. The GEP further supplies the background for making a more knowledgeable selection of major and elective courses.

Courses which fulfill the General Education requirements are specified, but in some cases an advanced course in the same discipline may be substituted for GEP requirements with the approval of the Office of Undergraduate Studies. Students should consult both with an advisor and with the Office of Undergraduate Studies before substituting any course.
Undergraduate students who have not completed requirements for the Associate of Arts degree and who wish to transfer to another Florida public university can have their transcripts stamped GENERAL EDUCATION REQUIREMENTS MET if they have completed UCF's GEP requirements with a GPA of 2.0 or better. UCF will accept a similar statement on transcripts received from Florida public community colleges and universities in lieu of completion of the University's General Education Program.

**GENERAL EDUCATION PROGRAM COURSES**

(40 semester hours required)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Communication Foundations</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td><em>ENC 1101</em></td>
<td>English Composition I</td>
<td>3(3,0)</td>
</tr>
<tr>
<td><em>ENC 1102</em></td>
<td>English Composition II PR: ENC 1101</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>SPC 1600</td>
<td>Fundamentals of Oral Communication</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>B. Cultural and Historical Foundations</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>1. Take one of the following two-semester sequences:</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td><em>EUH 2000</em></td>
<td>Western Civilization I</td>
<td>3(3,0)</td>
</tr>
<tr>
<td><em>EUH 2001</em></td>
<td>Western Civilization II PR: EUH 2000</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>HUM 2211</em></td>
<td>Western Humanities I</td>
<td>3(3,0)</td>
</tr>
<tr>
<td><em>HUM 2230</em></td>
<td>Western Humanities II PR: HUM 2221</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>AMH 2010</em></td>
<td>U.S. History: 1492-1877</td>
<td>3(3,0)</td>
</tr>
<tr>
<td><em>AMH 2020</em></td>
<td>U.S. History: 1877-present PR: AMH 2010</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>2. Take one course from the following:</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>ARH 2050</td>
<td>The History of Art I</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>ARH 2051</td>
<td>The History of Art II</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>MUL 2010</td>
<td>Enjoyment of Music</td>
<td>3(2,1)</td>
</tr>
<tr>
<td>THE 1020</td>
<td>Theatre Survey</td>
<td>3(2,1)</td>
</tr>
<tr>
<td>THE 2071</td>
<td>Cinema Survey</td>
<td>3(2,2)</td>
</tr>
<tr>
<td>REL 2300</td>
<td>World Religions</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>PHI 2010</td>
<td>Introduction to Philosophy</td>
<td>3(3,0)</td>
</tr>
<tr>
<td><em>LIT 2110</em></td>
<td>World Literature I PR: ENC 1102</td>
<td>3(3,0)</td>
</tr>
<tr>
<td><em>LIT 2120</em></td>
<td>World Literature II PR: ENC 1102</td>
<td>3(3,0)</td>
</tr>
</tbody>
</table>
C. Mathematical Foundations

Take one course from each group. Some majors require a specific course or a higher level course in this area. Consult your advisor.

1. **MAC 1104 College Algebra** 3(3,0)
**MGF 1203 Finite Mathematics** 3(3,0)
2. **CGS 1060C Introduction to Computer Science** 3(3,0)
**STA 2014 Principles of Statistics** 3(3,0)

D. Social Foundations

1. ECO 2013 Principles of Economics I 3(3,0)
2. POS 2041 American National Government 3(3,0)
3. Choose one:
   - PSY 2013 General Psychology 3(3,0)
   - SYG 2000 General Sociology 3(3,0)
   - ANT 2003 General Anthropology 3(3,0)

E. Science Foundations

Take one course from each group; one of which must include a laboratory. Some majors require a specific course or a higher level course in this area. Consult your advisor.

1. PSC 1512 Physical Science PR: MAC 1104 or MGF 1203 3(3,0)
   - PHY 3053C College Physics PR: MAC 1104 or MGF 1203 4(3,3)
   - CHM 1020 Concepts in Chemistry PR: MAC 1104 or MGF 1203 3(3,0)
2. BSC 1020C Biological Principles 4(3,2)
   - BSC 1030C Biology and Environment 4(3,2)
   - GLY 1030 Geology & Its Applications 3(3,0)
   - GEO 1200 Physical Geography 3(3,0)
   - BOT 1000C Plant Science 4(3,2)
   - ANT 3511 Human Species 3(3,0)

*A grade of "C" or better in this course satisfies three hours of the Gordon Rule requirement in English composition. In addition, any upper-division course in composition or literature taught by the UCF English Department and selected upper-division courses taught by the UCF History Department also satisfy three hours of the English composition requirement, if the course is completed with a grade of "C" or better. A list appears in "The Golden Rule" this section.

**A grade of "C" or better satisfies three hours of the Gordon Rule requirement in mathematics. In addition, a grade of "C" or better in any higher level course in mathematics, statistics, or computer science also satisfies three hours of the mathematics requirement.

Substitution Of Courses - General Education Program

The Student Academic Support System (SASS) Office routinely coordinates the evaluation of transfer courses for the University's General Education Program and Foreign Language Proficiency requirements. When the transfer coursework is entered into the UCF computer system (usually during the first semester at UCF), the SASS Office will request course descriptions and other information to provide a sufficient basis for evaluation. Courses are evaluated on the basis of equivalency with the content of the courses required by the university. The evaluation conducted by the SASS Office is entered into a computerized Degree Audit System and is then available to the colleges and departments through the University's computer network.

 Appeals of decision made by the SASS Office should be directed to Dr. David Dees, Assistant Dean, Undergraduate Studies. Further appeal of decisions made by Dr. Dees should be directed to the University Appeals Committee, Administration 210.

Substitution requests for college or major requirements are processed within those administrative offices.
Alternative Courses - General Education Program

Courses which may be taken in substitution for the stated GEP requirements are given below.

<table>
<thead>
<tr>
<th>GEP REQUIREMENTS</th>
<th>ACCEPTABLE SUBSTITUTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAC 1104 (College Algebra)</td>
<td>MAC 1114, MAC 3233, MAC 3253,</td>
</tr>
<tr>
<td></td>
<td>MAC 3254, MAC 3311, MAC 3312,</td>
</tr>
<tr>
<td></td>
<td>MAC 3313</td>
</tr>
<tr>
<td>ECO 2013 (Macro Economics)</td>
<td>Any higher level ECO course which has ECO 2013 as a prerequisite.</td>
</tr>
<tr>
<td>PHY 3053C (Physics)</td>
<td>PHY 3048, PHY 3049, PHY 3054C,</td>
</tr>
<tr>
<td></td>
<td>PHY 3014C, PHY 5015,</td>
</tr>
<tr>
<td>CHM 1020 (Chemistry)</td>
<td>CHM 2045, CHM 1032, CHS 1440</td>
</tr>
<tr>
<td>BSC 1020C or BSC 1030C (Biology)</td>
<td>BSC 2010C</td>
</tr>
<tr>
<td>GEO 1200 (Geography)</td>
<td>GEO 3370</td>
</tr>
<tr>
<td>CGS 1060C (Intro to Computer)</td>
<td>CGS 3000, CGS 3422, COP 1200, COT 3100</td>
</tr>
<tr>
<td>STA 2014 (Statistics)</td>
<td>STA 3023, STA 3032</td>
</tr>
</tbody>
</table>

FOREIGN LANGUAGE PROFICIENCY REQUIREMENT

The Foreign Language Proficiency requirement applies to all students seeking their first baccalaureate degree. Students graduating with a Bachelor of Science degree must demonstrate proficiency in a foreign language equivalent to one year of college instruction. Students graduating with a Bachelor of Arts degree must demonstrate a proficiency equivalent to Intermediate Language and Civilization I (FRE 2200, GER 2200, SPN 2230, etc.). This requirement supercedes all greater requirements in previous catalogs. This requirement may be met either by successful completion of the appropriate college-level course or by examination. Languages which may be used include those taught at UCF and any others for which the University can obtain standardized proficiency tests.

For specific guidelines concerning proper placement in foreign language classes, please see section: Dept. of Foreign Languages and Literatures, under the heading, Placement and Proficiency.

1. This requirement is for proficiency and not a requirement for a particular number of hours of coursework. For example, successful completion of only SPN 1121 (Elementary Spanish Language and Civilization II) would satisfy the B.S. requirement. Appropriate scores on Advanced Placement and CLEP examinations will also satisfy the requirement.

2. This is a University-wide requirement for all majors and replaces the previous Enhancement Option section of the General Education Program.

3. The Testing Administrator of the Office of Counseling and Testing will offer the Foreign Language Proficiency Examination periodically in each semester. Students must register in advance with that office to take the examination (RS 203).

4. The foreign language proficiency requirement does not apply to students seeking a second baccalaureate degree.

5. A student who is required to furnish a passing TOEFL (Test of English as a Foreign Language) score for admission to the university and does so is considered to have satisfied the requirements.

THE GORDON RULE

The Gordon Rule (State Rule 6A-10.30) applies to students who first enrolled in any college or university after October 1982. The rule requires students to complete 24,000 words of composition in 4 courses (12 semester hours) and to complete 2 courses (6 semester hours) of mathematics at the level of college algebra or higher. Each course must be completed with a grade of "C" or better. CLEP and other forms of credit by examination may not be used to satisfy the composition portion of the Gordon Rule Requirement.

UCF courses which are required by the General Education Program may also be used to satisfy the Gordon Rule. Gordon Rule requirements may be satisfied by the General Education Program as follows:

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Gordon Rule Requirement:
1. 6 hours of math at the level of college algebra or higher

GEP Courses Which Satisfy:
(1) college algebra or finite math
(2) statistics or computer science

Any 3000-level or above course in math, statistics, or computer science may also be used toward fulfillment of the math portion of the Gordon Rule Requirement.

2. 12 hours of coursework in which the student must complete 24,000 words of composition

(1) 6 hours of English Composition
(2) 6-hour sequence of Western Humanities, U.S. History, or Western Civilization

All literature and composition courses taught by the Department of English, and each of the courses listed below fulfill 6,000 words of the composition portion of the Gordon Rule Requirement.

ADV 4101 Adv Copy & Campaigns
JOU 3100 News Reporting
JOU 4302 Editorial/Column Writing
JOU 4310 Freelance Writing
JOU 4300 Feature Writing
JOU 4104 Public Affairs Reporting

Each of the courses listed below fulfill 3,000 words of the composition portion of the Gordon Rule Requirement.

AMH 3402 History of the South to 1865
AMH 3403 History of the South Since 1865
AMH 3441 History of the Frontier: Eastern America
AMH 3442 History of the Frontier: Western America
AMH 3445 Spanish Borderlands
AMH 3460 History of Urban America
AMH 3540 Military History
AMH 3560 Women in American History
AMH 3570 Black American History
AMH 3800 Canadian History
AMH 4110 Colonial America, 1607-1763
AMH 4130 The Age of the American Revolution 1763-1789
AMH 4140 Jeffersonian America
AMH 4160 Jacksonian America
AMH 4170 Civil War and Reconstruction
AMH 4201 Robber Baron Era
AMH 4231 United States History: 1914-1945
AMH 4270 United States History: 1945-Present
AMH 4311 American Culture I
AMH 4313 American Culture II
AMH 4510 Rise of the US to World Power, 1776-1914
AMH 4511 US as a Great Power: 1914-Present
ANT 3145 Archeology of Complex Soc
ANT 3162 Archeology of Mid & S. Am
ANT 3163 Mesoam Arch
ANT 3328 Maya Arch
ANT 3930 Seminar in Arch Meth
ARH 4350 Baroque Art

JOU 4306 Critical Writing
PUR 4800 Public Relations Campaigns
RTV 3501 Broadcast Copywriting
RTV 3300 Broadcast Newswriting
RTV 4402 Broadcast Criticism
THE 4072 Principles of Motion Picture Art

AMH 3300 Survey of East Asia
ASH 4404 China in 19th and 20th Centuries
ASH 4442 Modern Japan, 19th & 20th Centuries
EUH 3121 Age of Transition
EUH 3122 Medieval Society and Civilization
EUH 3142 Renaissance and Reformation
EUH 3235 Romanticism and Realism
EUH 3242 The Emergence of Modern Soc. 1870-1930
EUH 3281 Second World War & Rebirth of Europe
EUH 3401 Ancient Greece
EUH 3411 Ancient Rome
EUH 3651 War and Society
EUH 4284 Fascism & the Totalitarian Dictatorships
EUH 4456 France, 1914-Present
EUH 4461 Rise of Modern Germany
EUH 4465 Hitler's Third Reich
EUH 4500 English History to 1485
EUH 4501 English History to 1485-1815
EUH 4502 British History: 1815-Present
EUH 4530 British Empire & Commonwealth
EUH 4571 History of Russia to 1801

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The College-Level Academic Skills Test (CLAST) is designed to ensure that students have achieved communication and computation skills commensurate with successful completion of the Lower Division. All students seeking an Associate of Arts or Baccalaureate degree from UCF are required to pass CLAST. CLAST must be taken no later than the term in which a student enrolls for the 55th credit hour. Transfer students with more than 55 credit hours who have not had the opportunity to take CLAST may be admitted, but must take CLAST during their first term at UCF. Students with 60 or more hours of credit must pass 3 of the 4 CLAST subsections to be permitted to enroll in additional upper division courses.

CLAST is offered only once per term. Students must register in advance at the Office of the Registrar, AD, 1st Floor. Information regarding CLAST may be obtained from the Student Academic Resource Center, PC-102, Phone (407) 823-5130.

**CORRESPONDENCE COURSES**

The Department of Independent Study by Correspondence, Division of Continuing Education, University of Florida, Gainesville, FL 32609, administers all correspondence instruction for the State University System. Phone: (904) 392-1711.

**SUMMER ATTENDANCE REQUIREMENT**

A student entering the State University System with less than 60 semester hours of credit is required to enroll in a minimum of 9 hours of credit in the summer at a state university. Courses taken at the University during the summer for which the student receives a "W" or "F" may be counted toward this requirement. Petitions for exemption are sent to Dr. David Dees in Undergraduate Studies on the form supplied by the Office of Undergraduate Studies (AD 210).

**ADMISSION TO THE UPPER DIVISION**

To be classified as an upper-division student at the University of Central Florida, a student must complete the following:

1. A minimum of 60 semester hours of academic work.
2. The English and mathematics requirements of the Gordon Rule.
3. Passing scores on three of the four parts of the College Level Academic Skills Test (CLAST).
4. One year of college instruction in a single foreign language. (This requirement applies to those students admitted to the University without the required two units of foreign language in high school.)

**STEPS IN THE GRADUATION PROCESS**

A student should apply to the Registrar for graduation before registering for his final semester of attendance and not later than the end of the first full week of classes of the term of graduation.

Upon completion of 100 undergraduate semester hours of coursework, the student is notified to report to his Academic Advisor.
The following steps are required of students who are near or in their last semester before graduation:

1. The student must complete an "Intent to Graduate" form, available in the Registrar's Office, not later than the end of the first full week of the term of graduation.

2. The candidate for graduation must initiate a checksheet for graduation with his/her advisor. At the end of the semester the checksheet will be completed and forwarded for approval to the Dean of the college in which the student is enrolled. If approved, the Dean will forward the checksheet through appropriate channels to the Registrar's Office for inclusion in the student's permanent University record.

Successful completion of the degree requirements stated in the catalog under which the student wishes to graduate shall constitute a recommendation of the respective college faculty that the degree be awarded, assuming the student is in good standing in the University.

A student must complete all requirements for a baccalaureate or graduate degree no later than the date of the semester graduation ceremony. A student may not be enrolled as a transient student in another institution during the term in which the baccalaureate degree or the Associate of Arts degree is to be awarded.

**TEACHER CERTIFICATION REQUIREMENTS**

Since July 1, 1980, initial certification requirements (Temporary Certificate) in Florida have included three basic components with a fourth now added as prerequisite to (Regular Certificate) full certification. The components are:

1. **General Preparation**
   - Courses included in this category are normally classified as general education (i.e., General Education Program). A graduate with a Bachelor's degree from an accredited institution shall be considered to have met the General Preparation requirements.

2. **Teaching Specialization**
   - Courses included in this category are normally classified as the major area in a student's college program. Other subjects can be shown if the specific requirements in 6A-4.07 through 6A-4.35 Florida Requirements for Teacher Certification have been met.

3. **Professional Preparation**
   - Students can complete a program of Professional Preparation by one of two means at UCF. These means are:
     A. The State-Approved Program of Teacher Education (i.e., a major in the College of Education) and satisfaction of state requirements for SAT or ACT scores.
     B. The Basic Certification Program (i.e., a major in some other college) and admissibility to the professional phase of the program.

4. **Comprehensive Examination**
   - Competency must be demonstrated on a written examination in the areas of Mathematics, Reading, Writing, and Professional Skills. Examinations will be administered at least three times per year throughout the State of Florida.

   Beginning July 1, 1981, a Regular Florida Teacher's Certificate may be issued to persons meeting all requirements for the Temporary Certificate and satisfactorily completing a year-long beginning teacher program approved by the State Board of Education.
OFFICE OF UNDERGRADUATE STUDIES

Associate Vice President and Dean: Stuart A. Lilie, AD 210, Phone (407) 823-2226
Associate Dean: Paul R. McQuilkin, AD 210, Phone (407) 823-2691
Assistant Dean: David Dees, AD 210, Phone (407) 823-2691
Assistant Dean: Robert L. Belle, Jr., AD 225, Phone (407) 823-2716
Assistant to the Dean: C. Barth Engert, AD 210, Phone (407) 823-2691

The purpose of the Office of Undergraduate Studies is to enhance students' undergraduate education from admission through graduation. Undergraduate Studies oversees academic advisement, CLAST, the General Education Program, the Gordon Rule, intercollege programs, and placement examinations. Working with the University Admissions and Standards Committee, Undergraduate Studies reviews student problems in such areas as admissions, class schedules, grade forgiveness policy and withdrawals. The Office works to improve undergraduate teaching through the Learning Resource Council. Undergraduate Studies is responsible for the Offices of the Registrar, Admissions and Financial Aid.

Undergraduate Studies offers academic support to students through the Office of Minority Student Services, the Student Academic Resource Center and the Student Academic Support System. Undergraduate Studies supervises the administration of the Honors Program, the Liberal Studies Program, the Air Force and Army ROTC Programs, Cooperative Education, the Office of Community College Relations, and the McKnight Center of Excellence. Undergraduate Studies administers various University scholarships.

AEROSPACE STUDIES (Air Force ROTC)

Chair: J. C. Linn, BIO 306, Phone (407) 823-1247
Faculty: Brock, Chapoy, Dennehy, Linn, D. Smith, Owens

The Department of Aerospace Studies provides pre-commissioning education for qualified students who desire to serve as commissioned officers in the active duty Air Force. The department offers both the four-year and two-year Air Force ROTC programs. The four-year program provides on-campus study during the freshman through senior years. The two-year programs allow community college transfer students and other students with two academic years remaining in either undergraduate or graduate status to earn an Air Force commission while completing their studies. Both programs offer scholarships for selected students. Students are invited to write or visit the Department of Aerospace Studies to obtain additional information.

CURRICULUM

Students enrolled in the Air Force ROTC program may major in any academic discipline and earn a minor in Aerospace Studies. A major is not offered by this department. An Aerospace Engineering Degree is offered under the College of Engineering. AFROTC courses are listed under the prefix AFR. The curriculum is divided into two phases:
1. General Military Course (GMC)
   The General Military Course of the freshman and sophomore courses for students in the four-year AFROTC program. These courses deal with the mission, organization, and structure of the U.S. Air Force, and the development of air power into a prime element of American national security.
2. Professional Officer Course (POC)
   The Professional Officer Course consists of Aerospace Studies offered during the junior and senior years. All students who seek a commission through the Air Force ROTC must complete the POC curriculum. The curriculum involves the study of concepts of leadership and management in the Air Force and an analysis of the formulation and implementation of American defense policy.

REQUISITE FOR ADMISSION TO THE PROFESSIONAL OFFICER COURSES (POC)
1. Be at least 17 years of age at the time of acceptance.
2. Be able to complete the Professional Officer Course and complete all degree require-
ments prior to reaching age 26½ if entering Flight Training, or before age 30 if entering a non-flying Air Force specialty.
3. Pass the Air Force Officer Qualifying Test.
5. Complete the application and examination process, preferably prior to January 14 of the year in which they plan to enroll.
6. Selection by the Professor of Aerospace Studies and acceptance by the University.
7. Successful completion of a summer Field Training course.
8. Enlistment in the Air Force Reserve certifying agreement to complete the POC and accept an Air Force Commission. This enlistment is terminated upon receipt of a commission.

MONETARY ALLOWANCE
All students enrolled in the Professional Officer Course receive a tax-free monetary allowance of $100 per month.

AIR FORCE ROTC SCHOLARSHIP PROGRAM
Scholarships are phased at 4, 3½, 3, 2½, and 2-year intervals. This system provides opportunities to those enrolled in both the four-year and two-year programs. These scholarships provide for full tuition, and an allowance for fees and textbooks. Scholarship recipients also receive the $100 monthly tax-free monetary allowance.

SUMMER TRAINING
All students must attend a summer Field Training course conducted at an Air Force base. This course includes junior officer training, officer career orientation, and physical conditioning. Students enrolled in the four-year AFROTC program will attend a four-week summer course, normally upon completion of the General Military Course, and they will receive approximately $550. A six-week summer course, which includes a modified version of the General Military Course, is required for students entering the two-year AFROTC program. These students must complete their summer training prior to their formal enrollment in the Professional Officer Course. Students who complete the six-week course receive approximately $800.

OFFICER COMMISSIONS
Students who complete the Professional Officer Course are appointed Second Lieutenants in the United States Air Force Reserve. After completing the training program and entering active duty as reserve officers, they will serve a minimum active duty tour which varies in length depending on their particular career area. Such obligations are explained in detail during the one-on-one counseling sessions conducted with each prospect by detachment officers. During their period of active service, new officers are given the opportunity to attain career status and to obtain a regular commission in the United States Air Force.

MINOR
The Department of Aerospace Studies offers a minor consisting of a minimum of 16 semester hours. Required courses: AFR 1101, 1111, 2130, 2131, 3220, 3230, 4201, 4210.

ARMY ROTC-MILITARY SCIENCE
Chair: John T. Sanders, Trailer 522/525/527, Phone (407) 823-2430
Faculty: Bray, Cromwell, DeLeon, Morales, Perry, Powell, Thomson, Williams

The University of Central Florida, in cooperation with the U.S. Army, provides an opportunity to earn a commission as a lieutenant and compete for an active duty assignment or accept a guaranteed Army Reserve or National Guard position. The program offers both a four-year and two-year option for students working on their Associate of Arts, Baccalaureate or Graduate degrees. The two-year option allows students with at least two academic years remaining in either undergraduate or graduate studies to meet all requirements for commissioning. Students may be eligible for the Army's new Simultaneous Membership Program (SMP), which combines Reserve Forces duty with Army ROTC officer training courses on campus. Students earn about $2,700 in their last two years.

CURRICULUM
The Military Science curriculum is divided into three phases:
1. Basic Military Science
The Basic Military Science courses, open to both men and women, are designed for four-year participants and are normally offered during the freshman and sophomore years. These courses address military organization, equipment, weapons, map reading, land navigation, use of a compass, grade structure, communications, and leadership. There are no contractual obligations for students in the basic course and no commitments. It's an opportunity to see what Army ROTC is all about. (MIS 1031, 1400, 2120, and 2300)

2. Advanced Military Science
The Advanced Military Science courses are normally taken during the junior and senior years. These courses specialize in small unit tactics, how to prepare and conduct military training, military justice system, staff procedures, decision making, and leadership. Students who desire a commission as a second lieutenant are contracted and paid a subsistence allowance of $100.00 a month up to ten months during the school year. Each student is required to take courses that meet the Professional Military Educational Requirements. These requirements require taking at least one course in each of the following areas: Written Communication Skills, Human Behavior, Military History, Computer Literacy, and Math Reasoning. (MIS 3301, 3410, 4421, 4430 and AMH 3540)

3. Summer Camp
Prior to commissioning, each cadet must successfully complete an evaluation of skills learned. This evaluation is conducted at Ft. Riley, Kansas, during June and July. Summer Camp requirements apply only to Advanced Military Science students. Students attending the advanced camp receive approximately $700.00.

4. A student can earn placement credit for the Basic Course classes and allowed entry into the Advanced Courses if he/she attended Basic and Advanced Individual Training or attends ROTC Basic Camp at Ft. Knox, Kentucky.

5. Daytona Beach Campus students contact the Professor of Military Science at Embry Riddle Aeronautical University, Daytona Beach, FL, (904) 239-6469.

SUMMER TRAINING
1. A summer training program is offered for students who are to be academic juniors without previous ROTC or military training. A student can earn placement credit for the Basic Course classes and allow entry into the Advanced Courses by attending a six-week course at Fort Knox, Kentucky, thereby allowing completion of all requirements for commissioning within two years. Students attending the summer course at Fort Knox will receive approximately $700 pay for the period. Additionally, all lodging, meals, transportation, and uniforms will be provided at no expense.

2. Qualified students can be selected to attend specialized military training during the summer months. Some of the areas of training available are: a. Airborne Training, b. Air Assault Training, c. Northern Warfare Training, d. Cadet Troop Leadership Training, e. Master Fitness Trainer, f. Mountain Training

MINOR
The Department of Military Science offers a minor consisting of a minimum of 19 semester hours. Required courses: MIS 3301, 3410, 4421, 4430 and AMH 3540.

MONETARY ALLOWANCE
All students enrolled in the Advanced Military Science Course receive a tax free monetary allowance of $100 per month for the school year.

SCHOLARSHIPS
Four- and three-year scholarships are available for all students who qualify. These scholarships provide full tuition, and fees. Additionally, scholarship recipients receive $100 (tax free) per month and a $200 book stipend for the Fall & Spring semesters. Scholarship applications are processed in the December-February time frame.

REQUISITES FOR ADMISSION TO THE BASIC COURSE
1. Enrollment in a Baccalaureate or Masters degree program.
2. Full-time student status.

REQUISITES FOR ADMISSION TO THE ADVANCED COURSE
1. Successful completion of Basic Course, Basic Camp, JROTC, prior military service, or permission of Department Chair.
2. 17 years of age at the time of entry but not more than 30 years of age at the time of commissioning. Waiverable for veterans up to age 34.
3. Successful completion of an Army physical examination.
4. Agreement to complete the Advanced Course requirements and serve on active, reserve, or national guard duty as a commissioned officer.
5. Full-time student status.

COMMUNITY COLLEGE RELATIONS
Director: Ralph Boston, AD 210, Phone (407) 823-2231
Assistant: Robert Snow, AD 210, Phone (407) 823-2231

Community College Relations is responsible for: keeping community colleges informed about UCF's programs and policies; making state-wide visits to community colleges; conducting advanced orientations for AA transfers; annually publishing the UCF "Transfer Student Counseling Manual"; annually providing updated transfer information for the developing "Student OnLine Advisement and Articulation (SOLAR)" Statewide Network; monitoring the state-wide community college/university articulation agreement; serving as liaison with community college officials; and conducting appropriate workshops/meetings to maintain and improve community college relations.

COOPERATIVE EDUCATION
Director: Sheri Dressler, PH 210, Phone (407) 823-2314

Many university students actively plan their careers through participation in cooperative education. Co-op is an academic program combining on-campus classroom study with off-campus study-related work experience for which the student receives a salary. It offers a blend of theory and practice, integrating formal university preparation with practical work experience. Through this program, students develop professional work skills, test career goals, improve academic performance, generate income, and increase prospects for full-time employment upon graduation.

Students choose between two scheduling options, the alternating plan in which they alternate terms of full-time work with full-time school and the parallel plan in which they attend classes full time and work part time concurrently. Additionally, for students who qualify for financial aid, co-op administers the Florida College Career Work Experience Program (FCCWEP) through which employers are reimbursed 50% of the student's salary for providing career-related work opportunities.

Eligibility requirements include 1) full-time enrollment in an undergraduate or graduate degree program at UCF 2) completion of a minimum of 20 college semester hours 3) having a minimum of 1 academic semester remaining before graduation 4) maintenance of a minimum of a 2.5/4.0 UCF grade point average.

Co-op is available to students on all campuses in all five colleges.

Gerontology Certification Program

In recognition of the special needs of the elderly citizens of Central Florida, the University offers a fifteen-hour interdisciplinary program leading to a Certificate in Gerontology. The program is completed along with the undergraduate major of the student and is administered by the College of Health and Public Affairs. While the program may be of particular interest to students who are majoring in health sciences, psychology, social work, or sociology, it is compatible with many disciplines—for example, music, music education, physical education, or art education.

To be certified in gerontology, each student must successfully complete the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEP 3464</td>
<td>Psychology of Aging</td>
<td>3</td>
</tr>
<tr>
<td>HSC 4564</td>
<td>Health Care Needs of the Elderly</td>
<td>3</td>
</tr>
<tr>
<td>SYP 4730</td>
<td>Sociology of Aging</td>
<td>3</td>
</tr>
<tr>
<td>SOW 4644</td>
<td>Social Services for the Elderly</td>
<td>3</td>
</tr>
</tbody>
</table>

In addition, an approved clinical experience/practicum in gerontology or geriatrics must be completed for a minimum of three semester hours credit. Thus, the certification program requires fifteen semester hours of course work in addition to the major.

Students who are interested in certification should consult Dr. John F. Bergner, Jr., HP
124, Phone (407) 823-2176/2972 to enroll in the program and see one of the following faculty members for advisement:

Health Sciences - John F. Bergner, Ph.D., Professor of Health Sciences, HP 124.
Psychology - Richard D. Tucker, Ph.D., Professor and Chair, Psychology, PH 317.
Social Work - Eileen M. Abel, M.S.W., Assistant Professor, Sociology, FA 414.
Sociology - Charles M. Unkovic, Ph.D., Professor of Sociology, FA 406.

Students whose major does not fall within one of these departments should report to the College of Health and Public Affairs for advisement.

UNIVERSITY HONORS PROGRAM
Director: Mark Stern, PH 203, Phone (407) 823-2076

The University Honors Program is designed to enhance and broaden the talents and abilities of the most able students who matriculate at the University of Central Florida. The program includes intensified course work within traditional discipline boundaries, as well as interdisciplinary, integrated courses, independent study, international studies work, and activities beyond the classroom. The University Honors Program is oriented to accepting the best available students and expanding their horizons so that they can perform at the highest level of excellence. It is the intent of this program to prepare students for entry into the best graduate and professional schools, as well as for distinguished careers in business and public service.

Although entry into the Honors program is predicated on excellence in academic work, students are also expected to participate in extracurricular activities of the Honors Program, e.g., attendance at special guest lectures and presentations, and participation in University-related service activities, such as peer advising and tutoring. The Honors program is designed to provide students with the advantages of both an excellent undergraduate college experience and a major research university experience.

There are two distinct Honors curricula available to the student: University Honors and Honors in the Major.
University Honors. Admission into the University Honors Program is granted by the Honors Director. Students who seek admission into the program must apply directly to the Honors Director. It is the student's responsibility to obtain the appropriate Honors Program admissions information from the Director and to follow the procedures necessary to enter the program. Due to the highly selective nature of the Honors program and the limited enrollment available, there are two categories of admission: Early Decision and Alternate Decision.

Early Decision. An incoming Honors freshman will be eligible for Early Decision if he or she has achieved one or more of the following distinctions: National Merit Scholarship Finalist or National Achievement Scholar Finalist or Semi-Finalist, Valedictorian or Salutatorian of a regionally accredited high school, or recipient of a UCF Academic Scholarship. In addition, students who meet the following academic criteria will also be eligible for Early Decision.

<table>
<thead>
<tr>
<th>HIGH SCHOOL GRADE POINT AVERAGE (WTD.)</th>
<th>COMBINED SAT SCORE</th>
<th>COMBINED ACT SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.9+</td>
<td>1000</td>
<td>24</td>
</tr>
<tr>
<td>3.7 - 3.89</td>
<td>1100</td>
<td>26</td>
</tr>
<tr>
<td>3.5 - 3.69</td>
<td>1200</td>
<td>28</td>
</tr>
</tbody>
</table>

Students who meet any of the above criteria but apply to enter the program after the first 130 seats in the entering freshman Honors class are filled will be placed in the Alternate Decision category.

Alternate Decision. Students with (1) a 3.25 or better GPA and a total score of 1300 or better on the SAT or 30 or better on the ACT or (2) a 3.0 or better GPA and a total score of 1400 or better on the SAT or 33 or better on the ACT, or (3) the credentials which meet the Early Decision criteria, but who applied for entry into the program after the first 130 places were filled, may be admitted into the program under the Alternate Decision procedure. An Alternate Decision applicant must file a letter of application for admission with the Honors Director and must also submit a 500 word essay stating his or her contribution to the program. Students who seek to enter the program under the Alternate Decision procedure may be asked to visit with the Honors Director for a personal interview. At least thirty students in each entering freshman Honors class will likely be chosen from the Alternate Decision category.

Acceptance. A student who plans to enter the University Honors Program and who is notified of acceptance into the program must file with the Honors Director a written statement of intent to enter the program and a $50.00 payment to secure membership in the Honors Club. The student must complete this within thirty (30) days of acceptance into the program, or a place may not be available. Once the student has completed the procedures he or she will be provided with timely notice of Honors registration and orientation.

A student who is not admitted to the program as an entering freshman may apply for admission after completing at least fifteen (15) semester hours at the University of Central Florida with at least a 3.5 GPA. Mature students who are returning to do college work after having been out of college for a period of several years, or who have never been previously enrolled in college, are especially encouraged to apply for admission to the program after one or more semesters of at least 3.5 GPA work at the University. Transfer students who seek admission will have their requests considered if they meet the high school GPA and SAT/ACT criteria listed above and have at least a 3.5 GPA in their transfer work from a regionally accredited college or university.

1The $50.00 payment will normally be by check or money order made out to: UCF Foundation-Honors Endowment. If for any reason any applicant cannot make this payment, he or she should discuss this with the Honors Director. No student will be denied entry into the program because of inability to pay the Honors Club membership fee.
Students must maintain a 3.2 overall GPA and 3.0 GPA in Honors Courses in order to remain in the University Honors Program. In addition to meeting the GPA requirements, to graduate with University Honors a student must also meet the following requirements:

1. complete 12 hours of course work in Honors Sections of the General Education Program;\(^1\)
2. complete, with a "satisfactory" grade, "Honors Symposium I" and "Honors Symposium II";\(^2\)
3. complete one "Honors Lecture" course,\(^3\) and
4. complete two upper division "Honors Seminars" outside of the major field of study.\(^4\)

Students who complete a semester abroad or receive six or more hours of upper-division credit for study abroad as part of the University International Studies Program, will receive credit for completion of one upper division "Honors Seminar".

By the end of the second week of the term in which a student plans to graduate with honors, the student must file a completed "Intent to Graduate with Honors" form with the University Honors Director.

A student who completes all of the requirements for University Honors will have the designation of "Graduation with University Honors" entered on the Diploma and the University transcript.

**Honors in the Major**\(^2\). Application for admission to the Honors in the Major program will be made to the department or college in which Honors are sought. Requirements for admission to Honors in the Major are: the completion of sixty hours of college credits; a cumulative 3.2 or higher grade point average, including at least twelve graded upper-division hours at the University of Central Florida; and permission of the department in which such Honors are sought. Upon application and approval of the major department or college, and with notification to the University Honors Committee, GPA requirements may be waived in cases where prior work at the college level was taken at least three years previous to the current period of continuous enrollment at the college level. Participation in the University Honors Program is not a requirement for participation in Honors in the Major.

Honors in the Major is awarded upon completion of an advanced Honors Project or Thesis, and the completion of at least one upper division Honors Seminar or an Honors Directed Readings course in the department in which Honors is taken. Each department or college reserves the right to set additional requirements for Honors in the Major to be

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1When a student has an exceptionally high number of dual enrollment, Advanced Placement, CLEP or other work which is substituted for GEP course hours, he or she may petition the University Honors Committee to substitute, on a credit for credit basis, Honors Lecture course work or Honors Seminar course work for Honors GEP course work.

2"Honors Symposium I" and "Honors Symposium II" designate one credit hour courses which will be offered, respectively, in the Fall and Spring semester of each year. This course will include guest lectures, video and film presentations, and live performances by guest artists, e.g., musicians or poets. During each semester a field trip will be included as part of the Honors Symposium. Attendance at this series will be mandatory for all students seeking University Honors. Only one unexcused absence is permitted. The course is graded on a "satisfactory"/"unsatisfactory" basis.

3Each Fall and Spring term a three credit "Honors Lecture" course will be offered. The Lecturer will offer an integrative and original course that will be open only to Honors students. The purpose of this course is to explore cross-disciplinary domains and broaden the student's perspective beyond the usual notion of a "major" field of study. Students may take more than one Honors Lecture course, but at least one such course must be taken as part of the requirements for graduation with University Honors.

4The three credit hour "Honors Seminar" is offered within the department major areas or programs, but is broad-based in the topics which are pursued. These seminars are designed especially for Honors students and are intended for non-major participation. With the consent of the Instructor, majors will also be invited into an Honors Seminar.

5Honors in the Major also designates a program in which a particular college may undertake to award Honors for upper-division work within the college. In the case of a college-wide Honors in the Major program, the student should consult the Office of the Dean of the College for information concerning procedures and requirements related to this program. Honors in the Major work is available only at the option of each department or college.
achieved. Upon petition to the Honors Committee and with the consent of the major department, a student may be awarded credit for an Honors Seminar in the major if six hours of upper-division credit accepted by the major department or college is taken abroad as part of the University International Studies Program or other overseas program directly connected with the University. The Honors Project or thesis is to be completed under the direction of a committee of three faculty members, one of whom is the major adviser. Up to six hours of 4000-level thesis credit may be awarded for student work on the Honors Project. This program is designed to encourage original and independent work on the part of the student. A copy of the thesis, creative work or project that is the expected outcome of this course will be placed in the library. With the approval of the major department or college and notification to the University Honors Committee, an Honors student may be permitted to waive any and all of the usual requirements for completion of the major and pursue a course of study designed to fit his or her individual needs.

A student who completes all of the requirements for Honors in the Major will have the designation of "Honors in the Major" noted on the diploma and the University transcript.

Summary Table of Minimum Requirements for University Honors and Honors in the Major

<table>
<thead>
<tr>
<th></th>
<th>GEP*</th>
<th>Seminars*</th>
<th>Symposium*</th>
<th>Lecture*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Univ. Honors</td>
<td>12 Hrs.</td>
<td>6 Hrs.</td>
<td>2 Hrs.</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td>Hon. in Major</td>
<td>Up to 6 Hrs.</td>
<td>AND 3 Hrs.</td>
<td>OR 3 Hrs.</td>
<td></td>
</tr>
</tbody>
</table>

*Denotes Honors Hours

LIBERAL STUDIES PROGRAM

Dean: Stuart A. Lilie, AD 210, Phone (407) 823-2691
Director: Dennis Kamrad, AD 384, Phone (407) 823-2351

PURPOSE

The Liberal Studies curriculum is a university-wide general purpose program leading to the Bachelor of Arts or Bachelor of Science degree with a major in Liberal Studies. The determination of whether the Arts or Science degree shall be awarded will depend upon the course areas selected.

The program is administered through the office of Undergraduate Studies and is designed for liberal education and academic flexibility. It recognizes that, apart from the professional curricula, there are many combinations of courses which can be structured into meaningful programs to meet the needs of individual students.

The Liberal Studies program has two main purposes:

1. It accommodates students who desire a liberal, non-professional education encompassing several fields.
2. It provides a means for students to start a productive university education while delaying a decision on professional curricula until the sophomore year.

Students who are undecided about their major should pursue the Liberal Studies program until they can select a specific major area.

Students fulfilling the requirements for a degree in Liberal Studies must complete either the UCF General Education Program or the General Education requirement at a Florida State Community College. In addition, foreign language proficiency is required.

6It is the responsibility of the Honors student to obtain a faculty adviser who will undertake the responsibility of directing the Honors Reading and Study Course. The student is responsible for notifying the Honors Director in advance, when he or she intends to pursue the Honors Directed Readings Course. Prior to entry in the readings course, the student must file with the department or college and the University Honors Committee a readings list and study proposal signed by the faculty member under whose direction the course will be given. Credit towards Honors in the Major will be awarded by a department or college for a readings course if a grade of "A" or "B" is received by the student.
The Liberal Studies student must complete:
1. A minimum of four course area groupings in which at least three disciplines are represented.
2. A minimum of 15 semester hours in each area, with an additional 20 semester hours to be completed in a fifth area or used to strengthen one or more of the four course area groupings. Students choosing only four course area groupings may include a maximum of 11 semester hours of general electives as well as 9 hours of supporting electives in completing the fifth area.**
3. A minimum of 48 upper-level hours must be earned in the 5 areas.

In addition to the university-wide degree requirements, a minimum grade point average of 2.0 must be achieved in each course grouping.

The areas of Education and Engineering may be used twice, provided a specific concentration corresponding to a traditional major is chosen for one of the area course groupings.

The area of Mathematical Sciences may be used twice, provided a concentration in Computer Science courses is chosen for one of the area groupings.

Course Area Groupings

<table>
<thead>
<tr>
<th>DISCIPLINE #</th>
<th>(Four Course Area Groupings must be chosen from three different Discipline #’s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Business Administration&lt;br&gt;Accounting, Business Administration, Economics*, Finance, Hospitality Management, Management, Marketing</td>
</tr>
<tr>
<td>II</td>
<td>Education*&lt;br&gt;Art Education, Business Education, Educational Media, Exceptional Child, Physical Education, Teaching Analysis, Vocational Education, and selected courses from Elementary and Secondary Education</td>
</tr>
<tr>
<td>III</td>
<td>Engineering&lt;br&gt;Selected courses from the Engineering core and departmental offerings. The minor in Engineering Technology and Society may also be used.</td>
</tr>
<tr>
<td>IV</td>
<td>Health Sciences&lt;br&gt;Communicative Disorders, Health Sciences, Medical Record Administration, Medical Laboratory Sciences, Nursing, Radiologic Sciences, Cardiopulmonary Sciences, and other Health Related Professions</td>
</tr>
<tr>
<td>V</td>
<td>Fine Arts&lt;br&gt;Art, Music, and Theatre</td>
</tr>
<tr>
<td>V</td>
<td>Humanities&lt;br&gt;English, Foreign Literature, History, Philosophy and Humanities</td>
</tr>
<tr>
<td>V</td>
<td>Languages&lt;br&gt;Chinese, French, German, Hebrew, Italian, Latin, Russian, Spanish</td>
</tr>
<tr>
<td>VI</td>
<td>Biology&lt;br&gt;Biology, Botany, Limnology, Zoology</td>
</tr>
<tr>
<td>VI</td>
<td>Mathematical Sciences&lt;br&gt;Computer Science, Mathematics, and Statistics</td>
</tr>
<tr>
<td>VI</td>
<td>Physical Sciences&lt;br&gt;Astronomy, Chemistry, Forensic Science, Geography (Physical), Geology, Physics, and general courses in the Earth and Space Sciences.</td>
</tr>
<tr>
<td>VI</td>
<td>Air Force or Army ROTC&lt;br&gt;For students who take and complete the Air Force or Army ROTC four-year program or two-year upper division program.</td>
</tr>
<tr>
<td>VII</td>
<td>Behavioral Sciences&lt;br&gt;Anthropology, Psychology, Sociology, and Social Welfare</td>
</tr>
<tr>
<td>VII</td>
<td>Communication&lt;br&gt;Film, Journalism, Radio-Television, Speech, and general courses in Communication</td>
</tr>
<tr>
<td>VII</td>
<td>Social Sciences&lt;br&gt;Criminal Justice, Economics*, Geography (Social), Legal Studies, Political Science, and Public Administration</td>
</tr>
</tbody>
</table>
Consult your advisor. Many Education courses require concurrent public school practicum.

This course shown in two areas.

Courses used to satisfy the GEP cannot also be used to satisfy the hours needed to complete a course area grouping.

The Liberal Studies disciplines are: (Three must be represented within the four areas chosen)

I. Business Administration  
II. Education  
III. Engineering  
IV. Health  
V. Fine Arts, Humanities, and Languages  
VI. Biology, Mathematical Sci., and Physical Sci.  
VII. Air Force or Army ROTC, Behavioral Science, Communication, and Social Sciences

MINORITY STUDENT SERVICES
Assistant Dean and Director: Robert L. Belle, Jr., AD 225, Phone (407) 823-2716

The Office of Minority Student Services is responsible for coordinating special programs, projects, and special services for minority students. The office cooperates with existing student services in the recruitment, admission, and retention of minority students, and is responsible for monitoring and facilitating the academic progress of minority students. Minority Student Services also assists in developing cultural and social programs to enhance the development of the individual.

STUDENT ACADEMIC RESOURCE CENTER
Director: Mary Helen Callarman, PC1-102, (407) 823-5130

The Student Academic Resource Center (SARC) provides students with individualized and small-group tutoring in math, English, reading, foreign language, physics, statistics, and many other disciplines.

Every semester the SARC offers a series of CLAST Review Workshops for each of the four CLAST subtests. The SARC staff can also prescribe self-paced programs specifically designed for CLAST preparation.

The SARC provides English grammar materials for non-native students who want to develop their written English skills and various academic mentoring programs.

Each semester the SARC provides a series of study skills workshops and materials on time management, note taking, test taking, memory, left-brain/right-brain thinking, and test anxiety.

The SARC is designed to meet the individual needs of students. Its major objective is to provide students with academic support to ensure their success in college.
UNDERGRADUATE DEGREES

Associate of Arts Degree

University of Central Florida students who satisfactorily complete 60 semester hours of acceptable college work may apply for an Associate of Arts degree. University requirements include achievement of an overall and UCF grade point average of 2.0 or above, fulfillment of the General Education Program requirements, and completion of the last 20 credit hours in residence at UCF. In addition, any student who wishes to receive an A.A. degree must have satisfied the Gordon Rule requirement and passed the College Level Academic Skills Test.

The Associate of Arts degree is awarded only upon application. The application form may be obtained in the Student Academic Support System (SASS) Office and should be completed by the end of the fifth week in the semester in which the Associate of Arts degree is to be awarded. A student may not be enrolled as a transient student in another institution during the term in which the Associate of Arts degree is to be awarded. An Associate of Arts degree will not be awarded in the same term that the baccalaureate degree is to be awarded or in any term following the completion of the baccalaureate degree.

Baccalaureate Degrees

The University offers the degrees of Bachelor of Arts, Bachelor of Engineering Technology, Bachelor of Fine Arts, Bachelor of Science, Bachelor of Science in Business Administration, Bachelor of Science in Engineering, Bachelor of Science in Nursing, and Bachelor of Science in Social Sciences. These degrees are available in the following Colleges with majors or areas of specialization as indicated:

College of Arts and Sciences
Bachelor of Arts (B.A.)
Majors: Anthropology, Art, Communication, Economics, English, Film (RTV), Foreign Languages (General), French, History, Humanities, Journalism, Music, Music Education, Philosophy, Political Science, Psychology, Radio-Television, Sociology, Spanish, Speech, Theatre

Bachelor of Fine Arts (B.F.A.)
Major: Art

Bachelor of Science (B.S.)
Majors: Biology, Botany, Chemistry, Computer Science, Forensic Science, Limnology, Mathematics, Physics, Psychology, Social Sciences (interdisciplinary), Statistics, Zoology

College of Business Administration
Bachelor of Science in Business Administration (B.S.B.A.)
Majors: Accountancy, Economics, Finance, General Business Administration, Management, Marketing

College of Education
Bachelor of Science (B.S.)
Major: Elementary Education, Exceptional Child
Major: K-12--Art Education, Physical Education
Major: Secondary Education, English Language Arts, Foreign Language, Mathematics, Science Education Social Science, Speech, Vocational Education and Industry Training

College of Engineering
Bachelor of Science in Engineering (B.S.E.)
Majors: Aerospace Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, Environmental Engineering, Industrial Engineering, Mechanical Engineering

Bachelor of Science in Engineering Technology (B.S.E.T.)
Double Majors

Any UCF student working toward a single bachelor's degree (a B.A. degree or a B.S. degree) who satisfies the requirements for two majors will be awarded one diploma, but both majors will be indicated on the student's permanent record. Since the requirements for Bachelor of Arts and Bachelor of Science degrees are different, a student completing a major with a B.A. and a major with a B.S. must satisfy the requirements for both the B.A. and the B.S. degrees. Although both majors will be indicated on the student's permanent record, only one diploma (a B.A. or a B.S., at the student's option) will be awarded. A double major does not require a minimum number of hours beyond those necessary for completing degree requirements, while a second degree has specific minimum requirements. (See Second Baccalaureate Degree.)

Second Baccalaureate Degree

Any UCF student desiring to obtain two baccalaureate degrees must meet the requirements for both degrees and earn a minimum of 150 hours. A separate diploma will be awarded for each degree.

Transfer graduates from accredited four-year U.S. institutions who apply for admission to work toward a second baccalaureate degree at the University of Central Florida must meet the regular graduation requirements of the major department, and the 30 semester-hour residency requirement. Students holding the baccalaureate degree from accredited U.S. institutions are considered to have completed all General Education Program Requirements. Students who hold degrees from foreign institutions may be required by the Dean of Undergraduate Studies to fulfill all or part of the UCF General Education Program requirements.

The University requirements specified in the preceding paragraphs are minimum requirements. Departments and colleges may require more than 150 hours for a second degree or more than 30 hours to be taken in residence at UCF. Students should confirm department and college requirements with their academic advisors.

Minors

Minors in a limited number of programs have been authorized for certification with baccalaureate degrees. Minors must be indicated on the Intent to Graduate card and must be certified at the same time as the student's baccalaureate degree. Unless a second baccalaureate degree is earned, certification will not be made at a later time even if additional courses have been completed.

GRADUATE PROGRAMS

See listing at the beginning of each college section. For further information on a particular program, contact the Office of the Dean of the respective college.
## UNDERGRADUATE PROGRAMS

<table>
<thead>
<tr>
<th>Undergraduate Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology (BA)</td>
</tr>
<tr>
<td>Art (BA)</td>
</tr>
<tr>
<td>Art (BFA)</td>
</tr>
<tr>
<td>Biology (BS)</td>
</tr>
<tr>
<td>Botany (BS)</td>
</tr>
<tr>
<td>Chemistry (BS)</td>
</tr>
<tr>
<td>Communication (BA)</td>
</tr>
<tr>
<td>Computer Science (BS)</td>
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<tr>
<td>Economics (BA)</td>
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<td>English (BA)</td>
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<tr>
<td>Film (BA)</td>
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<td>Foreign Language Combination (BA)</td>
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<td>Journalism (BA)</td>
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<td>Limnology (BS)</td>
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<td>Mathematics (BS)</td>
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<td>Music (BA)</td>
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<td>Political Science (BA)</td>
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<tr>
<td>Psychology (BA) (BS)</td>
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<td>Radio-Television (BA)</td>
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<td>Social Sciences (Int.) (BS)</td>
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<td>Sociology (BA)</td>
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<td>Spanish (BA)</td>
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<td>Speech (BA)</td>
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<tr>
<td>Statistics (BS)</td>
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<tr>
<td>Theatre (BA)</td>
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<tr>
<td>Zoology (BS)</td>
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</table>

## PREPROFESSIONAL PROGRAMS

<table>
<thead>
<tr>
<th>Preprofessional Programs</th>
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</thead>
<tbody>
<tr>
<td>Predental</td>
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<tr>
<td>Prelaw</td>
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<tr>
<td>Premedical</td>
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<td>Preoptometry</td>
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<td>Prepharmacy</td>
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<tr>
<td>Prepodiatry</td>
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<tr>
<td>Preveterinary</td>
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## OTHER PROGRAMS

<table>
<thead>
<tr>
<th>Other Programs</th>
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</thead>
<tbody>
<tr>
<td>Afro-American Studies</td>
</tr>
<tr>
<td>American Studies</td>
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<tr>
<td>Canadian Studies</td>
</tr>
<tr>
<td>Community Arts</td>
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<td>Judaic Studies</td>
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<tr>
<td>Latin-American Area Studies</td>
</tr>
<tr>
<td>Soviet Area Studies</td>
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<td>Women's Studies</td>
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</tbody>
</table>

See also: Summer Study Programs under Department of Foreign Languages.

## GRADUATE PROGRAMS*

<table>
<thead>
<tr>
<th>Graduate Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology (MS)</td>
</tr>
<tr>
<td>Chemistry, Industrial (MS)</td>
</tr>
<tr>
<td>Communication (MA)</td>
</tr>
<tr>
<td>Computer Science (MS, Ph.D.)</td>
</tr>
<tr>
<td>English (MA)</td>
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<tr>
<td>History (MA)</td>
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<tr>
<td>Mathematical Science (MS)</td>
</tr>
<tr>
<td>Physics (MS, Ph.D.)</td>
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<tr>
<td>Political Science (MA)</td>
</tr>
<tr>
<td>Psychology, Clinical (MS)</td>
</tr>
<tr>
<td>Psychology/Human Factors (Ph.D.)</td>
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<tr>
<td>Psychology, Industrial (MS)</td>
</tr>
<tr>
<td>Sociology, Applied (MA)</td>
</tr>
<tr>
<td>Statistical Computing (MS)</td>
</tr>
</tbody>
</table>

*See the Graduate Studies catalog for detailed descriptions of these programs.
The College of Arts and Sciences, the largest academic unit in the University, includes the following departments: Art; Biology; Chemistry; Communication; Computer Science; English; Foreign Language; History; Mathematics; Music; Philosophy and Humanities; Physics; Political Science; Psychology; Sociology and Anthropology; Statistics; and Theatre.

In keeping with the aims of the University of Central Florida, the College is responsible for all programs in the broad areas of the humanities, the fine arts, the natural sciences, and the social sciences. The departments offer more than sixty baccalaureate, graduate, and preprofessional programs in these areas. For additional information concerning graduate programs, please refer to the Graduate Catalog.

In addition to providing strong academic degree programs in the areas noted above, the College of Arts and Sciences functions in a service mode by making available a wide selection of courses designed to complement the offerings of the other four colleges of the University. These offerings include most of the courses necessary to satisfy the University's general education requirement for all students.

A student enrolled in the College as an undergraduate must fulfill all University degree requirements including that for general education, as well as the particular requirements set forth by the department for each area of specialization. To be certified for graduation, a student must achieve at least a "C" grade point average (2.0) in the courses of his or her major. Some departments also require a 2.0 in each major course; consult advisors for specific policies.

A student whose written or oral communication in any course is deemed unsatisfactory may be referred to the Dean by the instructor. Additional course work or an individual study program may be assigned consistent with the needs of the student and must be completed before the degree is granted.

PREPROFESSIONAL PROGRAMS

Pre-Health Programs: Students desiring to continue their education in health-related graduate programs (i.e., dentistry, medicine, osteopathic, optometric, pharmacy, podiatry or veterinary medicine) must select an academic major. Anyone completing the professional school's requirements is eligible to apply, regardless of major; however there are degree programs within the college which facilitate completing both the requirements for admission to a professional school and those for graduating from UCF. Regardless of whether a student selects the more customary preprofessional majors of Biology or Chemistry, or a non-traditional major, s/he should request and work closely with an advisor specializing in the preprofessional student.

PRELAW PROGRAM

Pre-Law Coordinator: Dr. R. L. Bledsoe, FA 416, Phone (407) 823-2080

There is no preferred major for prelaw. Law schools accept superior students with a good liberal arts background, regardless of major field. A Bachelor of Arts or Bachelor of Science degree with approximately three-fourths of the course work representing theory content is typically required. Majors such as English, History, Humanities, Legal Studies, Sociology, and Political Science meet this criterion. The quality of undergraduate education for the legal profession, according to the Association of American Law Schools, is grounded in three basic skills and insights: comprehension and expression in words, critical understanding of the human institutions and values with which the law deals, and the creative power of thinking. Law schools require that the Law School Admission Test (LSAT) be taken prior to consideration for admission.

General information pertaining to programs of study, LSAT, careers, and law schools can be obtained from the Pre-Law Coordinator.

Advisement of prelaw students will be provided in the area where a major is chosen; for example, a prelaw student who wishes to emphasize the historical foundations should seek advisement in the Department of History; for emphasis in political science advisement
should be sought in the Department of Political Science; emphasis in economics should be
gained through advisement in economics programs in either the College of Arts and
Sciences or the College of Business Administration; emphasis in Legal Studies can be
pursued in the Department of Criminal Justice and Legal Studies.

ADVISEMENT
Office of Academic Support and Information Services (OASIS)
Director: Ms. Judith Boyle, FA 208, Phone (407) 823-2492

The Office of Academic Support and Information Services (OASIS) assists students in
the College of Arts and Sciences in matters concerning College and University require-
ments and procedures. Petitions for the substitution of courses for requirements in the
General Education Program and evaluation of CLEP and TSD credit are processed through
this office for all students in the college. Questions concerning University and College
academic policies affecting Arts and Sciences majors should be directed to the OASIS staff
in FA 208 or by calling (407) 823-2492.

Program Planning
Although suggested curricula are available in most areas, students will plan their program
in consultation with a faculty advisor appointed by the chair of the major department or by
the Dean of the College of Arts and Sciences.

Natural Science Majors Requirement
In addition to meeting all University requirements, the College requires that each degree
program in the departments of Biology, Chemistry, Computer Science, Mathematics, Statis-
tics, and Physics contain courses which will introduce the student to the three major
scientific disciplines of physical science, biological sciences, and mathematical and comput-
er sciences.

To satisfy this requirement, students must successfully complete a minimum of four
courses under a semester system (or six courses under a quarter system) distributed
between the two scientific disciplines outside that of their major, with a minimum of one
course under a semester system (or two courses under a quarter system) in each
discipline. At least one course in each discipline must contain a laboratory component.
Some departments have identified a specific group of courses from which its majors may
select in order to satisfy this requirement. In addition, some departments may have
imposed additional criteria which must be met in order for their majors to satisfy this
requirement. It is the student's responsibility to insure that both Departmental and College
criteria have been met.

With proper justification students may be permitted to utilize courses offered outside the
College of Arts and Sciences and to mix courses taken under both quarter and semester
systems to satisfy this requirement. Any requests for such waivers must be accompanied
by a departmental recommendation and should be submitted to the Office of the Dean,
College of Arts and Sciences.

FOREIGN STUDY CENTERS—Undergraduate Interinstitutional Transient Program
The State University System operates study centers in London, England and Florence,
Italy during the fall and spring semesters. Students with 27 or more semester hours of
credit and a GPA of 2.5 or above in all State Universities are eligible to apply for one or both
semesters as interinstitutional transient students. Faculty at the centers are drawn from the
nine State Universities. While credits are earned through Florida State University, which
administers the program on behalf of the State University System, credits are fully
transferable within the System. Students at the Centers are considered to be resident in
their home institutions for attendance and degree purposes.

Classes at the Florence Center emphasize art history, Italian, social sciences, and the
humanities; at the London Center, theatre, business, English, history and the social
sciences. Field trips and museum visits are common to both. For further information consult
Dr. Thomas Greenhaw in the Department of History (London Program), (407) 823-2224 or
Dr. Robert Flick in the Department of Philosophy and Humanities (Florence Program), (407)
823-2273.

AFRO-AMERICAN STUDIES PROGRAM
The College of Arts and Sciences offers a minor but not a major in Afro-American Studies
consisting of a minimum of 16 semester hours. Required courses: AMH 3570, LIN 4612,
LIT 4354, SYD 3720. For further information, contact Dr. K. Seidel, Dean's Office, FA 511,
(407) 823-2551.

AMERICAN STUDIES PROGRAM

The minor in American Studies requires at least 21 hours of approved upper-division
courses. The courses include at least three hours of restricted electives from each of three
fields: literature and humanities, social sciences, and history. Other courses may be chosen
from the list of approved courses available from the American Studies advisor. For further
information, contact Dr. K. Seidel, FA 511, (407) 823-2251.

DEPARTMENT OF ART

Acting Chair: Jagdish J. Chavda, FA 523, Phone (407) 823-2676
Faculty: Chavda, Congdon, Eyfelis, Gaudnek, Lotz, Rivers, Skoglund, String, Wahlman,
Wellman

The Department of Art has 10 full-time and 8 part-time faculty members teaching
traditional studio arts, graphic design, and art history, as well as an endowed chair in
Community Arts (see Community Arts).

The curriculum in Art provides professional preparation in art history, visual arts adminis-
tration, and in the studio areas of ceramics, community arts, computer graphics, drawing,
fibers-fabrics, graphic design, painting, photography, printmaking, and sculpture, as well as
combination specializations. Both the Bachelor of Arts and the Bachelor of Fine Arts
degrees are offered. Competitive scholarships and awards are available to currently
enrolled full-time UCF art majors through portfolio reviews by Faculty. These awards are
sponsored by UCF, the Altrusa Club of Winter Park, and the Albin Polasek Foundation.

Portfolio Requirements For Studio Majors: A selective portfolio of work representing
the student's studio accomplishments in design and drawing is required for faculty review at
the end of the sophomore year or at the completion of 12 semester hours of studio art
courses. Faculty evaluation of this portfolio will determine if the student should advance
further in the B.A. program. The University reserves the right to hold, for exhibition
purposes, work done in classes.

Portfolio Requirements for Graphic Design concentration: Courses at many institu-
tions which are titled "Commercial Art" or "Advertising Art" may not be applicable toward the
Graphic Design concentration at UCF. Students wishing to transfer courses taken at other
institutions must present a portfolio of work for evaluation toward use in the concentration.

Credit: Cathy Siraci
MINORS

The Department of Art offers two minors, one in studio art and one in art history. The Art Department residency requirement consists of 6 semester hours of regularly scheduled 3000-4000 level art courses. These 6 hours must be in an area of specialization.

**Required courses for the minor in studio art:** ARH 2050 & 2051, ART 2201 & 2202, and nine semester hours of art at the 3000 and 4000 level. To be eligible for a minor in art, a student must have a GPA of at least 2.0 in all art courses subject to the following constraints: no "D" grades in art courses from other institutions are transferable. Total hours: 21.

**Required courses for the minor in art history:** ARH 2050 & 2051; 3 hours chosen from ART 2201, 2202, or 2300; and 15 hours from the following: ARH 3456, 3520, 3530, 3683, 3710, 3720, 4311, 4312, 4350, 4430, 4450, & 4655. ARH 3930 and 4710 may also apply with approval of an art history advisor. Total hours: 24.

**Two Track Concentration in Graphic Design**

<table>
<thead>
<tr>
<th>Track A</th>
<th>Track B</th>
</tr>
</thead>
<tbody>
<tr>
<td>I ART HISTORY</td>
<td>Graphic Design</td>
</tr>
<tr>
<td>a. ARH 2050 (required)</td>
<td>3</td>
</tr>
<tr>
<td>b. ARH 2051 (required)</td>
<td>3</td>
</tr>
<tr>
<td>c. Any upper division ARH</td>
<td>3</td>
</tr>
<tr>
<td>II DESIGN FUNDAMENTALS</td>
<td>Graphic Design</td>
</tr>
<tr>
<td>a. ART 2201 (required)</td>
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</tr>
<tr>
<td>b. ART 2202 (required)</td>
<td>3</td>
</tr>
<tr>
<td>III DRAWING FUNDAMENTALS</td>
<td>Graphic Design</td>
</tr>
<tr>
<td>a. ART 2300 (required)</td>
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<tr>
<td>b. ART 2301 (required)</td>
<td>3</td>
</tr>
<tr>
<td>IV STUDIO ART SPECIALIZATION</td>
<td>Computer Graphics</td>
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<tr>
<td>TRACK A</td>
<td>TRACK B</td>
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<tr>
<td>ART 3281 Type &amp; Design</td>
<td>ART 2481 Intro. to Computer Graphics</td>
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<td>ART 3280 Graphic Design I</td>
<td>ART 3280 Graphic Design I</td>
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<td>(3)</td>
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<tr>
<td>ART 3232 Graphic Design II</td>
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<td>(3)</td>
<td>(3)</td>
</tr>
<tr>
<td>(3)</td>
<td>(3)</td>
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<tr>
<td>ART 4237 Special Problems in Graphic Design</td>
<td>ART 4483C Advanced Computer Graphics</td>
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<tr>
<td>(3)</td>
<td>(3)</td>
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<tr>
<td>V RESTRICTED ELECTIVES</td>
<td>(Upper Division Hours)</td>
</tr>
<tr>
<td>Minimum of three (3) areas represented, all courses must be outside of the area of specialization.</td>
<td></td>
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<tr>
<td>Drawing</td>
<td>3330 (3),3331 (3)</td>
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<tr>
<td>Painting</td>
<td>3510 (3),4530 (3)</td>
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<tr>
<td>Printmaking</td>
<td>3400 (3),4402 (3)</td>
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<tr>
<td>Photography (PGY)</td>
<td>3401 (3),4420 (3)</td>
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<tr>
<td>Sculpture</td>
<td>3701 (3),4703 (3)</td>
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<tr>
<td>Ceramics</td>
<td>3110 (3),4111 (3)</td>
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<tr>
<td>Fibers &amp; Fabrics</td>
<td>4130 (3)</td>
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<tr>
<td>Any Upper Division ARH</td>
<td>Special Topics</td>
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<tr>
<td>(3)</td>
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<td>TOTAL required hours in major (Graphic Design Track A or Track B)</td>
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<tr>
<td>Graduation Portfolio Presentation.</td>
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</table>

**Bachelor of Arts: Art**

**Degree Requirements**

1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
A student must achieve at least a "C" grade point average (2.0) in the courses of his or her major.

No D grades in Art courses from other institutions are transferable.

Departmental Residency Requirement consists of at least 18 semester hours of regularly scheduled 3000-4000 level courses taken from the UCF Department of Art. Nine of these must be in an area of specialization.

3. Required courses
   Varies with Specialization

4. Restricted Electives
   Varies with Specialization

5. Electives
   To be selected primarily from upper level courses outside the Department, with the approval of the student's advisor.

   Total Semester Hours Required 120

AREAS OF SPECIALIZATION

I. Art History Specialization

A. Required Courses
   ARH 2050, 2051 History of Art I, II 6 hours
   ART 2201C Design Fundamentals I 3 hours
   ART 2300C or 2202 Drawing Fund. I, or Design Fund. II 3 hours
   ARH 4912 Senior Research 3-6 hours

B. Specialization
   3000 and 4000 level Art History Courses from the following:
   ARH 3060, 3456, 3520, 3530, 3683, 3710, 3720, 3905, 4170, 4311, 4312, 4350, 4430, 4450, 4655, 4690, or others, as approved by advisor.

   Total Semester Hours Required 15-18 hours

C. Restricted Electives
   Any three:
   Any ARH course listed under B (3)
   ARH 4800 Theory and Criticism of the Visual Arts (3)
   ARH 3820 Visual Arts Administration (3)
   ARH 3802 Happenings (3)
   ARH 5451 Artistic World Views (3)
   ENC 3311 Advanced Expository Writing or ENC Journal Writing (3)
   EUH 3000-4000 level course (3)
   ARH 3000-4000 level Community Arts course (3)
   ARH 3000-4000 level studio course (3)

   Total Semester hours in Art and Art History Courses 45-48

D. Foreign Language
   2 years of college level courses (proficiency).

E. Comprehensive Art History Examination:
   ARH 4906 Directed Independent Studies (3)

   Total Semester Hours Required 120 hours

II. Art (Studio)

A. Required Courses
   ART 2201C, 2202C Design Fundamentals I, II 6 hours
   ART 2300C, 2301C Drawing Fundamentals I, II 6 hours
   ARH 2050, 2051 History of Art I, II 6 hours
   ARH 3000-4000 Art History Courses 6 hours

B. Specialization
   3000-4000 level courses from:

   *See Two-Track concentration in Graphic Design

C. Restricted Electives
   3000-4000 level courses from at least 3 areas outside the area

   Total Semester Hours Required 9 hours
of specialization: Art History, Ceramics, Drawing, Fiber-Fabrics, Film Design, Graphic Design, Painting, Printmaking, Photography, Sculpture, and Special Topics Courses.

D. Portfolio Requirement
Seniors are required to submit a portfolio of representative work in the student's area of specialization, for review by Faculty.

Total Semester Hours in Art & other recommended courses 45-48

Total Semester Hours Required 120

Bachelor of Fine Arts: Art

The B.F.A. degree is recommended for studio art majors who plan to attend graduate school. Admission to the B.F.A. degree program requires the student to submit a formal application and a portfolio to the Faculty no earlier than the first semester of the student's senior year (upon completion of 90 semester hours). Once admitted to the B.F.A. program, the student must complete an additional 30 semester hours at UCF, with 12 hours in Art courses. A senior exhibition is required for graduation.

Degree Requirements
1. See University Degree Requirements. Students must achieve at least a "B" grade point average (3.0) in the courses of their major.

2. See Special college and/or department requirements: Students must achieve at least a 3.0 average in courses in the major. No "D" grades in transfer Art courses; Department Residency Requirement consists of at least 18 semester hours of regularly scheduled upper-level courses must be taken from the UCF Department of Art. Nine of these must be in the area of specialization.

3. Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ART 2201C, 2202C</td>
<td>Design Fundamentals I, II</td>
<td>6</td>
</tr>
<tr>
<td>ART 2300C, 2301C</td>
<td>Drawing Fundamentals I, II</td>
<td>6</td>
</tr>
<tr>
<td>ARH 2050, 2051</td>
<td>History of Art I, II</td>
<td>6</td>
</tr>
<tr>
<td>ARH 3000-4000</td>
<td>Art History Courses</td>
<td>9</td>
</tr>
</tbody>
</table>

4. Area Specialization 3000-4000 level courses from: Ceramics, Drawing, 15-21 hours
*Graphic Design, Painting, Printmaking, Photography, and Sculpture or combinations. Combination specializations in any two media require 9 or 12 hours of upper-division courses in each half of the combination for a total of 21 hours.

*(See Two Track concentration in Graphic Design. Minimum credit hour requirement for Graphic Design specialization will be 18 hours.)

5. Restricted Electives

3000-4000 level courses from at least three areas outside the student's specialization: Art History, Ceramics, Drawing, Fiber and Fabrics, Film Design, Graphic Design, Painting, Printmaking, Photography, Sculpture, and Special Topics Courses.

ARE and ARH Community Arts courses are acceptable, with consent of advisor.

6. Electives

Total Semester Hours in Art Courses 54-60

Total Semester Hours Required 120

DEPARTMENT OF BIOLOGY

Acting Chair: D. H. Vickers, BL 210, Phone (407) 823-2141

Faculty: Ehrhart, Koevenig, Kuhn, Miller, Osborne, Snelson, Stout, Sweet, Taylor, Vickers, Whittier, Ellis (Professor Emeritus)

The Department of Biology offers Bachelor of Science degree programs in Biology, Botany, Limnology, and Zoology; a minor in biology; and the Master of Science in Biology. The core curriculum required of all undergraduate degree programs provides a background in the chemical, mathematical, and physical sciences, as well as broad preparation in the biological sciences. This diverse background opens career opportunities for graduates in areas outside of their particular degree program. In addition, graduates are well prepared to further their education in professional or graduate schools. Selection of electives, in
consultation with a faculty advisor, permits emphasis on a specific subspecialty within a
degree program. Careful selection of restricted and unrestricted electives allows a student
to satisfy all requirements for admission to professional or graduate school, while at the
same time completing a B.S. degree in Biology. Research experience and exposure to
specialized topics not taught through formal courses may be gained through independent
study contracts.

MINOR IN BIOLOGY

The Department of Biology offers a minor in Biology consisting of a minimum of 28 hours.
Required courses (18 hours): BOT 2010C; BSC 2010C; PCB 3043; PCB 3063; ZOO
2010C. Restricted Electives (10 hours): At least 10 hours of course work taught within the
Department of Biology (designated as being within the College of Arts & Sciences-AS) with
at least one lecture or lecture/lab course from Group A or C and one such course from
Group B or D. Groups A-D are listed under the restricted elective subsection of the Biology
core curriculum.

To be eligible for a minor in Biology a student must have a GPA of at least 2.0 in all UCF
biology courses subject to the following constraints: (A) No CLEP or TSD credits may be
used (B) No "D" grades from other institutions will be accepted (C) At least 10 of the 28
hours must be earned in residence at UCF.

Bachelor of Science: All Biology Majors (Biology, Botany, Limnology, Zoology)

Degree Requirements

1. To be eligible for any undergraduate degree offered by the Department of Biology a
student must have a GPA of at least 2.0 in all UCF biology courses subject to the
following constraints: (A) No CLEP or TSD credits may be used (B) No "D" grades from
other institutions will be accepted (C) No more than 4 hours of independent study,
directed research or similar types of credit may be applied toward major requirements;
(D) at least 15 hours of all Biological Sciences credits applied toward the major must be
earned in residence at UCF within the Department of Biology.

Students seeking a double major within the Department of Biology must satisfy the
requirements for both majors and must take no fewer than 40 semester hours of upper
division restricted elective coursework appropriate to the combined areas of specializa­
tion of the two majors. Double majors receiving one degree from UCF's Department of
Molecular Biology and Microbiology and another from the Department of Biology must
also conform to the above requirement.

2. Core requirements: 47-52 hours
Must be satisfied by all students seeking an undergraduate degree from the Department
of Biology. These requirements apply equally to Biology, Botany, Limnology, and Zoology
majors unless otherwise noted under the specific degree requirements for a particular
major.

<table>
<thead>
<tr>
<th>Biology Core Courses (21 hours)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BOT 2010C</td>
<td>General Botany 4 hours</td>
</tr>
<tr>
<td>BSC 2010C</td>
<td>General Biology 4 hours</td>
</tr>
<tr>
<td>ZOO 2010C</td>
<td>General Zoology 4 hours</td>
</tr>
<tr>
<td>PCB 3023</td>
<td>Molecular Cell Biology 3 hours</td>
</tr>
<tr>
<td>PCB 3043</td>
<td>Ecology 3 hours</td>
</tr>
<tr>
<td>PCB 3063</td>
<td>Genetics 3 hours</td>
</tr>
</tbody>
</table>

The above courses are prerequisite or corequisite to all upper division biology courses.

Cognate Sciences Core Courses (26-31 hours)

The below requirements represent minimum physical science requirements of a Life
Sciences student. Those expecting to enter professional or graduate school after receiving
a B.S. degree at UCF must plan to take a full year of Physics with laboratory, either the
3053, 54 or 3048, 49 sequence with the latter being preferred. Such students should also
complete a full year of organic chemistry with laboratory and are strongly urged to complete
Biochemistry (BCH 4053, 54) as well. Knowledge of mathematics through calculus is also
considered an essential prerequisite for admission to many postgraduate and professional programs and students should bear this in mind when meeting their mathematics requirements—possibly taking the MAC 3311, 3312, 3313 (Calculus with Analytical Geometry) sequence. Students are urged to carefully select their cognate science courses in consultation with their advisor.

CHM 2045, 2046, 2046L Chem. Fund I and II with lab and one of the following 2 course groups 8 hours
CHM 3210, 3211, 3211L Organic Chem. I & II with lab or
CHM 3120C and Intro Organic & Biochemistry
or
CHM 2205
Minimum Chemistry 16-18 hours
PHY 3053 College Physics I 4 hours or
PHY 3054 College Physics II 4 hours or
PHY 3048 & PHY 3048L Physics for Eng. & Sci. with Lab 4 hours Minimum Physics 4 hours or
MAC 1104 and higher College Algebra and higher 6 hours or
Any Calculus course Calculus 3-5 hours Minimum Mathematics 3-6 hours
STA 3023 Statistical Methods 3 hours Minimum Statistics 3 hours

3. Upper Division Restricted Electives: 26-29 hours*
Must be selected regardless of major from the below course groupings and each student must complete at least one BOT and at least one ZOO course. In addition, each student must complete at least one lecture or combined lecture/laboratory course from each of the following groups with additional required credits to meet the individual major requirements. Courses can be selected from any of the below listed courses unless otherwise noted under the specific degree requirements for a particular major.

Group A
BOT 4713C Plant Taxonomy 5 hours
ENY 4004C General Entomology 4 hours
MCB 3013C General Microbiology 5 hours
MCB 4114C Microbial Systematics 4 hours
PCB 3301C Aquatic Biology 4 hours
ZOO 3303C Vertebrate Zoology 4 hours
ZOO 4203C Invertebrate Zoology 4 hours

Group B
BOT 3800 Ethnobotany 3 hours
BOT 3820 Plants and Urban Envir 3 hours
BOT 4623C Plant Geography & Ecology 4 hours
PCB 4833 Population Biol & Evolution 4 hours
PCB 3043L Ecology Laboratory 1 hour
PCB 4302C Limnology I 4 hours
PCB 4303C Limnology II 4 hours
ZOO 4880C Fisheries Management 4 hours

Group C
BOT 4223C Plant Anatomy 4 hours
BOT 4303C Plant Kingdom 5 hours
BSC 4103 History of Biology 3 hours
PCB 3063L Genetics Laboratory 1 hour
ZOO 3713C Comp Vert. Anatomy 5 hours
ZOO 4603C Embryology/Development 5 hours
ZOO 4753C Vertebrate Histology 5 hours
### Bachelor of Science: Biology

1. See University undergraduate degree requirements for GEP courses required outside major  
   - 27 hours
2. See special college and/or departmental requirements  
   - 0 hours
3. Required Departmental Core Curriculum  
   - 47-52 hours
   - A. Biology  
     - 21 hours
   - B. Cognate Sciences  
     - 26-31 hours
4. Restricted electives must include at least one upper division BOT and ZOO course and at least one lecture or lecture/laboratory course from each of the four course groupings  
   - 26 hours
5. Unrestricted electives may include 8 hours of Foreign Language and additional biology courses.  
   - 15-20 hours
6. Total Minimum Hours Required for B.S. in Biology  
   - 120 hours

### Bachelor of Science: Botany

1. See University undergraduate degree requirements for GEP courses required outside major  
   - 27 hours
2. See special college and/or departmental requirements  
   - 0 hours
3. Required Departmental Core Curriculum  
   - 47-52 hours
   - A. Biology  
     - 21 hours
   - B. Cognate Sciences  
     - 26-31 hours
4. Restricted electives must include at least one ZOO course and at least 17 hours of upper division Botany courses. Also, a minimum of one lecture or lecture/laboratory course from each of the four course groupings must be completed.  
   - 26 hours
5. Unrestricted electives may include 8 hours of Foreign Language and additional biology courses.  
   - 15-20 hours
6. Total Minimum Hours Required for B.S. in Botany  
   - 120 hours

### Bachelor of Science: Limnology

1. See University undergraduate degree requirements for GEP courses required outside major  
   - 27 hours
2. See special college and/or departmental requirements  
   - 0 hours
3. Required Departmental Core Curriculum  
   - 47-52 hours
   - A. Biology  
     - 21 hours
   - B. Cognate Sciences  
     - 28-31 hours
   - Limnology majors Must take CHM 3120C Analytical Chem, CHM 2205 Intro to Organic & Biochem and either PHY 3053 or PHY 3048 and 3048L to satisfy their cognate sciences core.
4. Restricted electives  
   - 28-29 hours

### Group A

- ZOO 3303C  
  - Vertebrate Zoology

*With the advisor's approval up to 8 credits from the following 5000-level courses may be taken to meet the restricted electives credit requirement: BOT 5495, BOT 5705, PCB 5044, PCB 5045, PCB 5046, PCB 5675, PCB 5721, ZOO 5456, ZOO 5463, ZOO 5475, ZOO 5483, ZOO 5745, ZOO 5815.
ZOO 4203C Invertebrate Zoology
or
ENY 4004C Entomology
or
PCB 3301C Aquatic Biology

**Group B**
PCB 4302C Limnology I
PCB 4303C Limnology II
ZOO 4880C Fisheries Management

**Group C**
BOT 4223C Plant Anatomy
or
BOT 4303C Plant Kingdom

**Group D**
Any Course Listed

5. Unrestricted electives may include 8 hours of Foreign Language and additional biology courses.
6. Total Minimum Hours Required for B.S. in Limnology 120 hours

**Bachelor of Science: Zoology**

**Degree Requirements:**
1. See University Undergraduate Degree Requirements for GEP courses required outside major 27 hours
2. See special college and/or departmental requirements 0 hours
3. Required Departmental Core Curriculum
   A. Biology 21 hours
   B. Cognate Sciences 26-31 hours
4. Restricted electives 26-29 hours
   Any BOT course from Group A, B, C, or D 3-5 hours
   PCB 3043L and PCB 3063L Ecology and Genetics Laboratories 2 hours
   Restricted electives to be selected from:
   ZOO 3303C, ZOO 3713C, ZOO 4203C, ZOO 4603C, PCB 4753, and PCB 4683. or, with the advisor's approval, up to 8 hours of the following 5000-level courses may be used to partially satisfy this requirement: ZOO 5456C, ZOO 5463C, ZOO 5475C, ZOO 5483C or ZOO 5815. Total restricted electives chosen must include at least one lecture or lecture/laboratory course from each of the four course groupings.
5. Unrestricted electives may include 8 hours of Foreign Language and additional biology courses. 12-20 hours
6. Total Minimum Hours Required for a B.S. in Zoology 120 hours

**Bachelor of Science: Biology/Preprofessional**

The Department of Biology does not offer a preprofessional degree and no such major exists. All students in the department are classified as Biology, Botany, Limnology or Zoology majors. However, many of our students plan to continue their education beyond the baccalaureate in a professional or graduate school. The below suggested curriculum is not a degree program but simply a composite suggestion as to how one might complete a degree in Biology while at the same time completing entrance requirements for professional or graduate school. Note that the minimum cognate science requirements listed below are more rigorous than those listed earlier under Departmental requirements.

1. See University undergraduate degree requirements for GEP courses required outside major 27 hours
2. See special college and/or departmental requirements
   All preprofessional students should complete SLS 2311, Overview of Selected Medical Careers, during their first semester at UCF.
3. Required Departmental Core Curriculum

A. Biology

B. Cognate Sciences

CHM 2045, 2046, 2046L
CHM 3210, 3211, 3211L
PHY 3053, 3054C
PHY 3048, 3048L
PHY 3049, 3049L
MAC 3233

Chern. Fund I and II with lab and
Organic Chem. I & II with lab
College Physics I & II
Physics for Eng. & Sci.
Concepts of Calculus
Calc & Anal Geom I & II

51-56 hours
21 hours
8 hours
8 hours
8 hours
3 hours
8 hours
8 hours

21 hours
30-35 hours
8 hours
8 hours
8 hours

4. Suggested Restricted Electives: The below courses are suggested as being appropriate to various preprofessional students but actual selections should be carefully made in consultation with the students advisor while paying attention to the specific admission requirements of the particular professional school to which the student expects to apply.

**Group A**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCB 3013C</td>
<td>General Microbiology</td>
<td>5 hours</td>
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**Group B**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BOT 3800</td>
<td>Ethnobotany</td>
<td>3 hours</td>
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</table>

**Group C**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>PCB 3063L</td>
<td>Genetics Lab</td>
<td>1 hour</td>
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<tr>
<td>ZOO 3713C</td>
<td>Comp Vert. Anat.</td>
<td>5 hours</td>
</tr>
<tr>
<td>ZOO 4603C</td>
<td>Embryology/Development</td>
<td>5 hours</td>
</tr>
<tr>
<td>ZOO 4753C</td>
<td>Vertebrate Histology</td>
<td>5 hours</td>
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**Group D**

<table>
<thead>
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<th>Course</th>
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<tbody>
<tr>
<td>PCB 3233, PCB 3233L</td>
<td>Immunology</td>
<td>4 hours</td>
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<tr>
<td>PCB 4723</td>
<td>Animal Physiology</td>
<td>4 hours</td>
</tr>
<tr>
<td>BCH 4053 &amp; 4054</td>
<td>Biochemistry</td>
<td>6 hours</td>
</tr>
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</table>

5. Unrestricted Electives may include 8 hours of foreign language and electives appropriate to particular professional subspecialty. Students should carefully select unrestricted electives with the assistance of their preprofessional advisor.

**CANADIAN STUDIES PROGRAM**

Canadian Studies offers both a certificate and a minor but not a major. This program is interdisciplinary and includes courses from the departments of Criminal Justice and Legal Studies, English, Foreign Languages, History, Political Science, Sociology and Anthropology, and the College of Engineering. In addition, UCF is the site of the Florida-Canada Institute, a state program which offers other activities relating to Canada. For information consult Dr. Henry Kennedy, Director of Canadian Studies, at the Florida Canada Institute Center, FA 209, (407) 823-2079.

**DEPARTMENT OF CHEMISTRY**

Chair: H. Miles, CH 117, Phone (407) 823-2246
Faculty: Clausen, Cunningham, Elsheimer, Gupton, Hampton, Hertel, Juge, Kujawa (Geology), Madsen, Mattson, McCann, McGee (Forensic Science), Trefonas

The Department of Chemistry offers courses and programs which lead to a Bachelor of Science in Chemistry, a Bachelor of Science in Forensic Science, a minor in Chemistry and a Master of Science in Industrial Chemistry.

The undergraduate degree program in chemistry is accredited by the American Chemical Society Committee on Professional Training. It prepares the graduate for career opportuni-
ties in the chemical or related industries or in government laboratories. The program may also lead to further study at the graduate level in chemistry or in a related area such as pharmacology or toxicology. With an appropriate choice of electives it also constitutes excellent preparation for the professional schools of dentistry, medicine, and veterinary medicine.

MINOR

The Department of Chemistry offers a minor consisting of a minimum of 28 semester hours.

Required courses (21 semester hours): CHM 2045, 2046, 2046L, 3210, 3211, 3211L, and 3120C.

Restricted electives (7 semester hours minimum): At least one course must be selected from group I and the remaining from group I and/or II:

Group I: CHM 3212L, 4130C; BCH 4103L, CHS 3531

Group II: BCH 4053, 4054, CHM 3410, 3411, 4220, 4221, CHS 4110C, 4200

Bachelor of Science: Chemistry

Degree Requirements

1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tr>
<td>CHM 2045, 2046</td>
<td>Chemistry Fundamentals I, II</td>
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<tr>
<td>CHM 2046L</td>
<td>Chemistry Fundamentals Laboratory</td>
<td>1</td>
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<tr>
<td>CHM 3210, 3211</td>
<td>Organic Chemistry I, II</td>
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<td>CHM 3211L, 3212L</td>
<td>Organic Laboratory Techniques I, II</td>
<td>4</td>
</tr>
<tr>
<td>CHM 3120C</td>
<td>Analytical Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>CHM 3410, 3411</td>
<td>Physical Chemistry I, II</td>
<td>7</td>
</tr>
<tr>
<td>CHM 3410L, 3411L</td>
<td>Physical Chemistry Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>CHM 4610</td>
<td>Inorganic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHM 4130C</td>
<td>Advanced Analytical Laboratory Technique</td>
<td>4</td>
</tr>
<tr>
<td>CHM 4912</td>
<td>Undergraduate Research</td>
<td>4</td>
</tr>
<tr>
<td>CHM 4932</td>
<td>Chemistry Seminar</td>
<td>1</td>
</tr>
</tbody>
</table>
ENC 3241 Technical Report Writing 3 hours
MAC 3311, 3312, 3313 Calculus with Analytic Geometry I, II, III 12 hours
PHY 3048, 3048L, 3049, 3049L Physics for Engineers & Scientists 8 hours
STA 3023 Statistical Methods I 3 hours

4. Restricted Electives
   a. Biological Sciences (minimum of 7 hours)
      BSC 2010C General Biology 4 hours
      Approved electives restricted to those biology courses not listed as designed for non-majors.
   b. Minimum of 3 hours
      COP 2500 Computer Science I 3 hours
      COP 3200 Computer Programming 3 hours
      CGS 3422 Programming and Numerical Methods 3 hours
   c. Minimum of 3 hours
      PHY 3752C Physics of Scientific Instruments 4 hours
      CET 3123C Microprocessor Electronics 3 hours
      EEL 3341C Introduction to Digital Circuits 3 hours
      EEL 3342C Intro to Digital Circuits and Systems 4 hours
   d. Minimum of 6 hours
      BCH 4053 Biochemistry I 3 hours
      BCH 4054 Biochemistry II 3 hours
      CHM 4220 Advanced Organic Chemistry I 3 hours
      CHM 5235 Applied Molecular Spectroscopy 3 hours
      CHM 4221 Advanced Organic Chemistry II 3 hours
      CHM 5580 Advanced Physical Chemistry 3 hours
      CHM 5450 Polymer Chemistry 3 hours
      CHS 3531 Forensic Analysis 3 hours
      CHS 4110C Nuclear and Radio Chemistry 3 hours
      CHS 4200 Concepts in Industrial Chemistry 3 hours

5. Electives
   Two years of German is recommended for those students intending to pursue graduate studies.

Total Semester Hours Required 128

Forensic Science Program
Director: W.W. McGee, CH 221, Phone (407) 823-2788

Forensic Science is the profession which serves the scientific needs of the justice system. The program at UCF has been designed to provide the student with an educational background in the professional specialty of criminalistics.

The principal job of the forensic scientist is to scientifically examine physical evidence gathered at the scene of a suspect criminal action. The criminalist may work on physical evidence such as blood, hairs, fibers, or pharmaceutical and clandestine drug preparations. Upon completion of an investigation the forensic scientist presents his findings in court. The goal of the Forensic Science program is to prepare students for this demanding profession.

Bachelor of Science: Forensic Science

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses
   BSC 2010C General Biology 4 hours
   CHM 2045, 2046 Chemistry Fundamentals I, II 7 hours
   CHM 2046L Chemistry Fundamentals Laboratory 1 hour
   CHM 3210, 3211 Organic Chemistry I, II 6 hours
   CHM 3210L Organic Laboratory Techniques I 2 hours
   CHM 3120C Analytical Chemistry 5 hours
   CHS 3501 Introduction to Forensic Science 3 hours
   CHS 3505 Forensic Microscopy 3 hours
### School of Communication

**Director:** J. Welke, FA 534, Phone (407) 823-2681  
**Faculty:** Andersen, Arnold, J. Butler, Collachia, Collins, Davis, Fedler, Fowles, Grasty, Hall, Hogin, Jeffery, Johnson, Maunez-Cuadra, McCann, Meeske, O'Keefe, Pryor, Shearer, R. Smith, Sullivan, Tanzi, Taylor, Weider-Hatfield, Wycoff

The School of Communication offers Bachelor Degree programs in five specific areas. Students have the option of selecting a specialized track for the Film or Journalism degree:

1. **Bachelor of Arts: Interpersonal Communication**
2. **Bachelor of Arts: Journalism**
   - A. News/Editorial Track
   - B. Advertising/Public Relations Track
3. **Bachelor of Arts: Organizational Communication**
4. **Bachelor of Arts: Radio-Television**
5. **Bachelor of Arts: Motion Picture Technology: [FILM]**
   - A. Production-Screenwriting
   - B. Animation

Any student contemplating graduate study should be aware of special requirements in some graduate schools, such as foreign languages, statistics, and computer sciences.

### Limited Access

All degree programs in the School of Communication have been designated as limited access beginning in the Fall, 1989. Limited access means there are additional admissions requirements over and above those set for general admission to the University. Students meeting the minimum requirements for admission will be admitted on a space available basis. Students will be assigned the category of Communication—pending prior to acceptance into the School. A minimum of 30 credit hours of college work is required before application for admission to a program. The Bachelor of Arts in Motion Picture Technology [Film] degree is a separate limited access program with other requirements.

### School Admission Application

Application for admission to the School of Communication must be made through the School office. Apply only after you have completed all requirements for admission. Deadlines are:

- **OCTOBER 8, 1991** for Spring, 1992
- **MARCH 8, 1992** for Summer, 1992
  
  *(See FILM note below)*
- **JULY 12, 1992** for Fall, 1992.

**NOTE:** Applications for the Film major are accepted only ONCE PER YEAR. Applications will be accepted **MARCH 8, 1992** for admission to the Fall, 1992.
Limited Access Requirements
The requirements for admission consideration and continuation as a major in the School for all programs, except Film [see special additional requirements for Radio-Television and both Journalism Tracks] are listed below.
1. An overall 2.25/4.00 grade point average based on a minimum of 30 credit hours of college work.
2. Demonstrated written proficiency in grammar, punctuation, and word usage. Testing is conducted prior to the start of each semester and remedial options are provided.
3. A maximum of three courses completed in the School prior to acceptance into the program may be counted toward the major including transfer courses in the major from another institution [total accepted: three courses]. NOTE: Some courses have a prerequisite requiring successful completion of the Grammar Proficiency Examination or Typing Proficiency Test.

Graduation Requirements
1. A final 2.25/4.00 grade point average in all required courses for a major must be completed in order to graduate with a major in the School. NOTE: This grade point average does not include Restricted Electives in the major or other electives.
2. A maximum of 40 credit hours in School courses may be counted toward the 120 hours required for graduation.
3. Students electing both a major and minor in the School must take the minor courses in excess of the 120 hours required for graduation.
4. The Department requires that students initiate a request for a review of graduation requirements at the beginning of the anticipated term of graduation. Failure to file the request may delay graduation.

Transfer Limitation
Generally, students may not substitute lower division courses taken at community colleges for upper division courses in the School of Communication (except Florida common numbered coursework). Students wishing to transfer courses from other colleges must apply for equivalency credit. College catalog, course syllabus, textbook used, or other supporting information must be provided by the student. The Divisions of the School of Communication will evaluate applications for equivalency. A maximum of three transfer courses or courses taken prior to School admission may be accepted in a School of Communication major [total accepted: three courses].

MINORS
The School of Communication offers the following minors:
1. Interpersonal Communication
   COM 3011 (3), COM 3311 (3), SPC 3301 (3), SPC 4330 (3), SPC 4350 (3), SPC 4540 (3).
2. Journalism: News/Editorial Track
   JOU 3004 or JOU 4602 (3), JOU 31001,2 (3), MMC 4200 (3), plus TWO JOU elective (writing and/or editing) courses1,2 (6).
3. Journalism: Advertising/Public Relations Track
   ADV 4000 (3), ADV 4003 (3), ADV 4101 (3), ADV/PUR 4941 or PUR 4800 (3), PUR 4000 (3).
4. Organizational Communication
   COM 3110 (3), COM 3120 (3), COM 3311 (3), SPC 3425 (3), SPC 3445 (3), SPC 4440 (3).
5. Radio-Television
   RTV 3000 (3), RTV 3200 (4), RTV 33001,2 or RTV 35011,2 (4), RTV 4700 or RTV 4403 (3).
1Prerequisite Grammar Proficiency Examination required.
2Prerequisite Typing Proficiency Test required.

Bachelor of Arts: Interpersonal Communication
Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or School requirements.
3. Required Courses
COM 3011 Communication and Human Relations 3 hours
COM 3311 Communication as a Behavioral Science 3 hours
SPC 3301 Interpersonal Communication 3 hours
SPC 3425 Group Interaction and Decision Making 3 hours
SPC 3601 Advanced Public Speaking 3 hours
SPC 3511 Argumentation and Debate 3 hours
SPC 4330 Nonverbal Communication 3 hours
SPC 4350 Studies in Listening 3 hours
SPC 4540 Attitudes and Communication 3 hours
SPC 4440 Group Dynamics 3 hours

4. Restricted Electives
Six credit hours in the School of Communication

5. Electives
A minimum of 9 upper division credit hours in one department outside the School of Communication.

Total Semester Hours Required 120
A maximum of 3 credit hours of internship may be earned in one semester. A total of 6 may be earned within the 120 credit hours required for graduation. Students should check with their advisor for prerequisites and other requirements.

Bachelor of Arts: Journalism

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or School requirements. In addition, all students planning a major in both journalism tracks must pass the Typing Proficiency Test (20 wpm) prior to admission to the major. The typing test may be taken ONLY three (3) times and not twice in one semester. Students should see their advisor for details.
3. Required Courses
Students must select and complete one of the areas of specialization listed below.
4. Restricted Electives (See Area of Specialization)
5. Electives (See Area of Specialization)

AREAS OF SPECIALIZATION
1. Required Courses: News-Editorial Track
   JOU 3004 History of American Journalism 3 hours
   JOU 3100¹ News Reporting 3 hours
   JOU 3101¹ Advanced News Reporting 3 hours
   JOU 3200¹ Editing I 3 hours
   JOU 3201¹ Editing II 3 hours
   JOU 4104¹ Public Affairs Reporting 3 hours
   JOU 4300¹ Feature Writing 3 hours
   MMC 4200 Mass Communication Law 3 hours
   MMC 4602 Contemporary Media Issues 3 hours
   PGY 3610 Photojournalism I 3 hours

Restricted Electives
JOU/PGY Elective 3 hours

¹Prerequisite Grammar Proficiency Examination and Typing Proficiency Test required. Some courses may also require a minimum grade of "C" in prerequisite courses.

The Journalism faculty strongly recommends that News-Editorial majors work for the student newspaper, The Central Florida Future. In addition, News-Editorial majors may obtain off-campus internship, with a commercial weekly or daily newspaper, or with a magazine. To enroll for credit, students must have a 2.5 GPA in their required major courses. Students with less than a 2.5 GPA will not be given academic internship credit. A maximum of 3 credit hours may be earned in one semester, with a total of 3 within the 120 required for graduation. Students should consult with their adviser for prerequisites and other requirements.
Required Minor: News-Editorial majors must complete a minor in an academic area outside of the School of Communication or complete a 15-credit hour area of concentration approved by the Faculty.

2. Required Courses: Advertising/Public Relations Track

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ADV 4000</td>
<td>Principles of Advertising</td>
<td>3</td>
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<tr>
<td>ADV 4003</td>
<td>Advertising Layout and Copywriting</td>
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<td>ADV 4101</td>
<td>Advertising Copy and Campaigns</td>
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<td>ADV 4103</td>
<td>Radio-TV Advertising</td>
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</tr>
<tr>
<td>COM 3110</td>
<td>Business and Professional Speaking</td>
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<tr>
<td>COM 3311</td>
<td>Communication as a Behavioral Science</td>
<td>3</td>
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<tr>
<td>MMC 4200</td>
<td>Mass Communication Law</td>
<td>3</td>
</tr>
<tr>
<td>PGY 3610</td>
<td>Photojournalism I</td>
<td>3</td>
</tr>
<tr>
<td>PUR 3100</td>
<td>Writing for Public Relations</td>
<td>3</td>
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<td>PUR 4000</td>
<td>Public Relations</td>
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<td>PUR 4941</td>
<td>Internship</td>
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<tr>
<td>ADV 4941</td>
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<td>3</td>
</tr>
<tr>
<td>PUR 4800</td>
<td>Public Relations Campaigns</td>
<td>3</td>
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</table>

1Prerequisite Grammar Proficiency Examination and Typing Test required.

A maximum of 6 credit hours of internship may be earned in one semester. A total of 9 credit hours of internship may be earned within the 120 credit hours required for graduation. Students should consult with their adviser for prerequisites and other requirements.

Bachelor of Arts: Organizational Communication

Degree Requirements

1. See Undergraduate Degree Requirements
2. See special college and/or school requirements.
3. Required Courses (27 credit hours)

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<tr>
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<tbody>
<tr>
<td>COM 3011</td>
<td>Communication and Human Relations</td>
<td>3</td>
</tr>
<tr>
<td>COM 3110</td>
<td>Business and Professional Speaking</td>
<td>3</td>
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<td>COM 3120</td>
<td>Organizational Communication</td>
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<tr>
<td>COM 3311</td>
<td>Communication as a Behavioral Science</td>
<td>3</td>
</tr>
<tr>
<td>COM 4941</td>
<td>Internship</td>
<td>3</td>
</tr>
<tr>
<td>PUR 4000</td>
<td>Principles of Public Relations</td>
<td>3</td>
</tr>
<tr>
<td>ADV 4000</td>
<td>Principles of Advertising</td>
<td>3</td>
</tr>
<tr>
<td>SPC 3425</td>
<td>Group Interaction and Decision Making</td>
<td>3</td>
</tr>
<tr>
<td>SPC 3445</td>
<td>Leadership</td>
<td>3</td>
</tr>
<tr>
<td>SPC 4440</td>
<td>Group Dynamics</td>
<td>3</td>
</tr>
</tbody>
</table>

4. Restricted Electives
   Six (6) to Nine (9) credit hours in the School of Communication

5. Electives
   A minimum of 9 upper-division credit hours in one department outside the School of Communication.

Total Semester Hours Required = 120

Bachelor of Arts: Radio-Television

Degree Requirements

1. See Undergraduate Degree Requirements
2. See Special college and/or School requirements. In addition, all students planning a major in radio-television must pass the Typing Proficiency Test (20 wpm) prior to admission to the major. The typing test may be taken ONLY three (3) times and not twice in one semester. Students should see their advisor for details.
3. Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTV 3000</td>
<td>Foundations of Broadcasting</td>
<td>3</td>
</tr>
<tr>
<td>RTV 3200</td>
<td>Broadcast Techniques</td>
<td>4</td>
</tr>
<tr>
<td>RTV 3210</td>
<td>Radio Production</td>
<td>4</td>
</tr>
<tr>
<td>RTV 3260</td>
<td>Electronic Field Production</td>
<td>4</td>
</tr>
<tr>
<td>RTV 3300</td>
<td>Broadcast Newswriting</td>
<td>4</td>
</tr>
<tr>
<td>RTV 3501</td>
<td>Broadcast Copywriting</td>
<td>4</td>
</tr>
<tr>
<td>RTV 4403</td>
<td>Radio/Television and Society</td>
<td>3</td>
</tr>
<tr>
<td>RTV 4700</td>
<td>Broadcast Regulations</td>
<td>3</td>
</tr>
<tr>
<td>RTV 4800</td>
<td>Broadcast Management</td>
<td>3</td>
</tr>
</tbody>
</table>

4. Restricted Electives

- Six credit hours in the School of Communication

5. Electives

**Total Semester Hours Required:** 120

Students are encouraged to work with WUCF radio to gain practical experience. In addition, students should arrange for an internship off campus in a professional broadcast, production, or corporate operation. A maximum of 3 credit hours of internship may be earned in one semester. A total of 6 credit hours of internship may be earned within the 120 credit hours required for graduation. A maximum of 3 credit hours of internship may be counted as a Restricted Elective. Summer internships are available during "C" term only. Students should consult with their advisor for prerequisites and other requirements.

- Prerequisite Grammar Proficiency Examination and Typing Proficiency Test required.

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**Bachelor of Arts: Motion Picture Technology [Film]**

**Limited Access**

Access to this program is based on a selective set of requirements which differ from other School of Communication majors. Students meeting the minimum requirements for admission will be admitted on a space available basis. The basic requirements for admission consideration to the Film program are:

1. An overall 3.0 grade point average based on a minimum of 45 credit hours of college work.
2. Submission of a written essay.
3. Students are required to demonstrate written proficiency in grammar, punctuation and word usage before admission. Testing is conducted prior to the start of each semester.
4. A portfolio or additional information may be submitted.
5. A maximum of three courses in film completed prior to acceptance into the program may be counted toward the major.

**NOTE:** Applications are accepted ONLY once per year. See paragraph on School Admission Application.

**Graduation Requirements**

Students will be required to continue to meet the following minimum standards after acceptance into the Film program:

1. An overall 3.0 grade point average.
2. Juried retention by a faculty committee will be considered when the student has completed ninety (90) credit hours of coursework.

**Degree Requirements**

1. University graduation requirements
2. Special College and/or School requirements
3. Required Courses: Students must select and complete one of the areas of specialization listed below.
4. Restricted Electives (See Area of Specialization)
5. Electives
## Areas of Specialization

1. Required Courses: General Production/Screenwriting  
   (27 credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIL 3100</td>
<td>Writing for the Screen or Writing Scripts</td>
<td>3 hours</td>
</tr>
<tr>
<td>CRW 3410</td>
<td>Writing Scripts</td>
<td>3 hours</td>
</tr>
<tr>
<td>FIL 3200</td>
<td>Beginning Film Production</td>
<td>3 hours</td>
</tr>
<tr>
<td>FIL 3300</td>
<td>Documentary Film</td>
<td>3 hours</td>
</tr>
<tr>
<td>FIL 3400</td>
<td>History of the Motion Picture or</td>
<td>3 hours</td>
</tr>
<tr>
<td>THE 3251</td>
<td>History of the Motion Picture</td>
<td>3 hours</td>
</tr>
<tr>
<td>FIL 3503</td>
<td>Film Theory</td>
<td>3 hours</td>
</tr>
<tr>
<td>FIL 4201</td>
<td>Advanced Film Production</td>
<td>3 hours</td>
</tr>
<tr>
<td>FIL 4600</td>
<td>The Film Producer</td>
<td>3 hours</td>
</tr>
<tr>
<td>FIL 4601</td>
<td>Production Management</td>
<td>3 hours</td>
</tr>
<tr>
<td>FIL 4209</td>
<td>Art Direction</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

Restricted Sequence Electives: Six (6) credit hours FIL courses.

Total Semester Hours Required: 120

2. Required Courses: Animation  
   (27 credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIL 3100</td>
<td>Writing for the Screen or Writing Scripts</td>
<td>3 hours</td>
</tr>
<tr>
<td>CRW 3410</td>
<td>Writing Scripts</td>
<td>3 hours</td>
</tr>
<tr>
<td>FIL 3200</td>
<td>Beginning Film Production</td>
<td>3 hours</td>
</tr>
<tr>
<td>FIL 3242</td>
<td>Film Design</td>
<td>3 hours</td>
</tr>
<tr>
<td>FIL 3400</td>
<td>History of the Motion Picture or</td>
<td>3 hours</td>
</tr>
<tr>
<td>THE 3251</td>
<td>History of the Motion Picture</td>
<td>3 hours</td>
</tr>
<tr>
<td>FIL 3410</td>
<td>History of Animated Films</td>
<td>3 hours</td>
</tr>
<tr>
<td>FIL 4201</td>
<td>Advanced Film Production</td>
<td>3 hours</td>
</tr>
<tr>
<td>FIL 4230</td>
<td>Film Graphics Animation</td>
<td>3 hours</td>
</tr>
<tr>
<td>FIL 4231</td>
<td>Computer Animation</td>
<td>3 hours</td>
</tr>
<tr>
<td>FIL 4942</td>
<td>Animation Workshop</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

Restricted Sequence Electives: Six (6) credit hours FIL courses.

Total Semester Hours Required: 120

A maximum of three (3) credit hours of internship may be earned in one semester. A total of six (6) may be earned within the 120 credit hours required for graduation. Check with your adviser for prerequisites and other requirements.

1Prerequisite Grammar Proficiency Examination required.
COMMUNITY ARTS PROGRAM

The William S. and Alice M. Jenkins Endowed Chair,
Director: K. Congdon, Art Complex, Phone (407) 623-2195.

Minor in Community Arts
A minor, but not a major, in Community Arts is offered for the student who is majoring in Art, Music, Theatre, or English (with a Creative Writing focus), and is interested in helping make the arts more democratic and accessible to everyone. Students minoring in Community Arts conduct studies in culture-based aesthetics, multi-cultural education; art and politics; art and economics; art and mental health; issues regarding ethnicity, class, age and occupation; program development; and the functions and purposes of art establishments in our society.

Requirements:
- ARE 3662 Community Arts I 3 hours
- ARE 3944 Community Arts Practicum 3 hours
Take two of the following:
1. ARE 3663 Community Arts II
2. ARE 3550 Introduction to Art Therapy
3. ARE 3554 Art Therapy Methods
4. ARH 3820 Visual Arts Administration
5. ARH 4821 Methods in Arts Administration
6. ENC 3501 Journal-Writing Practicum
7. Approved courses in Anthropology, Education, Social Work, Sociology, or Psychology.
8. Other Community Arts Classes
   ARE 4945 Community Arts Internship 6 hours
Total Hours 18

Certificate in Community Arts
The Community Arts Program also offers a certificate in Community Arts for undergraduate and post-baccalaureate students for majors in: Art, English, Music and Theatre and majors in: Business, Education, Health Sciences, Liberal Studies, Psychology, Social Work and Sociology (who have at least 12 hours in one of these areas: Art, Creative Writing, Music or Theatre).

Requirements:
- ARE 3662 Community Arts I 3 hours
- ARE 3944 Community Arts Practicum 3 hours
Take two of the following:
1. ARE 3663 Community Arts II
2. ARE 3550 Intro. to Art Therapy
3. ARE 3554 Art Therapy Methods
4. ARH 3820 Visual Arts Administration
5. ARH 4821 Methods in Arts Administration
6. ENC 3501 Journal-Writing Practicum
7. Women and Art in Twentieth Century America
8. 1 to 2 approved courses in education or a related field
9. Other Community Art Classes
   ARE 4945 Community Arts Internship 6 hours
Total Hours 18

For undergraduate students, the certificate is granted at the time of graduation. Some courses may be taken on the graduate level for the post-baccalaureate student.
DEPARTMENT OF COMPUTER SCIENCE
Interim Chair: T. Frederick, CCII 205, Phone (407) 823-2341
Faculty: Bassiouni, Brigham, Chandrasekaran, Chen, Cottrell, Deo, Driscoll, Dutton, Frederick, Gerber, Gomez, Guha, Hua, Hughes, Lang, Leeson, Lindholm, Moshell, Mukherjee, Orooji, Riggs, Shah, Vempaty, Vemulapati, Workman.

The Department of Computer Science offers courses and programs leading to Bachelor of Science, Master of Science (see Graduate Catalog), and Doctor of Philosophy (see Graduate Catalog) degrees in Computer Science. In addition, the Department offers a Computer Science minor for Business Majors, and a general minor in Computer Science.

Computer Science strives to meet the computer personnel needs of the scientific, business, and industrial community by producing graduates with a broad base of formal courses as well as a concentration in selected areas. In addition, the Department conducts research in programming systems/languages, information systems, computer architecture, computational methods, and other areas.

The Department requires that students initiate a request for a review of graduation requirements at the beginning of the anticipated term of graduation. Failure to file the request may delay graduation.

Research Equipment
The Department of Computer Science provides an environment that supports laboratories for the wide variety of research projects carried out by its faculty and students. The hardware infrastructure includes an Ethernet local area network and several large servers, consisting of a Sun 3/280 (to be upgraded to a SparcServer 490), a Harris HCX-9, a VAX 11/780, over eighty terminals, fourteen dialup modems, and a collection of Macintoshes and PC's. Numerous Sun-3 and Sun-4 (Sparc) workstations, a NeXT computer, and a Silicon Graphics Personal Iris are available for research and graduate instruction in computer graphics and image processing. A Hewlett-Packard HP9000 supports graphics research and microprocessor design through its 65000 emulation subsystem. The Center for Parallel Computation houses a BBN Butterfly GP1000 parallel processing computer with 16 processors and a total of 64 Megabytes of memory. The Visual Systems Laboratory contains an Evans and Sutherland ESIG 500 real time image generator, three Silicon Graphics Iris workstations, two Sun SparcStations, a Sun 386i, a NeXT computer, nine transputers, and numerous Macintoshes and PC's. The Intelligent Systems Laboratory provides a Symbolics 3653 LISP machine with three workstations. All major systems run the UNIX operating system. Standard languages such as Ada, C, C++, Concurrent C, FORTRAN, Lisp, Pascal and Prolog are supported. All of the department's computers are interconnected by Ethernet and linked to the outside world via SURAnet (the Southeast Regional component of NSFnet), affording real-time Internet access to research systems off-campus.

Computer Center
The Computer Center maintains and operates equipment used for both instruction and research, including an IBM 4381 Group 2 with 32 Megabytes of memory and 10 Gigabytes of disk storage, running the VM/CMS operating system. Over 150 IBM 3176, 3278, and 3279 terminals are used to access the mainframe. Additionally, over 400 IBM PS/2's, PC's, XT's, and AT's interconnected by a Novell network are available for student and faculty use. Separate faculty facilities exist. A Macintosh lab with Macintosh II's and assorted peripherals is also available.

Super Computations Research Institute
The Florida Information Resource Network (FIRN) provides additional mainframe resources including the CRAY Y-MP supercomputer for scientific research. Thirty-five percent of the supercomputer's time is open to any Florida university researcher whose project is approved by the Supercomputer Computations Research Institute.

MINORS
The Department of Computer Science offers the following minors consisting of a minimum of 18 semester hours in each minor. A minimum GPA of 2.00 is required in all courses used to satisfy the requirements for the minor in computer science, and at least three courses must be taken from the UCF Department of Computer Science.
1. Computer Science Minor for Business Majors
   Required courses (15 hours): CGS 3000, 3100, 3262, 3300, COP 3120.
   Restricted electives (3 hours minimum): ACG 3401, ACG 5346, CIS 4321, COP 2500, 2501, 3200, 3400, 4710, ECO 4412, FIN 3453, MAC 3233, 3311, 3312, 3313, MAN 4722, 4724, MAR 3613, MAS 3113, STA 4102, 4163.

2. General Computer Science Minor
   Required courses (12 hours): COP 2500, 2501, 3400, 3530.
   Restricted electives (6 hours minimum): COP 3402, 4020, 4124, 4600, 4710, COT 3100, 4500.

Bachelor of Science: Computer Science

Degree Requirements
1. A four-semester-hour Biology course with a laboratory is required, and this requirement is to be satisfied by BSC 1020C, BSC 1030C or BSC 2010C.
2. GPA Requirements
   a. A minimum GPA of 2.0 in all course work;
   b. A minimum grade of “C” in each required course (these courses are those in Section 4 below);
   c. A minimum GPA of 2.5 in upper division required courses (these courses are listed in Section 4.II below). Only the highest grade for a course is used in determining this GPA requirement.
3. Departmental Residency Requirement: At least eighteen semester hours of regularly scheduled 4000- and 5000-level courses must be taken from the UCF Computer Science Department.
4. Required courses:
   I. COMPUTER SCIENCE CORE:
      COP 2500  Computer Science I  3 hours
      COP 2501  Computer Science II  3 hours
      COP 3400  Assembly Language  3 hours
      COP 3402  Computer Systems Concepts/Programming  3 hours
      COT 3100  Introduction to Discrete Structures  3 hours
      COP 3530  Computer Science III  3 hours
      Support Courses
      MAC 3311  Calculus with Analytic Geometry I  4 hours
      MAC 3312  Calculus with Analytic Geometry II  4 hours
      STA 3023  Statistical Methods I  3 hours
      PHY 3048  Physics for Engineers & Scientists I  3 hours
      PHY 3049  Physics for Engineers & Scientists II  3 hours
      PHY 3049L  Physics for Engineers & Scientists Lab. II  1 hour
      EEL 3341C  Introduction to Digital Circuits  3 hours
      ENC 3241  Technical Report Writing  3 hours
   II. UPPER DIVISION REQUIRED COURSES:
      CDA 4150  Introduction to Computer Architecture  3 hours
      COP 4210  Discrete Computational Structures  3 hours
      COP 4020  Programming Languages I  3 hours
      COP 4600  Programming Systems  3 hours
   III. RESTRICTED ELECTIVES  16 hours
      a. At least ten hours of computer science courses, of which at most four hours can be independent study.
      b. At least four hours of mathematics and/or statistics for majors of the respective departments exclusive of independent study.
      Course work must be selected from 4000- and 5000-level courses in computer science, mathematics and/or statistics and the following courses: MAC 3313, MHF 3104, ACG 2023, MAN 3025, MAP 3302, MAR 3023, FIN 3403, MAN 3301, EEL 4701C, MAS 3105 or 3106
5. Electives
   Total Semester Hours Required  120
Bachelor of Arts: Economics

Contact Person: J. Boyle, FA 208, Phone (407) 823-2492

The Bachelor of Arts Program is designed to permit flexibility in course selection to the Economics major not planning a career in business. Although all economics courses are offered and administered by the College of Business Administration, they are available to students majoring in economics in the College of Arts and Sciences. Successful completion of this program leads to the Bachelor of Arts degree with a major in Economics.

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required courses
   - ECO 2013 Principles of Economics I 3 hours
   - ECO 2023 Principles of Economics II 3 hours
   - ECO 3101 Intermediate Price Theory 3 hours
   - ECO 3203 Aggregate Economic Conditions Analysis 3 hours
   - ECO 3411 Quantitative Methods and Business Analysis 3 hours
4.Restricted Electives
   a. Select Six Courses:
      - ECO 3703 International Economics 3 hours
      - ECO 3930 Independent Study 3 hours
      - ECO 4224 Money: Issues and Analysis 3 hours
      - ECO 4303 History of Economic Thought 3 hours
      - ECO 4412 Economic Statistics and Econometrics 3 hours
      - ECO 4504 Economics of the Public Sector 3 hours
      - ECP 3203 Contemporary Labor Economics 3 hours
      - ECP 3424 The Economics of Regulated Industries 3 hours
      - ECP 3433 Transportation Economics 3 hours
      - ECP 4403 Business, Government & Industrial Organization 3 hours
      - ECP 4603 Urban and Regional Economic Problems 3 hours
      - ECP 4703 Managerial Economics 3 hours
      - ECS 4003 Comparative Economic Systems 3 hours
      - ECS 4013 Economic Development 3 hours
   b. Twenty-seven hours of additional courses, including the completion of a minor from one of the following areas: Computer Science, Mathematics, Statistics, or the Social and Behavioral Sciences.
5. Electives

Total Semester Hours Required 120

DEPARTMENT OF ENGLISH

Chair: J. Schell, FA 452, Phone (407) 823-2212
Faculty: Adicks, Astro, Barnes, Becker, Brain, Deane, Donnelly, George, Haile, Hemschemeyer, Higgins-Young, Jaffe, Jones, Keller, Murray, Omans, Price, Regier, Rushin, Schiffhorst, Seidel, Smith, Sommer, Stap, Strasshofer, Umphrey, Wyatt

The Department of English is responsible for the effective teaching of language and literature in English, including World Literature, and creative, expository, and technical writing. Students may concentrate in creative writing, technical writing, literature or linguistics. The Department serves the broad needs of the University with course offerings in writing and literature for students from other departments. The department has a Technical Documentation Writing Lab and also publishes The Florida Review.

An Honors in English program provides an enriched course of study for exceptional students, leading to graduation with honors. Program description follows concentration degree plans.

Only courses with a grade of "C" or better may be applied to the English Major and Minor.
The Department of English offers the following minors:

Creative Writing Minor: 21 semester hours. Required courses: CRW 3000, CRW 2100 or CRW 2300, CRW 3010, CRW 3011. 9 remaining hours to be chosen from CRW 3410, CRW 4940, CRW 4041, CRW 3310, CRW 3410.

Literature Minor: 21 semester hours with no fewer than 12 completed at UCF. Requirements: 12 semester hours selected from ENL 3031, ENL 3051, AML 3031, AML 3051, LIT 3110, 3120. 9 additional semester hours of English courses chosen by the student and advisor.

Linguistics Minor: 18 semester hours. Required courses: LIN 3010, LIN 4100, LIN 4341. 9 remaining hours to be chosen from LIN 4202, LIN 4612, LIN 4801, LIN 4660, LIN 5137, ANT 3610, PHI 4220, or any course approved by the Linguistics Committee.

Technical Writing and Editing Minor: 22 semester hours, as follows: ENC 2290, 3210 or 3241, 3310, 3311 or 3341, 3311, 4215, 4293, 4294, 4295. Students completing the minor may intern with a Central Florida corporation.

Bachelor of Arts: English

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special College and/or department requirements
3. Required courses
   Foundation (for all concentrations)
   Choose three of the following four:
   
   LIT 3000  Introduction to Literary Interpretation  3 hours
   CRW 2000  Introduction to Creative Writing  3 hours
   ENC 3211  Introduction to Technical Writing  3 hours
   LIN 3010  Introduction to Linguistics  3 hours

   Choose three of the following four:
   
   ENL 3031  English Literature I  3 hours
   ENL 3051  English Literature II  3 hours
   AML 3031  American Literature I  3 hours
   AML 3051  American Literature II  3 hours

4. Restricted Electives
   (See Literature, Creative Writing, Technical Writing, and Linguistic concentrations below.)

5. Electives
   To be selected primarily from upper level courses with advisor’s approval.

Total Semester Hours Required 120

CONCENTRATIONS
1. Literature
   Required (9 hours)
   
   ENL 4311  Chaucer  3 hours
   or
   ENL 4341  Milton  3 hours
   ENL 4330  Shakespeare  3 hours
   LIN 4100  History of the English Language  3 hours
   or
   LIN 4341  Modern English Grammar  3 hours
   
   Choose 12 hours from the 3000 or 4000 level courses offered under AML, ENL, and LIT prefixes.

2. Creative Writing
   Choose Two (6 hours)
   
   CRW 3100  Fiction Writing  3 hours
   CRW 3300  Poetry Writing  3 hours
   ENC 3310  Magazine Writing  3 hours
   CRW 3410  Script Writing  3 hours

   Choose Two (6 hours)
   
   CRW 4120  Advanced Fiction Writing Workshop  3 hours
   CRW 4320  Advanced Poetry Writing Workshop  3 hours
   CRW 4410  Advanced Script Writing Workshop  3 hours
Choose One (3 hours)
CRW 3310  Structure of Verse
CRW 4172  History of Prose Style
CRW 3008  Literary Magazines

Choose Two (6 hours)
ENL 4311  Chaucer
ENL 4330  Shakespeare
ENL 4341  Milton and His Age
LIN 4100  History of the English Language
LIN 4341  Modern English Grammar

3. Technical Writing
Required (Basic) (4 hours)
ENC 2290  Careers in Writing 1 hour
ENC 3311  Advanced Expository Writing 3 hours

Required (Advanced) (21 hours)
ENC 4293  Technical Documentation I 3 hours
ENC 4294  Technical Documentation II 3 hours
ENC 4295  Technical Documentation III 3 hours
ENC 4215  Techniques of Technical Publication 3 hours
LIT 4433  Survey of Technical and Scientific Literature 3 hours
ENC 4218  Graphics Capabilities 3 hours
ENC 4280  Technical Vocabulary 3 hours

Choose One (3 hours)
ENC 3330  Rhetoric and Organization 3 hours
ENC 3283  Science and the Lay Reader 3 hours
ENC 4254  Technical Writing and the Uses of Imagination 3 hours

Optional
ENC 4941  Technical Writing and Editing Internship 3 hours

4. Linguistics:
Choose Three (9 hours)
LIN 4100  History of the English Language 3 hours
LIN 4202  Phonetics 3 hours
LIN 4341  Modern English Grammar 3 hours
LIN 4440  Sounds and Forms of Language 3 hours
LIN 4801  Language and Meaning 3 hours

Choose Four, including at least two additional from the above list or from List A (12 hours)

List A
LIN 4612  Black English 3 hours
LIN 4660  Linguistics and Literature 3 hours
LIN 5137  Linguistics 3 hours
LIN 3610  Language and Culture 3 hours

List B
LIN 4712  Normal Language Development 3 hours
LIN 5705  Psycholinguistics 3 hours
PHI 4220  Philosophy of Language 3 hours
SPC 4330  Non-Verbal Communication 3 hours

Honors In English
Requirements:
1) Application and admission through the English Honors Coordinator;
2) Fulfill University requirements for Honors in the Major;
3) Grade of "B" or better in Honors Seminar (3 hours), Bibliography and Research Methods (1 hour), one 5000 level English elective (3 hours), and Directed Readings (3 hours). (Honors Seminar and Directed Readings substitute for one restricted elective and one English core course);
4) Successful completion and oral defense of honors thesis.
Language studies in the College of Arts and Sciences provide instruction in Chinese, French, German, Hebrew, Italian, Japanese, Latin, Russian, and Spanish, with majors in French and Spanish. These programs are designed to meet the needs of students who desire competency in a language and expanded understanding of a foreign culture and literature. Students enrolled in 1000, 2000, and certain 3000-level courses are required to attend the language laboratory for at least one hour a week.

Students wishing to major in a foreign language must meet all the requirements for graduation as set forth by the University, the College of Arts and Sciences, and by the Department of Foreign Languages. They must complete 30 semester hours in the chosen language at the 3000 level or above. Among these 30 semester hours they must take courses numbered 3241 (SPN), 3244 (FRE), 3420, 3100, and 3101. Non-native French majors must also take FRE 4780 (French Phonetics and Diction) or the overseas summer course FRE 3955 (Corrective Phonetics and Vocabulary Building). Students interested in a combined major must take courses numbered 3241 (SPN), 3244 (FRE), 3420, 3100, and 3101 in both languages, plus an additional 15 hours in the primary language and an additional 6 hours in the secondary language for a total of 45 semester hours. This total must include FRE 4780 (French Phonetics and Diction) or FRE 3955 (Corrective Phonetics and Vocabulary Building).

Normal placement is as follows: Four years of one high school language would place the student in the first semester of the third year; three years, in the second semester of the second year; two years in the first semester of the second year; one year in the second semester of the first year.

A native or near-native speaker must substitute an alternate upper-division Spanish and French course for the conversation course (3241 (SPN) - 3244 (FRE)). Also, a native or near-native French speaker must substitute an alternate upper-division French course for FRE 4780 (French Phonetics and Diction) or FRE 3955 (Corrective Phonetics & Vocabulary Building). In cases where native speakers have received advanced education abroad, they will not be permitted to take the composition course (3420) for the fulfillment of their major requirements but must substitute another literature course chosen in consultation with advisors in the department.

Language Credit by Examination will not be given in courses lower in level than that in which students are presently enrolled. Native speakers will be allowed Credit by Examination only in literature courses.

Foreign Language State Teacher Certification may be obtained through the Department of Foreign Languages. The Certificate qualifies students to teach foreign languages at the elementary or high school levels.

MINORS
The Department of Foreign Languages offers a minor consisting of 18 semester hours in French, German, Italian, Russian, or Spanish.

Required courses: 18 semester hours at the 3000 level or above in one language including the courses numbered 3241 (SPN), 3244 (FRE), 3240 (GER), and 3420.

PLACEMENT AND PROFICIENCY
The Foreign Language Proficiency Requirement for the B.S. degree can be satisfied by passing the proficiency exam, or by completing the foreign language 1121 course; the B.A. degree requirement can be satisfied by passing the proficiency exam or by completing the foreign language 2200 course.

The following is a list of courses students can take to satisfy the proficiency-level foreign language requirement.

F.L. 1118 Review (2 hours credit). This course is designed to review principal grammatical and vocabulary content that students generally obtain in a one-year high school course, and is limited to students pursuing a language that they have been exposed to in the past (at least two years prior to entry at U.C.F.). Only an "S" (Satisfactory) or "U" (Unsatisfactory) grade is granted for this course.

F.L. 1120. This course is designed for students taking the foreign language for the first
time. Students who have had one year or more of that foreign language within two years prior to admission are excluded from this course; students receiving an "S" in F.L. 1118 are also excluded.

F.L. 1121. This course is designed to finalize the proficiency requirement for the B.S. and to prepare for entry into F.L. 2200. Admission requirement: an "S" in 1118, or a grade of "C" in F.L. 1120, or passing the placement exam. Students entering the course by passing the placement/credit-by-exam and receiving a "C" or better in the course may receive back credit for graduation (4 credits for 1120). Back credit for F.L. 1120 is excluded for those students entering this course with the "S" grade in F.L. 1118.

F.L. 2200. Course is designed to complete the B.A. degree foreign language proficiency requirement: admission—successful placement/credit-by-exam; a grade of "C" or better in F.L. 1121. The student who enters this course by the placement/credit-by-exam and receives a "C" or above in the course may receive back credit for graduation for F.L. 1121.

All students may elect to satisfy the proficiency-level F.L. requirement at any time during the course; if successful they may elect to withdraw from the course without receiving credit towards graduation, even though they will have satisfied the Foreign Language Proficiency requirement.

Bachelor of Arts: French or Spanish

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required courses for French or Spanish Major
   3244 (FRE), 3241 (SPN) Conversation 3 hours
   3420 Composition 3 hours
   3100 Survey of Literature I 3 hours
   3101 Survey of Literature II 3 hours
   or
   3130 Survey of Latin-American Lit. I 3 hours
   3131 Survey of Latin-American Lit. II 3 hours
   French Majors
   FRE 4780 French Phonetics and Diction 3 hours
   or
   FRE 3955 Corrective Phonetics & Vocabulary Building 3 hours
4. Restricted Electives
   Students are also required to choose two of the following:
   LIN 4100 History of the English Language 3 hours
   LIN 4341 Modern English Grammar 3 hours
   LIN 3010 Principles of Linguistics 3 hours
5. Electives
   Total Semester Hours Required 120

Bachelor of Arts: Foreign Language Combination

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses for Combined Major in Foreign Languages
   3244 (FRE), 3241 (SPN) Conversation 3 hours
   3420 Composition 3 hours
   3100 Survey of Literature I 3 hours
   3101 Survey of Literature II 3 hours
   FRE 4780 French Phonetics and Diction 3 hours
   or
   FRE 3955 Corrective Phonetics & Vocabulary Building 3 hours
4. Restricted Electives
   15 credits in first language
   6 credits in second language
Students are required to choose two of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIN 4100</td>
<td>History of the English Language</td>
<td>3</td>
</tr>
<tr>
<td>LIN 4341</td>
<td>Modern English Grammar</td>
<td>3</td>
</tr>
<tr>
<td>LIN 3010</td>
<td>Principles of Linguistics</td>
<td>3</td>
</tr>
</tbody>
</table>

5. Electives

Total Semester Hours Required 120

SUMMER STUDY ABROAD PROGRAMS

The Department of Foreign Languages has been offering a Summer Study program in Spain since 1972, in Italy since 1975, and one in France since 1981. These programs are approved by the Board of Regents and are expected to be offered annually. Credit bearing courses are available in these programs in language (all levels), art, and civilization of France, Italy, or Spain. These programs are open to all students of the State University System of Florida.

Jena, Germany

Courses in German language and civilization are offered at all levels. Students are housed at the Jena University campus and have an opportunity to visit other cities of importance in Germany.

Leningrad, USSR

This program is offered in cooperation with the Hertzen Pedagogical Institute of Leningrad. Courses in Russian art and language and civilization are offered at all levels. Visits to points of historical and cultural interest in Leningrad and Moscow will be made.

Madrid, Spain

This program is intended for students who wish to begin or continue their study of Spanish language and civilization. Language courses will be offered from the beginning level to the advanced. Business Spanish, Art of Spain and Contemporary Spanish history will also be offered. In addition, students will have an opportunity to visit major points of cultural and artistic interest of Spain.

Urbino, Italy

The city of Urbino, on the slopes of the Eastern Appennines, is one of the major centers for the study of Renaissance art and architecture. The modern university sponsors a number of conventions of learned societies and cultural events in the summer. Courses in Renaissance art and modern Italian history are given in English; language courses are conducted in Italian.

Jonquiere, Quebec

Jonquière is a clean and modern city of 60,000 in the picturesque Lac Saint-Jean region, about 150 miles north of Quebec City. Students live with French-speaking families, receive 5 hrs. of classroom instruction in French each weekday, and pledge to use French only at all times during the program. Educational week-end excursions and a number of socio-cultural activities are included.

AREA OF SPECIALIZATION

1. Latin American Studies. The minor in Latin American Area Studies offers a broad interdisciplinary approach to the understanding of Latin America and its peoples. The minor requires the completion of 18 semester hours selected from courses listed in the General Latin American Foundation Areas. In addition, students must complete the introductory language sequence (or its equivalent) in French or Spanish. For information, consult Professor Jose B. Fernandez, FA 551, (407) 823-2224.

2. Soviet Area Studies. The College of Arts and Sciences offers an academic minor in Soviet Area Studies. Five UCF departments, Foreign Languages, History, Political Science, Sociology, and Philosophy and Humanities, have pooled their resources in order to offer students a multidisciplinary approach so as to understand linguistic, cultural, historical, political, and socio-economic interrelationships. Interested students should register for the minor with Dr. Barsch, (407) 823-2472.
DEPARTMENT OF HISTORY
Acting Chair: Richard C. Crepeau, FA 551-B, Phone (407) 823-2224
Faculty: Coibourn, Evans, Fernandez, Fetscher, Greenhaw, Kallina, Leckie, Pauley, Shofner, Wehr

Students majoring in history must complete a minimum of 36 hours in history courses. At least 6 hours must be selected from each of three different geographical areas, such as: United States, Europe, Asia, or Latin America. Grades of "D" or below may not be counted toward the major.

History majors who are interested in a pre-law program should work closely with their advisors in selecting major courses and electives which will best prepare them for law school. These students should use their electives for additional courses in history as well as English, speech, and philosophy. Such a course of study will prepare them for success in law school and will concomitantly provide a broad liberal education.

Latin American Studies: The History Department participates in the Latin American Studies program. Consult Dr. Jose B. Fernandez for information.

MINOR
The Department of History offers a minor consisting of a minimum of 18 semester hours.

Required courses: 18 semester hours of history, twelve of which must be at the 3000-4000 level. Specific courses must be selected in conference with a departmental advisor.

Bachelor of Arts: History
Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses
   None
4. Restricted Electives
   None
5. Electives
   To be selected with approval of the student’s advisor

Total Semester Hours Required 120

AREA OF SPECIALIZATION
1. Soviet Area Studies. The History Department participates in the Soviet Area Program. For information consult with Dr. John Evans.

JUDAIC STUDIES PROGRAM
Director: Moshe Pelli; FA 550, Phone (407) 823-5039 or 823-2251

The Interdisciplinary Program in Judaic Studies offers both a Minor and a Certificate (but not a major). The Program cooperates with the departments of English, Foreign Languages, History, Philosophy and Humanities, Political Sciences, and Sociology/Anthropology.

The program offers instruction, conducts research, and disseminates knowledge in the civilization of the Jewish people from Biblical times to the present day in the major dimensions of its creativity: literature, language, religion, philosophy, law, and social, political and economic organization. Because the roots of western culture and civilization and major world religions lie in ancient Jewish thought and practice as manifested in the Hebrew Bible and subsequent writings, Jewish Studies form an essential component of the university curricula.

The program is designed to serve students pursuing careers in general or Jewish education, in international and Middle-Eastern affairs, in languages or liberal arts, in the ministry or rabbinate, and the community at large.

The minor requires the completion of 18-upper-division credit hours in Jewish History (JST 3401, 3402, 3550), literature, such as HBR 3930 (Literature of the National Renaissance), HBT 3600 (Israeli Short Story), JST 3100 (Survey of Jewish Literature), JST 3751 (Literature of the Holocaust), LIT 4373 (Literature of the Bible), the Hebrew Bible (JST 3200 Introduction to Hebrew Scriptures), and culture, such as JST 3820 (Modern Hebrew Culture) JST 3810 (the Jewish National Movement), and JST 3550 (Introduction to Modern
Judaism). In addition, students must complete the lower-division one year of Introductory Hebrew (HBR 1120, 1121). Hebrew language courses satisfy foreign language requirements.

See listings and courses under HBR, HBT, HMW, JST, and REL, and cross-listed courses in the Departments of Foreign Languages and Philosophy and Humanities.

**Latin American Area Studies**

The minor in Latin American Area Studies offers a broad interdisciplinary approach to the understanding of Latin America and its peoples. The minor requires the completion of 18 semester hours selected from courses listed in the General Latin American Foundation Areas. In addition, students must complete the introductory language sequence (or its equivalent) in French or Spanish. For information contact Professor Jose B. Fernandez, FA 551, (407) 823-2224.

**DEPARTMENT OF MATHEMATICS**

**Chair:** L. Debnath, CC II 221, Phone (407) 823-6284

**Faculty:** Andrews, Anthony, Armstrong, Brigham, Caron, Debnath, Eves, Heinzer, Hurst, Jones, Mikusinski, Mohapatra, Norman, Pettofrezzo, Phillips, Rautenstrauch, Richardson, Rodriguez, Rollins, Salzmann, Sinkala, Sherwood, Shivamoggi, Taylor, Vajravelu, Verma

The Department of Mathematics offers courses and programs which lead to a Bachelor of Science in Mathematics, a minor in mathematics and a Master of Science in Mathematical Science. (See the Graduate Studies catalog for a description of the M.S. in Mathematical Science.)

The programs in mathematics are designed to serve (1) students who wish to pursue careers in mathematics after having completed a baccalaureate degree; (2) students who wish to continue their education in graduate and professional schools; and (3) students who need to use mathematics as a tool in their specialty areas.

In order to serve such a wide variety of students, the courses and programs in the Department of Mathematics have developed along several lines. There are the usual service courses in precalculus and calculus along with strong programs in the upper division in the traditional areas of algebra and analysis and applied mathematics.

A limited number of student assistantships are available for qualified graduate and undergraduate students.

**HONORS COURSES**

Currently, the Department of Mathematics offers a special sequence of Calculus courses for students in the Honors Program. These are listed as MAC 3311H, MAC 3312H, and MAC 3313H. The topics are the same as the regular calculus sequence, but students will be expected to place more emphasis on the development and structure of the mathematics.

**MINOR**

The Department of Mathematics offers the following minor consisting of a minimum of 21 hours.

- Required Courses: MAC 3311, 3312, 3313, MAP 3302.
- (MAC 3311 and 3312 may be waived by the Department Standards Committee for a student with adequate high school preparation in calculus.)

Restricted Electives: A minimum of two courses selected from MHF 2300, MAA courses, MAD courses, MAP courses, MAS courses, or MTG courses. (Either MAS 3105 or MAS 3106 may be used but not both. Courses may be selected from MAA 4226, 4227, or MAA 5211 but not both.) These two courses must be taken from the Department of Mathematics at UCF.

**Bachelor of Science: Mathematics**

**Degree Requirements**

1. See Undergraduate Degree Requirements
2. See special college and/or department requirements

All mathematics courses except for MAC 3311, 3312, 3313, and MAP 3302 must either be taken from the Department of Mathematics at UCF or must be approved by the Mathematics Department Standards Committee. The Department suggests that students
consider taking MAS 3105 (Matrices) before taking MAS 3106 (Linear Algebra). The Matrices course will then be used as an elective.

3. One course selected from

- ENC 3241 Technical Report Writing (3 hours)
- ENC 3310 Magazine Writing (3 hours)
- ENC 3311 Advanced Expository Writing (3 hours)

4. AREA OF SPECIALIZATION

a. Mathematics Option

**Required Courses**

<table>
<thead>
<tr>
<th>1st Year Sequence</th>
<th>2nd Year Sequence</th>
<th>3rd Year Sequence</th>
<th>4th Year Sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAC 3311 Calculus I (F)</td>
<td>MAC 3313 Calculus III (F)</td>
<td>MAD 4203 Combinatorics and Graph Theory (F)</td>
<td>MAA 4226 Advanced Calculus I (F)</td>
</tr>
<tr>
<td>STA 3023 Statistical Methods I (F)</td>
<td>MAS 3105 Elementary Linear and Matrix Algebra</td>
<td>MAP 4363 Applied Boundary Values I (F)</td>
<td>MAA 4227 Advanced Calculus II (Sp)</td>
</tr>
<tr>
<td>MAC 3312 Calculus II (Sp)</td>
<td>PHY 3048 Physics for Engineers &amp; Scientists I (F)</td>
<td>STA 4321 Statistical Theory I (F)</td>
<td>MTG 4302 Introduction to Topology (Sp)</td>
</tr>
<tr>
<td>MHF 2300 Logic and Proof (Sp)</td>
<td>PHY 3048L Physics Lab I (F)</td>
<td>COP 2500 Programming I (F)</td>
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</tr>
<tr>
<td>BSC 2010 General Biology (Sp)</td>
<td>MAP 3302 Differential Equations (Sp)</td>
<td>MAS 4301 Algebraic Structures (Sp)</td>
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</tr>
<tr>
<td>PHY 3049 Physics for Engineers &amp; Scientists II (Sp)</td>
<td>MAS 3106 Linear Algebra (Sp)</td>
<td>PHY 3049L Physics Lab II (Sp)</td>
<td></td>
</tr>
</tbody>
</table>

A minimum of 8 hours selected from upper-division or graduate mathematics or statistics courses from COT 4500, COT 5510, COT 4210 or ENG 4634. (MAC 3233, 3253, 3254, MAE 3817 and MAA 5211 may not be used.) One additional course in either the biological or physical sciences must be taken. This course must be approved by the Department Standards Committee.

b. Applied Mathematics Option

<table>
<thead>
<tr>
<th>1st Year Sequence</th>
<th>2nd Year Sequence</th>
<th>3rd Year Sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAC 3311 Calculus I (F)</td>
<td>MAC 3313 Calculus III (F)</td>
<td>MAD 4203 Combinatorics &amp; Graph Theory (F)</td>
</tr>
<tr>
<td>STA 3023 Statistical Methods I (F)</td>
<td>MAS 3105 Elementary Linear and Matrix Algebra</td>
<td>or</td>
</tr>
<tr>
<td>MAC 3312 Calculus II (Sp)</td>
<td>PHY 3048 Physics for Engineers &amp; Scientists I (F)</td>
<td>or</td>
</tr>
<tr>
<td>MHF 2300 Logic and Proof (Sp)</td>
<td>PHY 3048L Physics Lab I (F)</td>
<td></td>
</tr>
<tr>
<td>BSC 2010 General Biology (Sp)</td>
<td>MAP 3302 Differential Equations (Sp)</td>
<td></td>
</tr>
<tr>
<td>PHY 3049 Physics for Engineers &amp; Scientists II (Sp)</td>
<td>MAS 3106 Linear Algebra (Sp)</td>
<td></td>
</tr>
<tr>
<td>PHY 3049L Physics Lab II (Sp)</td>
<td>PHY 3049 Physics for Engineers &amp; Scientists II (Sp)</td>
<td></td>
</tr>
</tbody>
</table>

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**DEPARTMENT OF MUSIC**

**Acting Chair:** E. Hotaling, FA 105A, Phone (407) 823-2869  
**Assistant Chair:** J. Gardner  
**Faculty:** Brunner, Eubank, Farina, Gardner, Greenwood, Koons, Lesko, Pickering, Roney, Sung, Whisler, Whitney, Wolf, Wrancher.  
**Part-time Faculty:** Becker, Bishop, Markstein, A. Mascaro, J. Mascaro, McQuinn, Micarelli, Patton, Pech, Radock, Schwab, Threatte.

The Department of Music offers a Bachelor of Arts degree with options in performance and piano pedagogy; A Bachelor of Arts Degree in performance; and a Bachelor of Music Education Degree in instrumental, choral and elementary school music.

The Music Department is fully accredited by the National Association of Schools of Music.

Music organizations on campus include Pi Kappa Lambda, Phi Mu Alpha, Sigma Alpha Iota, Tau Beta Sigma, Kappa Kappa Psi, University Vocal Society, Gospel Choir, and a Student Chapter of Music Educators National Conference.

**SPECIAL MUSIC MAJOR ENTRANCE REQUIREMENTS**

In order to be accepted as a music or music education major, the student must perform an audition. Each student must demonstrate an advanced level of proficiency by performing compositions representing a variety of musical periods. Memorization is required for pianists and vocalists. Accompanists will be furnished only upon request prior to the audition. Each candidate must bring music for the compositions he or she intends to perform. The College will provide large instruments such as the tuba, string bass, or tympani for these auditions. All smaller instruments must be brought to the University. The audition will serve as a placement examination for accepted candidates.

**K-12 Certification**

The Music Education programs are approved by the Florida State Department of Education. Students who wish to be certified to teach in elementary and secondary schools should consider a major in Music Education. Courses leading to teacher certification are offered cooperatively with the College of Education. A reciprocal certification arrangement is in effect with approximately 30 other states, with reciprocal certification pending in other states. In addition, a Master of Arts and a Master of Education degree in Music Education is offered by the College of Education.

As a prerequisite to formal admission to the State Approved Program of Teacher Education students must:
1. score at or above the 40th percentile of all college-bound persons tested on the American College Testing Program (ACT, score 17) or the Scholastic Aptitude Test (SAT, score 835) and have this score reported as part of their official academic record
2. have an overall G.P.A. of 2.5
3. have satisfactorily completed EDG 4321 (Teaching Strategies)
4. have passed the College Level Academic Skills Test (CLAST)
5. submit a formal junior student teaching application to the College of Education Student Internships Office. Must meet the College of Education’s requirements for admission to Junior and Senior Year Student Teaching.
Since July 1, 1980, all applicants for a teaching certificate in Florida must pass a written competency examination administered by the Florida State Department of Education.
Since July 1, 1982, all applicants for their First Regular Florida Teaching Certificate must satisfy requirements of the Florida Beginning Teacher Program.

COMPREHENSIVE EXAMINATIONS
Comprehensive examinations in Music Theory and Music History should be taken by students during their junior year. Ear-training, sight-singing, part-writing, and visual analysis examinations will be offered during the fall semester; the music history examination will be offered during the spring. [See policy regarding recitals and student teaching.]

POLICY REGARDING MAJOR ENSEMBLE PARTICIPATION
1. In order to graduate, music majors with a performance specialization must spread their required 8 semester hours of major ensemble credit over at least 8 separate semesters; music majors with a liberal arts specialization must spread their required 6 semester hours of major and/or minor ensemble credit over at least 6 separate semesters; music education majors must spread their required 7 semester hours of minor ensemble credit over at least 7 separate semesters.
2. The following ensembles are defined as major ensembles: chorus, symphony orchestra, concert band, marching band, and wind ensemble.
3. Vocal music education majors may elect to substitute 1 hour of band or orchestra or 1 hour of the minor ensemble requirement, provided they have sufficient facility on an appropriate instrument.
4. Assignment to major ensembles will be made by the ensemble directors.
5. Undergraduate students taking a course in Performance must take concurrently a major ensemble appropriate to their principal instrument.

**POLICY REGARDING MINOR ENSEMBLE PARTICIPATION**

1. In order to graduate, music majors with a performance specialization must spread their required 4 semester hours of minor ensemble credit over at least 3 separate semesters; music majors with a liberal arts specialization must spread their required 6 semester hours of major and/or minor ensemble credit over at least 6 separate semesters; music education majors must spread their required 4 semester hours of minor ensemble credit over at least 3 separate semesters.
2. The following ensembles are defined as *minor* ensembles: Brass Ensembles, Percussion Ensembles, Piano Ensembles, String Ensembles, Vocal Ensembles (except Opera Workshop), Woodwind Ensembles, Jazz Lab.

**POLICY REGARDING RECITALS AND STUDENT TEACHING**

Music and Music Education students must complete all but one of the following proficiency examinations before they will be permitted to audition for their senior recital and/or do their senior student teaching: music history, piano, sight-singing, ear training, and music theory. Music Education students may not give their required recital during the semester of their senior student teaching.

**MINOR**

The Department of Music offers a Minor in Music. The requirements are as follows:

1. A successful audition on the student’s principal instrument or voice.
2. A minimum of 21 semester hours credit to include the following or their equivalent: MUT 1111, MUT 1112 (4 hours); MUT 1241, MUT 1242 (2 hours); MUL 2010 (3 hours); major ensemble credit spread over at least 4 separate semesters (4 hours); 2 semesters of performance level I (4 hours) and 2 semesters of performance level II (4 hours) on the same performance medium.
3. A minimum of 11 semester hours of these required courses, including two semesters of a major performing organization and two semesters of Performance Level II, must be completed at UCF.
4. Successful completion of 4 semesters of Music Forum (Mus 1010).
5. A GPA of 2.0 is required for all music courses attempted, whether used to fulfill these requirements or not.

**CERTIFICATE PROGRAM IN RECORDING**

Students pursuing a music degree may obtain a Certificate in Recording by taking the following courses, which are offered in conjunction with Full Sail Center for the Recording Arts:

- Sophomore Practicum in Recording Arts—Introduction to Recording Arts, Recording Engineering, MIDI 8 Semester Hours
- Junior Practicum in Recording Arts—Sound Reinforcement and Concert Lighting, Tapeless Studio, Video 10 Semester Hours
- Senior Practicum in Recording Arts—Music Business, Advanced Recording, Maintenance and Troubleshooting 10 Semester Hours
- A recording internship offered by the Music Department 2 Semester Hours

Total course work specified for certificate: 30 Semester Hours

Normally, the practicum courses will be scheduled during the summer sessions after the first, second, and third years of the major. Students who pursue the Bachelor of Arts Degree should normally be able to complete the degree and Certificate requirements in three years.

Students must pay UCF all normal fees required for the number of credit hours for which they register. In addition, they must pay directly to Full Sail its appropriate fees for the 28 semester hours of course work undertaken there.
Bachelor of Music: Performance

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses [both specializations]
   
<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 1010</td>
<td>Music Forum (8 semesters)</td>
<td>0 hours</td>
</tr>
<tr>
<td>MUT 1111, 1112, 2116, 2117, 3561</td>
<td>Music Theory</td>
<td>10 hours</td>
</tr>
<tr>
<td>MUT 1241, 1242, 2246, 2247, 3248</td>
<td>Ear Training and Sight Singing</td>
<td>5 hours</td>
</tr>
<tr>
<td>MVP/MVS/MVW/MWB</td>
<td>Performance (8 semesters including 2 semesters of Level IV)</td>
<td>16 hours</td>
</tr>
<tr>
<td>MUH 4211, 4212</td>
<td>*Music History</td>
<td>6 hours</td>
</tr>
<tr>
<td>MUN</td>
<td>Major Ensemble (8 semesters)</td>
<td>8 hours</td>
</tr>
<tr>
<td>MUN</td>
<td>Minor Ensemble (4 semesters)</td>
<td>4 hours</td>
</tr>
<tr>
<td>MVK</td>
<td>Class Piano I-IV</td>
<td>4 hours</td>
</tr>
<tr>
<td>MUG 3101</td>
<td>Basic Conducting</td>
<td>2 hours</td>
</tr>
<tr>
<td>PHY 3464</td>
<td>Physical Basis of Music</td>
<td>3 hours</td>
</tr>
<tr>
<td>Music Electives</td>
<td></td>
<td>22 hours</td>
</tr>
</tbody>
</table>

Any secondary performance course not in area of major instrument or any MUC, MUE, MUG, MUH, MUL, MUN, MUS, MUT courses numbered 3000 or higher.

In partial fulfillment of their elective requirements, piano students must take Piano Literature (MUL 3400, 3401 - 2 hours each) for a combined total of 4 hours; voice students take Foreign Diction (FRE 1005, GER 1005, ITA 1005 - 1 hour each), Voice Pedagogy (MVV 4640, 4641 - 1 hour each), and Song Literature (MUL 3600, 3601 - 1 hour each) for a combined total of 7 hours; piano pedagogy students take Piano Literature (MUL 3400, 3401 - 2 hours each), Piano Pedagogy (MVK 4640, 4641 - 1 hour each), and Studio Teaching (MUS 4401) for 2 hours, for a combined total of 8 hours.

4. Restricted Electives
   see above paragraph

5. Electives
<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUL 3400, 3401</td>
<td>Piano Literature</td>
<td>2 hours</td>
</tr>
<tr>
<td>MVK 4640, 4641</td>
<td>Piano Pedagogy</td>
<td>1 hour each</td>
</tr>
<tr>
<td>MUS 4401</td>
<td>Studio Teaching</td>
<td>2 hours</td>
</tr>
</tbody>
</table>

5. Electives
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<th>Description</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>MUL 3400, 3401</td>
<td>Piano Literature</td>
<td>2 hours</td>
</tr>
<tr>
<td>MVK 4640, 4641</td>
<td>Piano Pedagogy</td>
<td>1 hour each</td>
</tr>
<tr>
<td>MUS 4401</td>
<td>Studio Teaching</td>
<td>2 hours</td>
</tr>
</tbody>
</table>

Special Non-Course Requirements
1. Students are required to take piano until they meet the Piano Proficiency requirement.
2. Students must take music history, theory, ear training and sight singing comprehensive examinations.
3. Two faculty-approved public recitals: a junior recital of 30 minutes length and a senior recital of 45 minutes length. Students who select the Piano Pedagogy option will perform two faculty-approved thirty-minute recitals.
4. Residency requirements: 2 semesters of Performance Level IV; senior recital; history and theory proficiency examinations.
5. At least 77 hours of credit must be earned in music courses.

Bachelor of Arts: Performance

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses [both specializations]
   
<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 1010</td>
<td>Music Forum (6 semesters)</td>
<td>0 hours</td>
</tr>
<tr>
<td>MUT 1111, 1112, 2116, 2117, 3561</td>
<td>Music Theory</td>
<td>10 hours</td>
</tr>
<tr>
<td>MUT 1241, 1242, 2246, 2247, 3248</td>
<td>Ear Training and Sight Singing</td>
<td>5 hours</td>
</tr>
</tbody>
</table>

5. Electives
<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
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<td>Piano Pedagogy</td>
<td>1 hour each</td>
</tr>
<tr>
<td>MUS 4401</td>
<td>Studio Teaching</td>
<td>2 hours</td>
</tr>
</tbody>
</table>
MVP/MVV Performance (6 semesters including 2 semesters of Level III) 8 hours
MUH 4211, 4212 Music History 6 hours
MUN Major and Minor Ensembles (6 semesters) 6 hours
MVK Class Piano I-IV 4 hours
Music Electives/Special Requirements 5 hours

Any MUC, MUE, MUG, MUH, MUL, MUS, MUT courses numbered 3000 or higher.

In partial fulfillment of their elective requirements, piano students take Piano Literature (MUL 3400, 3401 - 2 hours each) for a combined total of 4 hours; voice students take Foreign Diction (FRE 1005, GER 1005, ITA 1005 - 1 hour each) and Song Literature (MUL 3600, 3601 - 1 hour each) for a combined total of 5 hours.

4. Restricted Electives see above paragraph

5. Electives 35 hours

Special Non-Course Requirements
1. Students are required to take piano until they meet the Piano Proficiency requirement.
2. Students must take music history, theory, ear training, and sight singing comprehensive examinations.
3. One faculty-approved thirty-minute recital.
4. Residency requirements: 2 semesters of Performance Level III; 2 ensembles, [each in a different semester]; MUT 3561; MUT 3248; 2 semesters of MUS 1010; history and theory proficiency examinations, recital.

Total Semester Hours Required 120

*Three semester hours of coursework in the General Education Program are satisfied by MUH 4212.

Bachelor of Music Education

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements

3. Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 1010</td>
<td>Music Forum (6 semesters)</td>
<td>0 hours</td>
</tr>
<tr>
<td>MUT 1111, 1112, 2116, 2117, 3561</td>
<td>Music Theory</td>
<td>10 hours</td>
</tr>
<tr>
<td>MUT 1241, 1242, 2246,2247,3248</td>
<td>Ear Training and Sight Singing</td>
<td>5 hours</td>
</tr>
<tr>
<td>MVB/MVK/MVP</td>
<td>Performance (6 semesters including 2 semesters of level III)</td>
<td>12 hours</td>
</tr>
<tr>
<td>MVS/MVV/MVW</td>
<td>Major Ensemble (7 semesters)</td>
<td>7 hours</td>
</tr>
<tr>
<td>MUN</td>
<td>Minor Ensemble</td>
<td>4 hours</td>
</tr>
<tr>
<td>MUH 4211, 4212</td>
<td>*Music History</td>
<td>6 hours</td>
</tr>
<tr>
<td>MUG 3101</td>
<td>Basic Conducting</td>
<td>2 hours</td>
</tr>
<tr>
<td>MUE 3460</td>
<td>Brass Techniques</td>
<td>1 hour</td>
</tr>
<tr>
<td>MUE 3470</td>
<td>Percussion Techniques</td>
<td>1 hour</td>
</tr>
<tr>
<td>MUE 3440</td>
<td>String Techniques</td>
<td>1 hour</td>
</tr>
<tr>
<td>MUE 3450</td>
<td>Woodwind Techniques</td>
<td>1 hour</td>
</tr>
<tr>
<td>EDF 3603</td>
<td>Analysis of Educational Foundations</td>
<td>3 hours</td>
</tr>
<tr>
<td>EDF 4214</td>
<td>Classroom Learning Principles</td>
<td>3 hours</td>
</tr>
<tr>
<td>EDF 4285</td>
<td>Application of Technology in Education</td>
<td>3 hours</td>
</tr>
<tr>
<td>EDG 4324</td>
<td>Teaching in the Schools</td>
<td>3 hours</td>
</tr>
<tr>
<td>EDG 4321</td>
<td>Teaching Strategies</td>
<td>4 hours</td>
</tr>
<tr>
<td>EDE 3943</td>
<td>Junior Year Student Teaching</td>
<td>6 hours</td>
</tr>
<tr>
<td>EDE or ESE 4943</td>
<td>Senior Year Student Teaching</td>
<td>12 hours</td>
</tr>
<tr>
<td>MUE 4311</td>
<td>Elementary School Music Instructional Analysis</td>
<td>2 hours</td>
</tr>
<tr>
<td>MUE 4360</td>
<td>Secondary School Music Instructional Analysis</td>
<td>2 hours</td>
</tr>
</tbody>
</table>
Program A - Instrumental

MVV 1111  Class Voice  1 hour
MK  Class Piano I-IV  4 hours
MVb/MV/K/MVP/ Performance IV  2 hours
MVS/MV/MVW
MUE 3460  Brass Techniques (repeat)  1 hour
MUE 3450  Woodwind Techniques (repeat)  1 hour
MUG 3302  Instrumental Conducting  2 hours
MUT 4344  Seminar in Music Arranging  1 hour
MUE 4460  Marching Band Techniques  1 hour

Program B - Choral

MVK 1111-1141  Class Piano I-IV  4 hours
(MV Not required of Piano Majors)
MVV 1111  Class Voice  2 hours
(MV Not required of Voice Majors)
MVS 1216  Secondary Guitar  1 hour
MUG 3202  Choral Conducting  2 hours
MVB/MV/K/MVP/ Performance IV  2 hours
MVS/MV/MVW
ITA 1005, FRE 1005, Diction  3 hours
GER 1005

Program C - Elementary School

MVK 1111-1141  Class Piano I-IV  4 hours
(MV Not required of Piano Majors)
MVV 1111  Class Voice  3 hours
(MV Not required of Voice Majors)
MVS 1216  Secondary Guitar  1 hour
MVO 3124  Recorder II  1 hour
Special Topics in Elementary School Music (2 semesters)  4 hours

4. Restricted Electives
   None.
5. Electives
   None.

Minimum Total Semester Hours Required  134-139

Special Non-course requirements
1. Students are required to take piano until they meet the Piano Proficiency requirement.
2. A faculty-approved public recital of at least 30 minutes length. (A recital is optional for the Elementary School Music Specialization).
4. Students graduating from UCF with a major in music education must complete their last two semesters of required performance; their recital, if required; and, their senior year student teaching while attending UCF.
5. A GPA of 2.5 is required for all courses attempted.

*Three semester hours of course work in the General Education Program are satisfied by MUH 4212.

DEPARTMENT OF PHILOSOPHY AND HUMANITIES

Chair: J. Riser, FA 464, Phone (407) 823-2273
Faculty: Flick, Jones, Kassim, Levensohn, Park, Riley, Riser, White

The Department of Philosophy and Humanities offers a philosophy major and an interdepartmental humanities major, as well as minors in philosophy, humanities, and Asian studies.

MINORS
The Department of Philosophy and Humanities offers the following minors:
1. Philosophy
   Twenty-one semester hours.
   Selection of courses from an approved list, in consultation with a departmental advisor, with the following distribution: one course in critical thinking/logic, two courses in the
history of philosophy, two courses in values and society, and two courses in philosophical analysis. For information, consult Dr. Donald Jones.

2. Humanities
Twenty-four semester hours.
Required courses: 12 semester hours of humanities, plus courses in art, music, literature, and electives in philosophy or religion. Specific courses must be selected in conference with a departmental advisor. For information, consult Dr. Paul Riley.

3. Asian Studies
Twenty-one semester hours.
An interdisciplinary minor in which seven UCF departments—Anthropology, Art, Economics, Foreign Languages and Literatures, History, Philosophy and Humanities, and Political Science—participate in order to offer students a basic and well-rounded background in the field. For information, consult Dr. Husain Kassim.

Bachelor of Arts: Philosophy
A. Regular Major (33 hours required)

*Required Courses (24 hours required)*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHI 1100</td>
<td>Critical Thinking</td>
<td>3</td>
</tr>
<tr>
<td>PHI 3000</td>
<td>Philosophical Reasoning</td>
<td>3</td>
</tr>
<tr>
<td>PHI 3130</td>
<td>Formal Logic I</td>
<td>3</td>
</tr>
<tr>
<td>PHH 3100</td>
<td>Ancient Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHH 3200, or</td>
<td>Modern Continental Philosophy, or</td>
<td>3</td>
</tr>
<tr>
<td>PHH 3300</td>
<td>Modern British Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHH 3350, or</td>
<td>Contemporary Continental Philosophy, or</td>
<td>3</td>
</tr>
<tr>
<td>PHH 3500</td>
<td>Contemporary Analytic Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHI 3600</td>
<td>Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PHI 4360, or</td>
<td>Epistemology, or</td>
<td>3</td>
</tr>
<tr>
<td>PHI 4500</td>
<td>Metaphysics</td>
<td>3</td>
</tr>
</tbody>
</table>

*Electives:* Nine upper-division hours in philosophy or related areas, with approval of advisor.

B. Honors in Philosophy

*Requirements*

1. Admission to and continuing acceptance in University Honors Program.
2. Satisfaction of all University requirements for Honors in the major.
3. Grade of “B” or better in Honors Directed Readings (3 hours).
5. Thirty-three hours of courses to be selected with guidance and approval of Honors Advisor and Department Chair.

*Electives:* Students are encouraged to select courses from other disciplines that supplement training in philosophy.

Bachelor of Arts: Humanities

*Degree Requirements*

1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses (24 semester hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>HUM 3431</td>
<td>Ancient World: Greece</td>
<td>3</td>
</tr>
<tr>
<td>HUM 3432</td>
<td>Ancient World: Rome</td>
<td>3</td>
</tr>
<tr>
<td>HUM 3410</td>
<td>Asian Humanities or</td>
<td>3</td>
</tr>
<tr>
<td>HUM 3250</td>
<td>Contemp. Humanities</td>
<td>3</td>
</tr>
<tr>
<td>HUM 3510</td>
<td>Critical Evaluation/Arts or</td>
<td>3</td>
</tr>
<tr>
<td>PHI 3800</td>
<td>Aesthetics</td>
<td>3</td>
</tr>
<tr>
<td>CLA 3850</td>
<td>Classical Myth or</td>
<td>3</td>
</tr>
<tr>
<td>CLA 3900</td>
<td>Comparative Myth</td>
<td>3</td>
</tr>
<tr>
<td>HUM 4301</td>
<td>The Classical Ideal</td>
<td>3</td>
</tr>
<tr>
<td>HUM 4302</td>
<td>The Romantic Ideal</td>
<td>3</td>
</tr>
<tr>
<td>HUM 4303</td>
<td>The Spiritual Ideal</td>
<td>3</td>
</tr>
</tbody>
</table>

4. Restricted Electives (24 semester hours, to be chosen with the help of an advisor and to include at least one course each in art, literature, music, and philosophy.)
DEPARTMENT OF PHYSICS

Chair: S. K. Bose, HPB 310, Phone (407) 823-2325

Faculty: Bass, Bolemon, Boyle, Bose, Brennan, Caldwell, Chai, Chow, Elias, Hagan, Heinonen, Johnson, Kim, Lin, Littlewood, Llewellyn, Miller, Neighbor, Richardson, Saha, Schulte, Silfvast, Soileau, Stegeman, Van Stryland

The Department of Physics offers the Bachelor of Science, Master of Science, and Doctor of Philosophy degrees in Physics. Students planning graduate study should consult faculty advisors about increased course content in physics (some electives are offered in alternate years) and mathematics, such as applied boundary problems, vector and tensor analysis, matrices; double majors are encouraged where appropriate.

Physics is the basic science fundamental to many different fields of endeavor. Physics majors are therefore encouraged to prepare for interdisciplinary careers by using electives to study other areas in depth, planning with an advisor by the sophomore year (or after arrival, for transfer students).

Independent investigation and use of scientific instrumentation (such as lasers, computer interfacing, lock-in amplifiers, multi-channel analyzers, oscilloscopes) are emphasized at the upper division. Computer programming requiring numerical analysis and familiarity with microcomputers is required.

Research of the faculty covers condensed matter physics, environmental physics, free electron lasers, solid state and gas lasers, mathematical modeling, Mossbauer spectroscopy, molecular and atomic spectroscopy, nuclear physics, nonlinear optics, and physics education. Physics faculty conduct interdisciplinary research at the UCF Center for Research in Electro-optics and Lasers (CREOL).

Service courses in physics are provided for students in other departments and colleges. A special laboratory-oriented course is available for science education majors. A physical science course satisfying General Education requirements (section E) is offered regularly.

MINOR

The Department of Physics offers a minor consisting of a minimum of 20 semester hours. Required courses: PHY 3048, 3048L, 3049, 3049L, 3101. The remaining 9 semester hours must be selected from appropriate upper-level lecture or laboratory courses.

HONORS

Honors sections of the introductory physics sequence are available to students with appropriate academic standing.

Bachelor of Science: Physics

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements

In addition to the degree requirements listed below for a B.S. in Physics, the following standards are required by the department for graduation. Approval as a special case by the Department Undergraduate Affairs Committee must be requested for any waiver.
a. A minimum GPA of 2.0 for all courses used for a major in physics.
b. No credit toward graduation for a "D" grade in any physics or mathematics course required for a major in physics; a higher grade on repeating is acceptable.

3. Required Courses
The courses listed, or departmentally approved equivalents, are required in the physics curriculum.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC 2010C</td>
<td>General Biology</td>
<td>4</td>
</tr>
<tr>
<td>CHM 2045, 2046, 2046L</td>
<td>Chemistry Fundamentals</td>
<td>8</td>
</tr>
<tr>
<td>MAC 3311, 3312, 3313</td>
<td>Calculus with Analytic Geometry</td>
<td>12</td>
</tr>
<tr>
<td>PHY 3048, 3048L, 3049, 3049L</td>
<td>Physics For Engineers &amp; Scientists I &amp; II</td>
<td>8</td>
</tr>
<tr>
<td>MAP 3302</td>
<td>Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>PHY 3101</td>
<td>Modern Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHY 3221, 4222</td>
<td>Mechanics I, II</td>
<td>6</td>
</tr>
<tr>
<td>PHY 3503</td>
<td>Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>PHY 3322, 4324</td>
<td>Electricity and Magnetism I, II</td>
<td>6</td>
</tr>
<tr>
<td>PHY 3151</td>
<td>Computer Methods in Physics</td>
<td>4</td>
</tr>
<tr>
<td>PHY 3752C</td>
<td>Physics of Scientific Instruments</td>
<td>4</td>
</tr>
<tr>
<td>PHY 4604</td>
<td>Wave Mechanics</td>
<td>3</td>
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<tr>
<td>STA 3023</td>
<td>Statistical Methods I</td>
<td>3</td>
</tr>
<tr>
<td>PHY 3802L</td>
<td>Intermediate Physics Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>PHY 4803L</td>
<td>Advanced Physics Laboratory</td>
<td>3</td>
</tr>
</tbody>
</table>

4. Restricted Electives
Upper division PHY or PHZ courses or those to be used in partial fulfillment of the requirements of a double major. 6 hours

5. Electives for Career Enrichment
Each physics major must complete a plan of study, no later than the junior year, indicating choice of electives, and submit it to the department undergraduate advisor for approval by the UAC. No more than 6 hours may be research credit. 12 hours

Total Semester Hours Required 127

DEPARTMENT OF POLITICAL SCIENCE
Chair: M.E. Vittes, FA 426, Phone (407) 823-2608
Faculty: Benson, Bledsoe, Celso, Fine, Handberg, Johnson-Freese, Kennedy, Kiel, Kurfist, J. Lille, S. Lille, Morales, Pollock, Stern, Vittes

The Department of Political Science seeks to (1) provide a broad background for careers in foreign and domestic public service and in the private sector where a knowledge of government and politics is necessary; (2) provide a broad background for and facilitate admission to law school through the prelaw emphasis; (3) prepare students for teaching, research, and graduate study in Political Science; (4) provide a broad background for careers in politics; and (5) educate citizens and promote their active interest in public affairs. Students should plan their major or minor in consultation with their departmental advisor according to their interests and career objectives.

Political Science courses are divided into three areas of specialization: American Politics and Policy; International Relations and Comparative Politics; and Political Theory.

It is strongly recommended that majors planning to continue their education at the graduate level or to pursue a career in international fields acquire a working knowledge of a foreign language.

Canadian Studies: The Department of Political Science is the main contributor to the Canadian Studies Program. Interested students should contact Dr. Henry Kennedy.

Latin American Studies: The Political Science Department participates in the Latin American Studies Program. Contact Dr. Waltraud Q. Morales.

Soviet Area Studies: The Political Science Department participates in the Soviet Area Studies program. Consult Dr. Henry Kennedy.

MINOR
The Department of Political Science offers minors consisting of a minimum of 18 semester hours in each minor.
1. Political Science
   Required courses: POS 2041. In the event a student has taken the varying credit POS 4941, only 3 semester hours from this course can be used in the minor. Only two courses (6 semester hours) from a two-year institution will be accepted as part of the minor. Except for these requirements, students may select any other Political Science courses with the aid of an advisor.

2. Political Science/Prelaw
   Required courses: POS 2041, 4284; at least one from INR 4401, 4402, POS 4603, or POS 4604. In the event a student has taken the varying credit POS 4941, only 3 semester hours from this course can be used in the minor. Only two courses (6 semester hours) from a two-year institution will be accepted as part of the minor. Except for these requirements, students may select any other Political Science courses with the aid of an advisor.

Bachelor of Arts: Political Science

Degree Requirements
1. See Undergraduate Degree Requirements
   Only two courses (6 semester hours) from a two-year institution will be accepted toward completion of major requirements.
2. See special college and/or department requirements
3. Required Courses
   - POS 2041 American National Government 3 hours
   - POS 3703 Scope and Methods of Political Science 3 hours
   *This course should be completed by the second semester of the junior year.
4. Restricted Electives
   Majors must choose from one of the following emphases for a minimum of 30 additional hours.
   Emphasis 1: American Politics and Policy
   - Five courses from area A 15 hours
   - Two courses from area B 6 hours
   - Two courses from area C 6 hours
   - One additional course from any area 3 hours
   Emphasis 2: International Relations-Comparative Politics
   *Five courses from area B 15 hours
   - Two courses from area A 6 hours
   - Two courses from area C 6 hours
   - One additional course from any area 3 hours
   *No more than two of the following courses may be considered part of area B credit: INR 4401, INR 4402, INR 4403.
   Emphasis 3: Prelaw
   - POS 4284 Judicial Process and Politics 3 hours
   One of the following:
   *POS 4603 American Constitutional Law I
   POS 4604 American Constitutional Law II
   INR 4401 International Law I
   INR 4402 International Law II
   *POS 4603 should ordinarily be taken before POS 4604.
   - Five courses from either area A or area B 15 hours
   - Two courses from area A if area B is chosen above; or Two courses from area B if area A is chosen above 6 hours
   - One course from area C 3 hours
   Total Hours in Major 36 hours
5. Electives
   Total Semester Hours Required 120

AREAS OF SPECIALIZATION
The Department courses are divided into three areas of specialization.
A. American Politics and Policy
   - POS 3122 State Government
   - POS 3443 Political Parties and Processes
POS 3413 The American Presidency
POS 3424 Congress and the Legislative Process
PUP 3314 Minorities in American Politics
POS 3235 Mass Media and Politics
POS 3233 Public Opinion
POS 3273 Voting and Elections
POS 3173 Southern Politics
POS 4246 Political Socialization
POS 4603 American Constitutional Law I
POS 4604 American Constitutional Law II
POS 4284 Judicial Process & Politics
POS 4412 Presidential Campaigning
PUP 4323 Women and Politics
POS 4142 Metropolitan Politics
URP 4026 Community Planning
PUP 3204 Environmental Politics
PUP 4003 American Public Policy
POS 4622 Politics and Civil Rights
POS 4445 Comparative Political Parties
PUP 4503 Government and Science
PUP 4602 Politics of Health
POS 4265 Power and Policy in the United States
PUP 4009 Topics in Public Policy

B. International Relations and Comparative Government

INR 3002 International Relations
GEO 3470 World Political Geography
INR 4035 International Political Economy
INR 4102 American Foreign Policy
INR 4114 American Defense Policy
INR 4115 Strategic Weapons and Arms Control
INR 4224 Contemporary International Politics of Asia
INR 4243 International Politics of Latin America
INR 4274 International Politics of the Middle East
INR 4275 Vietnam War
INR 4335 Coercion in International Politics
INR 4401 International Law I
INR 4402 International Law II
INR 4403 Space Law
INR 4504 International Organizations
CPO 3034 Politics of Developing Areas
CPO 3103 Comparative Politics
CPO 3132 Introduction to Canadian Studies
POS 3253 Contemporary Revolution and Political Violence
CPO 4123 Government and Politics of Great Britain
CPO 4284 Comparative Judicial Policies
CPO 4303 Comparative Latin American Politics
CPO 4643 Government and Politics of the Soviet Union
CPO 4024 Non-Western Politics
CPO 4133 Government and Politics of Canada
PUP 4510 Space Policy

C. Political Theory

POT 3302 Modern Political Ideologies
POT 3204 American Political Thought
POT 4003 Political Theory
POT 4314 Contemporary Democratic Theory
POT 4045 Ancient, Medieval and Early Modern Political Philosophy
POT 4054 Modern Political Philosophy
POS 4206 Political Psychology
POS 4252 Politics of the Future
Prelaw: Political Science

While no specific major is prescribed for admission to law school, many prelaw students elect to major in political science. These individuals usually choose the prelaw emphasis within the political science major.

Prelaw students are encouraged to work closely with a prelaw advisor in planning their programs. By judicious use of electives, the student builds a firm foundation for law school entry and acquires a broad training which can result in career options upon graduation. For further information, consult one of the Department's prelaw advisors.

1. Some suggested electives include:

- ACG 2001 Principles of Accounting I
- ACG 2011 Principles of Accounting II
- BUL 3111 Legal Environment of Business
- ENC 3210 Business Report Writing
- PLA 3015 Legal Research
- PLA 3155 Legal Writing
- PHI 3130 Formal Logic I
- PHI 3131 Formal Logic II
- MHF 2300 Logic and Proof in Mathematics
- LIN 4341 Modern English Grammar
- LIN 4801 Language and Meaning

Internship Program: Political Science

For students who excel, a limited number of internships may be available each semester for 3 to 6 hours of credit. Under the Internship Director, the student is typically placed in an office of local, state, or national government, a law office, or campaign headquarters.

DEPARTMENT OF PSYCHOLOGY

Chair: R. Tucker, PH 317, Phone (407) 823-2216

The undergraduate program provides a general preparation in Psychology with the option to select an emphasis area from a variety of subfields. Suggested emphasis area course listings are available in the department. Successful completion of the specified program of at least 41 hours leads to the Bachelor of Arts degree with a major in Psychology. The Bachelor of Science option is also available.

MINOR

The Psychology Department offers minors in several emphasis areas, including Clinical Psychology, Human Factors Psychology, and Industrial/Organizational Psychology. The guiding principle in design of a minor is to select those Psychology courses which will strengthen the graduate school preparation and/or the marketability of the student's major program. Therefore, a minimum of 22-25 credit hours are required, 3 in Statistics, and 19-22 in Psychology, including PSY 2013 (3 hours) and PSY 3214 (4 hours). The additional 12 (or more) hours are to be taken with the approval of the Psychology Department's Undergraduate Program Coordinator. The additional hours will generally follow suggested course lists which are available in the Department.

Bachelor of Arts: Psychology

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 2013</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2023</td>
<td>Careers in Psychology</td>
<td>1</td>
</tr>
<tr>
<td>PSY 3214</td>
<td>Research Methods</td>
<td>4</td>
</tr>
<tr>
<td>PSY 3204</td>
<td>Statistical Methods in Psychology</td>
<td>4</td>
</tr>
<tr>
<td>EXP 3404</td>
<td>Basic Learning Processes</td>
<td>4</td>
</tr>
<tr>
<td>PSB 3002</td>
<td>Physiological Psychology</td>
<td>4</td>
</tr>
</tbody>
</table>
4. Restricted Electives
a. Psychology Department (any two)
   - CLP 3143 Abnormal Psychology 3 hours
   - DEP 3004 Developmental Psychology 3 hours
   - PPE 3003 Personality Theory 3 hours
   - SOP 3004 Social Psychology 3 hours
b. Statistics Department (one of the two)
   - STA 2014 Principles of Statistics 3 hours
   - STA 3023 Statistical Methods I 3 hours
c. B.S. Option (9 hrs. from the following courses):
   - COP 2500 Computer Science I 3 hours
   - COP 2501 Computer Science II 3 hours
   - CGS 3000C Computer Fundamentals for Business Applications 3 hours
   - MAC 3233 Concepts of Calculus 3 hours
   - MAC 3253 Applied Calculus I 3 hours
   - PCB 3063, 3063L Genetics with Lab 4 hours
   - PCB 3703C Human Physiology with Lab 4 hours
   - STA 4102 Computer Programming of Statistical Data 3 hours
   - ZOO 3733C Human Anatomy with Lab 4 hours

5. Electives
   A total of 12 semester hours in other courses offered by the Psychology Department taken in accordance with the student’s interests and career goals and with the consent of the advisor.

Bachelor of Science: Social Sciences
Contact Person: J. Boyte, FA 208, Phone (407) 823-2492

The Social Sciences program offers students an opportunity to become acquainted with the various fields of the Social Sciences and to better understand the relationships between those fields. Satisfactory completion of the program leads to the degree Bachelor of Science with a major in Social Sciences.

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses
   None
4. Restricted Electives
   a. Choose one
      - POS 3703 Scope and Methods of Political Science 3 hours
      - PSY 3214 Research Methods (Psychology) 3 hours
      - SYA 3300 Research Methods (Sociology) 3 hours
   b. A minimum of 15 semester hours in each of four Social Science disciplines. The following are the required courses for each discipline selected.

Communication
   - RTV 4403 Radio, Television and Society 3 hours
   - JOU 3003 History of American Journalism 3 hours
   - COM 3311 Communication as a Behavioral Science 3 hours

Economics
   - ECO 2013 Principles of Economics I 3 hours
   - ECO 2023 Principles of Economics II 3 hours

Political Science
   - POS 2041 American National Government 3 hours

Psychology
   - PSY 2013 General Psychology 3 hours
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPE 3003</td>
<td>Personality Theory</td>
<td>3</td>
</tr>
<tr>
<td>Public Service Administration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAD 3003</td>
<td>Introduction to Public Administration</td>
<td>4</td>
</tr>
<tr>
<td>CCJ 3020</td>
<td>Criminal Justice System</td>
<td>4</td>
</tr>
<tr>
<td>or PLA 3013</td>
<td>Law and the Legal System</td>
<td>4</td>
</tr>
<tr>
<td>Sociology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SYG 2000</td>
<td>General Sociology</td>
<td>3</td>
</tr>
<tr>
<td>ANT 2003</td>
<td>General Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Semester Hours Required</td>
<td>120</td>
<td></td>
</tr>
</tbody>
</table>

**DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY**

**Chair:** D. Fabianic, FA 402, Phone (407) 823-2227  
**Faculty:** W. Brown, A. Chase, D. Chase, Cook, Dees, Gay, D. Jones, Lynxwiler, Stearman, Unkovic, Wallace

The Department of Sociology and Anthropology offers a Bachelor of Arts in Sociology and Anthropology. Students should consult with their advisor early in their academic careers to select an area of specialization within the Department or if they plan to pursue graduate work.

**MINORS**

The Department offers the following minors:

1. **Anthropology**  
   Required Courses: ANT 3211, 3410, 3422, ANT 3511, 12 additional hours to be taken in consultation with the student's advisor. No more than two courses can be transferred from other Sociology/Anthropology Departments. The minimum number of semester hours required - 21.

2. **Sociology**  
   Required Courses: SYG 2000, SYO 3000, and SYA 3110 or SYA 3120; and a minimum of 9 semester hours of Sociology courses. No more than 2 sociology courses may be transferred from another Sociology Department and no more than 8 semester hours of 1000 or 2000 level sociology courses can be applied. The minimum number of semester hours required - 18.

**Bachelor of Arts: Sociology**

**Degree Requirements**

The Sociology curriculum is designed to provide students a basic curriculum which emphasizes critical examination of various components of society. The purpose of the curriculum is to increase students' social awareness and ability to employ a sociological perspective to interpret social institutions and behavior. A minimum of 44 semester hours is required for a major. In addition, one course in statistics is also required.

1. **See Undergraduate Degree Requirements**
2. **See special college and/or department requirements**
3. **Required Courses (23 semester hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYG 2000</td>
<td>General Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SYO 3000</td>
<td>Modern Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SYA 3110</td>
<td>Development of Social Thought</td>
<td>3</td>
</tr>
<tr>
<td>or SYA 3120</td>
<td>Modern Sociological Thought</td>
<td>3</td>
</tr>
<tr>
<td>SYA 3300</td>
<td>Research Methods</td>
<td>4</td>
</tr>
<tr>
<td>SYO 3360</td>
<td>Social Organization &amp; Human Relations</td>
<td>3</td>
</tr>
<tr>
<td>or SYP 4000</td>
<td>Sociological Social Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SYA 4450</td>
<td>Data Analysis (PR: Course in Statistics)</td>
<td>4</td>
</tr>
<tr>
<td>SYA 4650</td>
<td>Applied Sociology</td>
<td>3</td>
</tr>
</tbody>
</table>

One course in Statistics

(After the required courses are completed, remaining courses listed in the required course category may be taken and will be credited in the Social Processes and Institutions category.)

133
4. Restricted Electives

Majors must choose from one of the following emphases for a minimum of 21 semester hours.

A. General Sociology Emphasis. Students are required to take 6 semester hours from the Deviant Behavior and Social Problems category, and 15 semester hours from the Social Processes and Institutions category, or, students may take 15 semester hours from the Social Processes and Institutions category, and a minimum of 6 semester hours of Sociology Internship.

B. Deviant Behavior and Social Problems Emphasis. Students are required to take 15 semester hours from the Deviant Behavior and Social Problems category and 6 semester hours from the Social Processes and Institutions category; or, students may take 15 semester hours from the Deviant Behavior and Social Problems category and a minimum of 6 semester hours of Sociology Internship.

Areas of Emphasis

Social Processes and Institutions

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYD 3410</td>
<td>Urban Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SYD 3700</td>
<td>Race and Ethnic Minorities in the U.S.</td>
<td>3</td>
</tr>
<tr>
<td>SYD 3800</td>
<td>Sex Roles in Modern Society</td>
<td>3</td>
</tr>
<tr>
<td>SYP 3650</td>
<td>Sociology and Sport</td>
<td>3</td>
</tr>
<tr>
<td>SYD 4020</td>
<td>Population</td>
<td>3</td>
</tr>
<tr>
<td>SYD 4680</td>
<td>Soviet Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SYO 3530</td>
<td>Social Stratification</td>
<td>3</td>
</tr>
<tr>
<td>SYO 4100</td>
<td>The Family</td>
<td>3</td>
</tr>
<tr>
<td>SYO 4250</td>
<td>Sociology of Education</td>
<td>3</td>
</tr>
<tr>
<td>SYO 4300</td>
<td>Political Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SYO 4370</td>
<td>Sociology of Occupations &amp; Professions</td>
<td>3</td>
</tr>
<tr>
<td>SYO 4400</td>
<td>Medical Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SYP 3300</td>
<td>Collective Behavior</td>
<td>3</td>
</tr>
</tbody>
</table>

Deviant Behavior and Social Problems

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYP 3400</td>
<td>Social Change</td>
<td>3</td>
</tr>
<tr>
<td>SYG 3010</td>
<td>Social Problems</td>
<td>3</td>
</tr>
<tr>
<td>SYO 3410</td>
<td>Sociology of Mental Illness</td>
<td>3</td>
</tr>
<tr>
<td>SYP 3510</td>
<td>Sociology of Deviant Behavior</td>
<td>3</td>
</tr>
<tr>
<td>SYP 3520</td>
<td>Criminology</td>
<td>3</td>
</tr>
<tr>
<td>SYP 3530</td>
<td>Juvenile Delinquency</td>
<td>3</td>
</tr>
<tr>
<td>SYP 3551</td>
<td>Sociology of Alcoholism</td>
<td>3</td>
</tr>
<tr>
<td>SYP 3450</td>
<td>Sociology and Law</td>
<td>3</td>
</tr>
<tr>
<td>SYP 4550</td>
<td>Sociology of Drug Abuse</td>
<td>3</td>
</tr>
<tr>
<td>SYP 4730</td>
<td>Sociology of Aging</td>
<td>3</td>
</tr>
</tbody>
</table>

Eligible students may enroll for 3 to 16 semester hours of Internship. Arrangements for Internship are coordinated by the Department.

5. Electives

Bachelor of Arts: Anthropology

Degree Requirements

Anthropology offers the Bachelor of Arts degree. In keeping with the holistic nature of the discipline, students are required to pursue a course of study which leads to a comprehension of all subfields of Anthropology. The recognized subfields of Anthropology are Cultural Anthropology, Archaeology, Physical Anthropology, and Linguistics. Area studies concerned with North American Indians, Mesoamerican Civilization, and Latin American Culture are available. Students majoring or minoring in Anthropology with sufficient course background are provided an opportunity to participate in ongoing archaeological excavations associated with the Maya culture in the Central American country of Belize.

A minimum of 45 semester hours is required for a degree. All Anthropology courses are 3 semester hours with the exception of ANT 4124, which is 9 semester hours.

Degree Requirements

1. See Undergraduate Degree Requirements
2. Special college and/or department requirements

3. Required Courses (21 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT 3211</td>
<td>Human Origins (Anthropology I)</td>
</tr>
<tr>
<td>ANT 3410</td>
<td>Cultural Anthropology (Anthropology II)</td>
</tr>
<tr>
<td>ANT 3511</td>
<td>The Human Species (Anthropology III)</td>
</tr>
<tr>
<td>ANT 3145</td>
<td>Archaeology of Complex Societies</td>
</tr>
<tr>
<td>ANT 3422</td>
<td>Peoples of the World</td>
</tr>
<tr>
<td>ANT 3610</td>
<td>Language and Culture</td>
</tr>
<tr>
<td>ANT 4084</td>
<td>History of Anthropological Thought</td>
</tr>
</tbody>
</table>

4. Restricted Electives (24 hours)

Area Studies (Select 3)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>ANT 3153</td>
<td>Archaeology of North America</td>
</tr>
<tr>
<td>ANT 3162</td>
<td>Archaeology of Middle and South America</td>
</tr>
<tr>
<td>ANT 3163</td>
<td>Mesoamerican Archaeology</td>
</tr>
<tr>
<td>ANT 3311</td>
<td>Indians of the Southeastern United States</td>
</tr>
<tr>
<td>ANT 3312</td>
<td>Ethnology of North American Indians</td>
</tr>
<tr>
<td>ANT 3313</td>
<td>Indians of the North American High Plains</td>
</tr>
<tr>
<td>ANT 3328</td>
<td>Maya Archaeology</td>
</tr>
<tr>
<td>ANT 3332</td>
<td>Peoples and Cultures of Latin America</td>
</tr>
<tr>
<td>ANT 3360</td>
<td>Peoples of the Far East</td>
</tr>
<tr>
<td>ANT 3363</td>
<td>Anthropology of Japan</td>
</tr>
</tbody>
</table>

Specialized Studies (Select 5)

- Cultural
  - ANT 3302: Sex, Gender, and Culture
  - ANT 3241: Magic, Ritual, and Belief
  - ANT 3432: Culture and the Individual
  - ANT 3418: Aging and Death
  - ANT 3262: Rural Society
  - ANT 3271: Law and Culture
  - ANT 3705: Action Anthropology

- Archaeology
  - ANT 3122: Archaeological Method and Theory
  - ANT 3141: The Emergence of Civilizations
  - ANT 3142: Old World Prehistory
  - ANT 3144: Prehistory of the American Indians
  - ANT 4124: Advanced Archaeological Fieldwork
  - ANT 4180: Seminar in Laboratory Analyses
  - ANT 4930: Selected Topics in Archaeology

- Physical
  - ANT 3462: Medical Anthropology
  - ANT 3464: Human Microevolution
  - ANT 3512: Biobehavioral Anthropology
  - ANT 3552: Primatology

5. Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT 2003</td>
<td>General Anthropology (recommended for non-majors)</td>
</tr>
<tr>
<td>ANT 5479</td>
<td>Comparative Cultural Analysis</td>
</tr>
<tr>
<td>ANT 5937</td>
<td>Proseminar in Anthropology</td>
</tr>
</tbody>
</table>

Total Semester Hours Required: 120

SOVIET AREA STUDIES

Five UCF departments, Foreign Languages, History, Political Sciences, Sociology, and Philosophy and Humanities, have pooled their resources to offer a minor to students interested in Soviet Area Studies a basic and well-rounded background in the field. The philosophy of the program is to offer students a multidisciplinary approach to the subject, so as to allow them to grasp the subject in its complexity and to understand linguistic, cultural, historical, political, and socio-economic interrelationships.

Interested students should register for the minor with Dr. Karl-Heinrich Barsch, Department of Foreign Languages, FA 439 (407) 823-2466. For further information consult any of the above mentioned departments.
DEPARTMENT OF STATISTICS
Chair: M. E. Johnson, CCII 221, Phone (407) 823-2289
Faculty: Cutchins, Hoffman, Kazempour, Kheoh, Malone, Nickerson, Richardson, J. Schott, S. Schott, Somerville, Wildman-Pepe

The Department of Statistics offers courses and programs which lead to a Bachelor of Science in Statistics, a minor in statistics, and a Master of Science in Statistical Computing. (See the Graduate Studies catalog for a description of the M.S. in Statistical Computing.) The undergraduate programs in statistics are designed to serve (1) students who wish to pursue careers in statistics after having completed a baccalaureate degree; (2) students who wish to continue their education in graduate or professional schools; and (3) students who need to use statistics as tools in their specialty areas.

In order to serve such a wide variety of students, the courses and programs in the Department of Statistics have developed along several lines. There are the usual service courses in elementary statistics along with strong programs in the upper division in statistical methods, statistical theory, and statistical computing.

A limited number of assistantships are available for qualified graduate and undergraduate students.

MINOR
The Department of Statistics offers a minor (with a minimum of 18 hours). Required Courses: STA 3023 or STA 3032 or equivalent; STA 4163, STA 4164, and one of the following: STA 4222 or STA 4502. A grade of C or higher is required in each course counting toward a minor.

Restricted Electives: Six or more hours from STA courses numbered 3000 or higher. (Credit from STA 3023 or STA 3032 or the equivalent may not be used as a restricted elective.) All courses except STA 3023 or STA 3032 must be taken from the Department of Statistics at UCF unless substitutes are approved by the Department Standards Committee.

Bachelor of Science: Statistics
Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
   (a) All statistics courses except STA 3023, STA 3032, and those protected by the Florida Common Course Numbering system must be taken from the Department of Statistics at UCF. Substitution of other transfer work must be approved by the Department Standards Committee.
   (b) To meet the College of Arts and Sciences requirement for Natural Science majors, a Statistics major must take one course from one group (A or B) and two courses from the other group, with at least one laboratory in each group. Any additional science course in the College of Arts and Sciences of any level or any course in the College of Health numbered 3000 or higher will count as the fourth required course.

   **Group A**  
   BOT 2010C  
   BSC 2010C  
   ZOO 2010C  

   **Group B**  
   CHM 2045  
   CHM 2046 and CHM 2046L  
   PHY 3053C  
   PHY 3054C  

   (NOTE: If both CHM 2046 and CHM 2046L are taken, they will only count as one course in satisfying the above requirement. CHM 2046L by itself will not count as a course.)
   (c) A grade of "C" or higher is required in all STA courses counting towards a statistics major.
   (d) A 2.0 average or higher is required in all computer science and mathematics courses that count toward a statistics major.
3. Required Courses
   STA 3023  Statistical Methods I  3 hours
   STA 4664  Statistical Quality Control  3 hours
   STA 4102  Computer Processing of Statistical Data  3 hours
   STA 4163  Statistical Methods II  3 hours
   STA 4164  Statistical Methods III  3 hours
   STA 4222  Sample Survey Methods  3 hours
### Restricted Electives

A minimum of 6 hours selected from upper-division or graduate statistics, mathematics, or computer science courses. (COC 3024; MAC 3233, 3253, 3254; all MAE courses; and MHF 4404 may not be used.)

Selected courses in engineering may be used but must first be approved by the Statistics Department Standards Committee.

### Electives

The number of hours depends on the courses chosen to satisfy university requirements.

| Total Semester Hours Required | 120 |

### DEPARTMENT OF THEATRE

**Director:** H. Smith, TH 120, Phone (407) 823-2861  
**Faculty:** Cali, Rusnock. **Associate:** James Best

The Department of Theatre offers the student an opportunity to concentrate in the area of theatre either as preparation for graduate or professional study or as a course of study in the liberal arts. In order to be accepted as a theatre major, the student must demonstrate proficiency level through a process of audition/portfolio/resume review and department interview. Please contact the Department of Theatre for specific information.

The major in Theatre offers two separate areas of concentration. Successful completion of the theatre degree is contingent upon the student's continuing participation in Department productions.

### MINOR

The Department of Theatre offers a minor consisting of a minimum of 29 hours, as follows: THE 1020, THE 2925, THE 3370 or THE 3112 or THE 3113, TPA 2210, TPA 3060, or TPP 3310, TPP 2110, DAA 2200 and 9 hours of 3000/4000 level theatre electives.

### Bachelor of Arts: Theatre

#### Degree Requirements

1. See Undergraduate Degree Requirements  
2. See special college and/or department requirements  
3. Required Courses (28 semester hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAA 2200</td>
<td>Dance I</td>
<td>3</td>
</tr>
<tr>
<td>THE 1020</td>
<td>Theatre Survey</td>
<td>3</td>
</tr>
<tr>
<td>THE 2925</td>
<td>Theatre Practicum I</td>
<td>2.2</td>
</tr>
<tr>
<td>THE 3112</td>
<td>Theatre History I</td>
<td>3</td>
</tr>
<tr>
<td>THE 3113</td>
<td>Theatre History II</td>
<td>3</td>
</tr>
<tr>
<td>TPA 2210</td>
<td>Technical Theatre Production I</td>
<td>3</td>
</tr>
<tr>
<td>TPA 2204</td>
<td>Technical Theatre Production II</td>
<td>3</td>
</tr>
<tr>
<td>TPP 2110</td>
<td>Acting I</td>
<td>3</td>
</tr>
<tr>
<td>TPP 3310</td>
<td>Directing I</td>
<td>3</td>
</tr>
</tbody>
</table>
### AREAS OF CONCENTRATION

**Program "A" Performance**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>THE 3305</td>
<td>Drama Analysis</td>
<td>3 hours</td>
</tr>
<tr>
<td>THE 3925</td>
<td>Theatre Practicum II</td>
<td>2 hours</td>
</tr>
<tr>
<td>TPP 3111</td>
<td>Acting II</td>
<td>3 hours</td>
</tr>
<tr>
<td>TPP 4150</td>
<td>Scene Study and Character Development</td>
<td>3 hours</td>
</tr>
<tr>
<td>TPP 4260</td>
<td>Acting III</td>
<td>3 hours</td>
</tr>
<tr>
<td>TPP 4311</td>
<td>Directing II</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

**Suggested Electives: Theatre and Related Courses** 15 hours

**Program "B" Technical Theatre & Design**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>THE 3260</td>
<td>Theatrical Costume History and Design</td>
<td>3 hours</td>
</tr>
<tr>
<td>THE 3925</td>
<td>Theatre Practicum II</td>
<td>2 hours</td>
</tr>
<tr>
<td>TPA 3060</td>
<td>Scene Design</td>
<td>3 hours</td>
</tr>
<tr>
<td>TPA 3081</td>
<td>Scene Painting</td>
<td>3 hours</td>
</tr>
<tr>
<td>TPA 3220</td>
<td>Stage Lighting</td>
<td>3 hours</td>
</tr>
<tr>
<td>TPA 3221</td>
<td>Lighting Design</td>
<td>3 hours</td>
</tr>
<tr>
<td>TPA 4060</td>
<td>Advanced Design</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

**Suggested Electives: Theatre and Related Courses** 12 hours

4. **Restricted Electives**

5. **Electives**—see each program for suggested electives

**Total Semester Hours Required** 120

### WOMEN'S STUDIES PROGRAM

The Women's Studies program offers an interdisciplinary minor, but not a major. Several departments cooperate in offering the minor, which emphasizes the history and cultural contributions of women and their role in society today. For further information contact Dr. Kathryn Seidel, FA 511, (407) 823-2251.

**Required Courses**—15 hours chosen from:

- AMH 3560 Women in American History
- ANT 3302 Sex, Gender and Culture
- ARH 4458 Women and Art in 20th Century America
- LIT 3383 Women in Literature
- PUP 4323 Women and Politics
- SOP 3742 Psychology of Women

**Elective Courses (choose one) — 3 hours:**

- SYD 3800 Sex Roles in Modern Society
- SYD 4100 The Family

Other courses as approved by the Women's Studies advisor.
UNDERGRADUATE PROGRAMS

Accounting (BSBA)
Economics (BSBA)
Finance (BSBA)
General Business Administration (BSBA)
Management (BSBA)
Marketing (BSBA)

GRADUATE PROGRAMS*

Accounting (MSA)
Applied Economics (MAE)
Business Administration (MBA, Ph.D.)
   Concentrations in Accounting and Finance (Ph.D.)
Taxation (MST)

*See the Graduate catalog for information.
The mission of the College of Business Administration at the University of Central Florida is to provide quality business education programs, at the undergraduate, graduate, and executive levels, to the citizens of the state of Florida and to selected clientele nationally and internationally. In delivering these programs, the College places primary emphasis on excellent teaching and research with a strong commitment to developing mutually supportive relationships with the business community of Central Florida.

In pursuit of its mission, the College of Business Administration affirms its commitment to the University's focus on excellence and accent on the individual. Furthermore, the College pledges to deliver innovative and progressive programs to its clientele. As the College approaches the twenty-first century, it has adopted "Driven by Excellence" as a motto and guiding force in achieving its goals and objectives. All undergraduate and graduate programs are accredited by the American Assembly of Collegiate Schools of Business (AACSB).

Admission to the University of Central Florida does not imply admission to the College of Business Administration. Students will only be allowed to enroll in the 3000/4000 level courses taught by the College of Business Administration after they have been admitted to the College.

Admission to the College will be granted when the following are complete:

a. Completion of the University General Education program.

b. Completion of the basic ACG 2001, ACG 2071, or ACG 2023, ECO 2013, ECO 2023, ENC 1101, ENC 1102, MAC 1104, STA 3023, CGS 3000, with a minimum grade of "C".

c. Achieved a minimum grade point average of 2.5 overall at the completion of at least sixty hours of course work.

Students who otherwise meet the University admission requirements, such as entering freshmen and transfer students, will be placed in a Business Administration pending category until they meet the requirements set forth above. Grades of "D" will not transfer into the program. Each student should attend orientation for academic advising and should meet with an academic advisor in the College to outline a program of study.

The degree Bachelor of Science in Business Administration with the following majors is offered by the College of Business Administration:

Accounting General Business Administration
Economics Management
Finance Marketing

Common Body of Knowledge

The following common course work, required of all majors, provides a foundation in the major areas of business administration.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>*ACG 2001</td>
<td>Principles of Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>*ACG 2071</td>
<td>Principles of Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*ACG 2023</td>
<td>Principles of Accounting I &amp; II</td>
<td>6</td>
</tr>
<tr>
<td>*ECO 2013</td>
<td>Principles of Economics I</td>
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<td>*ECO 2023</td>
<td>Principles of Economics II</td>
<td>3</td>
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<tr>
<td>*ENC 3210</td>
<td>Business Report Writing</td>
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<tr>
<td>*MAC 3233</td>
<td>Concepts of Calculus</td>
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<tr>
<td>*STA 3023</td>
<td>Statistical Methods I</td>
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<tr>
<td>*CGS 3000</td>
<td>Comp. Fund. for Business App.</td>
<td>3</td>
</tr>
<tr>
<td>BUL 3111</td>
<td>Legal Environment of Business</td>
<td>3</td>
</tr>
</tbody>
</table>

*Must be completed with a minimum grade of "C."
ECO 3411 Quant. Methods & Bus. Decisional Anal. 3 hours
FIN 3403 Business Finance 3 hours
MAN 3025 Management of Organizations 3 hours
MAR 3023 Marketing 3 hours
MAN 3504 Production/Operations Management 3 hours

Students in the College of Business Administration cannot receive credit for the following courses: GEB 3004, and FIN 3100.

Grade Point Average Requirements
For graduation the student must have maintained a minimum 2.0 GPA in course work taken in the College of Business Administration and a minimum 2.0 GPA in the course work required in the major, except in accounting and finance where a "C" or better is required in each course.

Student Load
A student who is enrolled in 15 semester hours of course work is considered to be carrying a normal academic load. Students desiring to take more than 15 hours of course work in the College of Business Administration must obtain permission from the college.

Community/Junior College Transfers
1. Subject to the general grade and residence requirements, credit will be granted for transferred course work equivalent to that required in UCF's Business program.
2. Florida Public Community College students are advised to complete the Associate of Arts Degree including:
   A. the general education requirements;
   B. the one year Accounting and Economics sequence; and
   C. College Algebra.
3. Professional courses should not be taken at a community/junior college in the areas of Management, Marketing, Real Estate, or Finance. These professional areas are third and fourth year course areas in the College of Business Administration and cannot be satisfied with community/junior college courses.
4. A minimum of 12 semester hours must be completed at UCF within each individual major.

Minor—International Business (Restricted to Business Majors)
The College of Business Administration offers a minor in International Business consisting of 18 semester hours.
Required Courses: GEB 4351, ECO 3702, FIN 4624, MAR 4243; Electives: 6 hours of the following courses - ANT 3410, ECS 4003, ECS 4013, GEO 3470, INR 4035, INR 4401, INR 4224, INR 4243, INR 4274; Special Topics Seminars in International Business; 3000/4000 level foreign language course.

Minor (Restricted to Non-Business Majors)
The College of Business Administration offers a minor consisting of 24 semester hours. (Nine semester hours of upper division business courses must be completed at UCF.) Students are required to earn a "C" or better in each course.
Required courses: ACG 2001, 2071, or ACG 2023; ECO 2023, 2013; FIN 3403; MAN 3025; MAR 3023; one 3000/4000 level business course elective. A GPA of 2.0 is required for each course. GEB 3004 may not be used as the business course elective.

See also: Florida Tilburg Program (for Business Majors) listed under International Studies and Programs

SCHOOL OF ACCOUNTING
Director: T. Evans, BA 437, Phone (407) 823-2871
Assistant to the Director: L. Mahoney, BA 438, Phone (407) 823-5809
OBJECTIVES OF ACCOUNTING PROGRAMS

The objective of the baccalaureate program with a concentration in accounting is to provide basic conceptual accounting and business knowledge as a foundation for accounting career development.

Bachelor of Science in Business Administration: Accounting

Degree Requirements
1. See Undergraduate Degree Requirements
2. Special qualifications for satisfying this program’s requirements are:
   a. A minimum grade of "C" must be earned in each accounting and tax course completed. Principles of Accounting and Principles of Managerial Accounting are included under this rule.
   b. A transfer student to this program must:
      (1) take a minimum of twelve (12) semester hours in accounting at UCF as approved by the director of the School of Accounting.
      (2) have credit for a course in each of the following areas:
         a. English communication arts including written composition
         b. Oral expression
         c. Behavioral sciences such as psychology, anthropology, and sociology
         d. Humanities
         e. Political environment of business and society such as political science, public administration, and ethics.
3. Required Courses
   a. Business College Common Body of Knowledge*
   b. GEB 4351 Business in the International Environment 3 hours
      MAN 4720 Business Policies 3 hours
   c. ACG 3103 Financial Accounting I 3 hours
      ACG 3113 Financial Accounting II 3 hours
      ACG 3361 Cost Accounting I 3 hours
      ACG 3501 Financial Accounting for Governmental and Nonprofit Organizations 3 hours
      ACG 4401 Accounting Information Systems I 3 hours
      TAX 4001 Federal Income Tax I 3 hours
      ACG 4123 Financial Accounting III 3 hours
      ACG 4203 Financial Accounting IV 3 hours
      ACG 4651 Auditing 3 hours
      BUL 3112 Business Law I 3 hours
      BUL 3121 Business Law II** 3 hours
4. Electives: As necessary to result in 120 total credit hours.
   Total Semester Hours Required 120
*Except BUL 3111, Legal Environment of Business, which is satisfied by taking BUL I & II.
**Transferable only from senior academic institutions.

CPA EXAMINATION REQUIREMENTS

Effective August 31, 1983, Florida Law states that to qualify to sit for the CPA exam, one must possess thirty (30) additional semester hours of credit beyond the requirements for the baccalaureate degree. In addition to this overall educational requirement, the following specific criteria also apply:
36 hours in accounting beyond elementary, including at least:
12 hours in financial and cost accounting
6 hours in auditing and internal auditing
6 hours in tax
AND
39 hours in general business, including at least six hours of business law. Because of these increased educational requirements, no experience or additional course work is needed for certification.
To satisfy the necessary coursework required by the law, the School of Accounting offers the Master of Science in Accounting (MSA) and the Master of Science in Taxation (MST) degree programs. Please see the graduate catalog for program requirements.

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The Department of Economics participates in two undergraduate degree programs: a B.S.B.A. degree in the College of Business Administration and a B.A. degree in the College of Arts and Sciences. The purpose of the College of Business Administration economics major is to provide students with a professional business background that prepares them for careers in private business and government. The purpose of the economics major in the College of Arts and Sciences is to provide a broad-based liberal arts background that can serve as a strong foundation for future graduate studies in law, social sciences, and other fields or as training for careers in politics, teaching, research, social service, and other areas. The goal of both programs is to enable students to better understand the economic and non-economic issues that are confronted in their jobs and their private lives and to provide the analytical skills that will allow them to resolve these issues. Students interested in a B.A. in Economics should refer to the Economics Major in the College of Arts and Sciences.

MINOR (In Economics for Non-Business Administration majors)
Required Courses: ECO 3101, 3203, 3411. These requirements are in addition to the prerequisites ECO 2013 and 2023.
Elective Courses: Three courses from the following: ECO 3233, 3703, 4224, 4303, 4412, 4504; ECP 3203, 3424, 3433, 4403, 4603, 4703; ECS 4003, 4013.

Bachelor of Science in Business Administration: Economics

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses
   a. Business College Common Body of Knowledge
   b. GEB 4351 Business in the International Environment 3 hours
      MAN 4720 Business Policies 3 hours
   c. ECO 3101 Intermediate Price Theory 3 hours
      ECO 3203 Aggregate Economic Conditions Analysis 3 hours
4. Restricted Electives
   All economics majors will be required to take five (5) electives from the following for a total of twenty-one (21) hours beyond the Common Body of Knowledge.
   ECO 3233 Money and Banking 3 hours
   ECO 3703 International Economics 3 hours
   ECO 4224 Money: Issues and Analysis 3 hours
   ECO 4303 History of Economic Thought 3 hours
   ECO 4412 Economic Statistics and Econometrics 3 hours
   ECO 4504 Economics of the Public Sector 3 hours
   ECP 3203 Contemporary Labor Economics 3 hours
   ECP 3424 The Economics of Regulated Industries 3 hours
   ECP 3433 Transportation Economics 3 hours
   ECP 4403 Business, Government & Industrial Organization 3 hours
   ECP 4603 Urban and Regional Economic Problems 3 hours
   ECP 4703 Managerial Economics 3 hours
   ECS 4003 Comparative Economic Systems 3 hours
   ECS 4013 Economic Development 3 hours
5. Electives
   Total Semester Hours Required 120
The Finance Major Curriculum consists of a total of 27 semester hours. Students are required to earn a grade of "C" or better in FIN 3403 and all other classes taken toward the major.

The program in finance is designed to provide the student with broad knowledge in finance, including business finance, investments, financial institutions, risk management and insurance, and real estate. The program provides the student with the theoretical background and tools of analysis required for making effective financial decisions.

The study of finance prepares the student for careers in business financial management. Students that major in finance are sought by both financial and non-financial firms.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<td>FIN 4514</td>
<td>Portfolio Analysis and Management</td>
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<td>FIN 4503</td>
<td>Speculative Financial Markets</td>
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<td>FIN 4624</td>
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<td>FIN 4424</td>
<td>Advanced Topics in Financial Management</td>
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<td>MAC 3311</td>
<td>Calculus with Analytic Geometry I</td>
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<td>MAC 3313</td>
<td>Calculus with Analytic Geometry III</td>
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<tr>
<td>PEA 4204</td>
<td>Land Use and Environmental Law</td>
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<tr>
<td>PEA 4207</td>
<td>Landlord and Tenant Law</td>
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<td>REE 4103</td>
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<td>Principles of Risk and Insurance</td>
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<tr>
<td>TAX 4001</td>
<td>Federal Income Tax I</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours Required: 120

*No class may be used more than once.

**GENERAL BUSINESS ADMINISTRATION**

This option allows students to develop a general program of study which will satisfy career objectives not provided for by the specialized areas of concentration. To pursue this option, students must make application through the office of the Assistant Dean of the College of Business Administration. An academic advisor will be assigned to assist each student in developing a meaningful program of study.

**Bachelor of Science in Business Administration:**

**General Business Administration**

**Degree Requirements**

1. Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses
   a. Business College Common Body of Knowledge
   b. GEB 4351 Business in the International Environment 3 hours
      MAN 4720 Business Policies 3 hours
   c. One (1) additional course beyond the Common Body of Knowledge in Finance (FIN prefix) and Marketing (MAR prefix) (one course from each discipline).
4. Restricted Electives
   A minimum of six (6) additional courses from at least three (3) different departments (Accounting, Economics, Finance, Management, Marketing) taught in the College of Business Administration.
5. Electives

Total Semester Hours Required: 120

**DEPARTMENT OF MANAGEMENT**

Chair: H. Jones, BA 335, Phone (407) 823-2679

Faculty: Altman, Bogumil, Burnette, Callarman, Eubanks, Fandt, Fernald, Goodman, Gupta, Hatfield, Huseman, Leigh, P. Lewis, Martin, Potts, Ragusa, Rosenkrantz, Winter

The study of management includes an investigation into the processes and techniques of leadership, planning, staffing, and controlling of both small and complex organizations.

Course offerings are designed to show how technological factors, the framework for decision-making, and the human contributions have impact on productivity, satisfaction of job-related needs, and effectiveness of actual organization.
A student majoring in management may find a wide variety of career opportunities in business, industry, or government.

**Bachelor of Science in Business Administration: Management**

**Degree Requirements**

1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses (Students are required to take the two required Management electives and five other courses from the designated Management options.)
   a. Business College Common Body of Knowledge
   b. GEB 4351 Business in the International Environment 3 hours
      MAN 4720 Business Policies 3 hours
   c. ISM 3011 Management Information Systems 3 hours
      MAN 4120 Business and Society 3 hours
      MAN 4240 Organization Theory and Behavior 3 hours
4. Restricted Electives (Select a minimum of five courses)
   (The major should select one of the following concentration areas and take the designated five courses.)
   a. Human Resource Management
      MAN 3301 Personnel Management 3 hours
      MAN 4150 Human Relations in Management 3 hours
      MAN 4310 Personnel Management Issues 3 hours
      MAN 4350 Training and Development 3 hours
      MAN 4401 Labor Relations Management 3 hours
   b. Management Information Systems
      PHI 3130 Formal Logic I 3 hours
      ISM 4212 Data Base Management Systems 3 hours
      ISM 4113 Information Systems Analysis and Design 3 hours
      ISM 4130 Implementation Information Systems 3 hours
      ISM 4090 Seminar in Management Information Systems 3 hours
   c. Production/Operational Management
      MAN 4420 Management of Service Organizations 3 hours
      MAN 4521 Production Planning and Control 3 hours
      MAN 4590 Procurement Management 3 hours
      MAN 4854 Management Science 3 hours
      MAN 4595 Automated Materials Planning 3 hours
   d. General Management
      MAN 4150 Human Relations in Management 3 hours
      MAN 4600 International Management 3 hours
      Three additional courses to be selected from two of the other MAN or ISM concentration areas. 9 hours
5. Electives
   Total Semester Hours Required 120

**MINOR (For Business and Non-Business Majors)**

The College of Business Administration and the Department of Management offer a minor in Management Information Systems consisting of 27 semester hours.

Required courses: ACG 2001, ACG 2011, CGS 3000, MAN 3025, PHI 3130, ISM 3011, ISM 4212, ISM 4113, ISM 4130.2

**DEPARTMENT OF MARKETING**

**Interim Chair:** Ray R. Fisk, BA 317, Phone (407) 823-2108

**Faculty:** Allen, Davis, Fisk, Fuller, Gillett, Jarvis, Morris, Patton, Paul, Rubin, Teeple, Zank

Marketing encompasses the total system of interacting business activities designed to plan, price, promote, and distribute products and services to customers.

The marketing curriculum concentrates on developing the student's ability to understand, interpret, and measure market demand and to understand the blending of product, pricing strategies, promotional strategies, and distribution.
Bachelor of Science in Business Administration: Marketing

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses
   a. Business College Common Body of Knowledge
   b. GEB 4351 Business in the International Environment 3 hours
      MAN 4720 Business Policies 3 hours
   c. MAR 3503 Consumer Market Behavior 3 hours
      MAR 3613 Marketing Research and Information Systems 3 hours
      MAR 3823 Marketing Management 3 hours
      MAR 4803 Marketing Strategy 3 hours
4. Restricted Electives
   Minimum of 3 courses
   MAR 3323 Advertising and Promotion Management 3 hours
   MAR 3403 Sales Management 3 hours
   MAR 4623 Product Management 3 hours
   MAR 4231 Retail Management 3 hours
   MAR 4203 Marketing Channel Systems 3 hours
   MAR 4156 International Marketing 3 hours
   MAR 4453 Industrial Marketing 3 hours
   MAR 4071 Contemporary Marketing Issues 3 hours
   MAR 4848 Services Marketing 3 hours
5. Electives
   Total Semester Hours Required 120
   Majors who meet departmental criteria are also eligible to apply for a marketing internship (MAR 4941) or the small business consulting class (MAR 5941), each of which is assigned three hours of elective credit. However, neither of these two courses can be counted as one of the restricted electives required of marketing majors.
COLLEGE OF EDUCATION

UNDERGRADUATE PROGRAMS
Art Education (BS)
Elementary Education (BS)
English Language Arts Education (BS)
Exceptional Child (BS)
Foreign Language Education (BS)
Mathematics Education (BS)
Physical Education (BS)
Science Education (BS)
Social Science Education (BS)
Vocational Education and Industry Training (BS)

GRADUATE PROGRAMS*
Masters Programs
Business Education (M.Ed.)
Counselor Education (MA, M.Ed)
Educational Leadership (MA, M.Ed)
Educational Media (M.Ed)
Elementary Education (MA, M.Ed)
English Language Arts Education (MA, M.Ed)
Exceptional Child (MA, M.Ed)
Instructional Systems (MA)
Instructional Technology (MA, M.Ed)
Mathematics Education (MA, M.Ed)
Music Education (M.Ed)
Physical Education (MA, M.Ed)
Reading Specialist (M.Ed)
School Psychology (Ed.S)
Science Education (MA, M.Ed)
Social Science Education (MA, M.Ed)
Vocational Education (MA, M.Ed)

Doctoral and Specialist Programs
Administration & Supervision (Ed.S, Ed.D)
Curriculum and Instruction (Ed.S, Ed.D)
Educational Leadership (Ed.S, Ed.D)
School Psychology (Ed.S)

*See the Graduate catalog for information.
The role of the College of Education at the undergraduate level is to prepare students for careers as elementary, secondary, exceptional, physical, and vocational education teachers. The program of studies includes three components: general education, a subject matter specialization(s), and a teacher education component that addresses the professional knowledge and practical experience future teachers need in order to successfully teach children and youth in public school or private school settings.

The College of Education offers Bachelor of Science degrees with the following majors:

Art Education
Elementary Education
English Language Arts Education
Exceptional Child Education
Foreign Language Education
Mathematics Education
Physical Education
Science Education
Social Science Education
Vocational Education and Industry Training

Admission to the University of Central Florida does not imply admission to the College of Education. Students will only be allowed to enroll in the 3000/4000 level courses taught by the College of Education after they have been admitted to the College. Students admitted to the College of Education will need to meet additional requirements in order to be fully admitted to Teacher Education.

Admission to the College of Education

Admission to the College will be granted when students meet the following requirements:

• complete 60 hours including the University General Education program or its equivalent, i.e. an A.A. degree from an approved Florida community college or state university
• have on file in the University admissions office a score at or above the 40th percentile on the SAT (840) or ACT (20 enhanced) and a 2.5 overall GPA.

Additionally, students will be required to complete, during the course of their programs, the following pre-professional requirements:

1. SPC 1016
2. MAC 1104 or MGF 1203
3. PSY 2013 or SYG 2000
4. Program specific course (see program major requirements)

Admission to Teacher Education

Admission to Teacher Education will be granted when students meet the following requirements:

• have on file in the University admissions office passing scores on all parts of the College Level Academic Skills Test (CLAST)
• present an overall GPA of 2.5
• achieve a "C" or better grade in EDG 4321, Teaching Strategies, including successful completion of the tutorial component or equivalent
• complete a formal application for admission to a particular teacher education program
• be recommended by the faculty of the department of the student's major
• meet any special departmental requirements

Non-Degree Program (Initial Certification Only)

All students who have earned a Baccalaureate degree from an accredited institution and
who wish to be certified in elementary education must complete an undergraduate or master’s degree in elementary education. For other certification areas for which the College has programs, students may elect to complete 1) an undergraduate degree 2) a graduate degree or 3) an alternative program as a post-baccalaureate student. Students must meet regular admission requirements for the College of Education and Teacher Education.

Teacher Education Curriculum

The professional teacher education curriculum is designed to provide students the opportunity to develop the professional knowledge, understandings, and competencies required for entry into the profession of teaching. Particular attention is given in the curriculum to the following:

- knowledge and understanding of the growth and development of children and youth
- knowledge and understanding of how children and youth learn
- knowledge and skills for accurately assessing and evaluating student performance
- knowledge and understanding of the role and function of schools and teachers in a free society to design educational teaching objectives
- ability to plan and implement effective teaching strategies
- ability to utilize computers and other forms of technology in teaching
- ability to work with culturally diverse populations

Common Body of Professional Knowledge

Department of Educational Foundations, ED 243, Phone (407) 823-2427

The following course work provides the foundation of professional knowledge and understanding and is required of all majors:

- EDG 4321 Teaching Strategies 4 hours
- EDF 4282 Application of Technology in Education 3 hours
- EDG 4324 Teaching in the Schools 3 hours
- EDF 3603 Analysis of Educational Foundations 3 hours
- EDF 4214 Classroom Learning Principles 3 hours

Student Internships

Assistant Dean: J. H. Armstrong, ED 115, Phone (407) 823-2436
Director: H. Hall, ED 158, Phone (407) 823-5788

The internship components of the professional program include early and continuous field experiences which provide students opportunities to develop skills and instructional competence. The internship program provides students a broad range of instructional experiences in various school settings which are developed through cooperative planning with local school administrators and teachers.

Field experience is an integral part of every degree program and consists of a junior and senior-year student teaching requirement. Placement of students is the responsibility of the College of Education. Students are placed in public schools that have been approved as Student Internship Centers.

Junior student teaching is a six semester hours credit experience. Students are assigned to work with certified supervising teachers under the direction of a College faculty coordinator. The junior student teaching program provides the student experiences at different grade levels and classroom settings for the purpose of developing specific instructional skills and knowledge and understanding of schooling. Students are enrolled in related professional courses during the junior student teaching experience. Application is made through the Office of Student Internships.

Deadlines are as follows:

- Fall Semester: February 15 (preceding semester)
- Spring Semester: September 15 (preceding semester)

Senior student teaching is a twelve-hour experience normally completed during the student's last semester. The student is placed in an approved school internship center under a supervising teacher and College coordinator. Students are expected to develop and execute instructional plans and to demonstrate the competencies required for temporary
certification. The senior internship is considered a full-time experience, and students are encouraged not to register for other classes.

Admission to Senior Student Teaching requires that the student has successfully completed requirements of junior student teaching and possesses at the time of application, a 2.5 G.P.A. in the area of content specialization, a 2.5 G.P.A. in the professional education sequence, and a 2.5 G.P.A. overall. Students must also be approved for admission by the faculty in the department of the student's major.

Application is made through the office of Student Internships. Application deadlines are as follows:
- Fall Semester: February 15 (preceding semester)
- Spring Semester: September 15 (preceding semester)

Graduation Requirements for a Two-Year Temporary Certificate

To qualify for graduation, a student must have a 2.5 G.P.A. in all course work, a 2.5 G.P.A. in the area of content specialization, and a 2.5 G.P.A. in the professional course sequence. All College of Education undergraduate curricula fulfill State of Florida academic requirements for a temporary certificate. College of Education graduates who desire to teach outside Florida must meet certification requirements of the state in which they intend to seek a teaching position and should contact the appropriate Director of Teacher Education, State Department of Education for specific requirements.

All applicants for the Professional Teaching Certificate must demonstrate satisfactory completion of the Professional Orientation Program requirements and pass the College Level Academic Skills Test (CLAST), the professional education examination, and a specialization test in their certification area.

DEPARTMENT OF EDUCATIONAL FOUNDATIONS

Chair: Alexander T. Wood, ED 243, Phone (407) 823-2426
Faculty: Professors: Cowgill, Dziuban, Kysilka, Lange, Manning
Associate Professors: Beadle, Biramiah, Blume, Harrow, Hiett, Hoover, McLain, Miller, Olson, Sciortino, Sullivan, Wood
Assistant Professors: Allen, Holt, Ikpa
Instructors: Ericson, Hutchinson.

The Department of Educational Foundations teaches the core of professional courses that address the competencies and skills needed by all teachers. Foundation courses are also available for students pursuing graduate degrees in teacher education.

DEPARTMENT OF EDUCATIONAL SERVICES

Interim Chair: Robert A. Rothberg, ED 318, Phone (407) 823-2596
Faculty: Professors: Bozeman, Hernandez, Johnson, Lynn, Miller, Rothberg
Associate Professors: Baumbach, Bollet, Cornell, Driscoll, Orwig, Tubbs
Assistant Professors: Balado, Barron, Daly, Hill, Priest

The focus of the Department of Educational Services is to provide training for specialists in school and non-school environments. Certification programs and masters level (M.A. or M.Ed.) graduate programs are available in Counselor Education, Educational Leadership, and Instructional Technology. The Educational Specialist (Ed.S) is offered in Educational Leadership and School Psychology. The Doctor of Education (Ed.D) degree is offered in Educational Leadership.

DEPARTMENT OF EXCEPTIONAL AND PHYSICAL EDUCATION

Chair: Michael W. Churton, ED 214 Phone (407) 823-2598
Faculty: Professors: Churton, Midgett, Olson, Rohter.
Associate Professors: Bell, Cross, Gergley, Higginbotham, Miller, Platt, Powell.
Assistant Professors: Clark, Martin, Renner.
Instructors: Mitchell

Undergraduate academic major programs leading to bachelor's degrees and certification are offered in Exceptional Education and Physical Education. The Exceptional Education
program includes specialities in: (a) emotionally handicapped; (b) mentally retarded and (c) specific learning disabilities. The Physical Education program is a K-12 specialization. In addition, minors, certification programs, and masters graduate programs are available. Students are responsible for completion of program requirement and are encouraged to review their program with an assigned advisor.

**Bachelor of Science: Exceptional Child Education**

1. Undergraduate Degree Requirements
2. Program Specific Pre-professional Requirement: *Human Growth and Development*
3. Required courses

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<th>Specialization</th>
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<td></td>
<td>RED 3012</td>
<td>Foundations of Reading</td>
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<td>RED 4519</td>
<td>Diag and Corrective Reading Strategies</td>
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<td>Methods for Academic Skills for Exceptional Students</td>
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<td>Instruction of Math in the Elementary School</td>
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<td>PET 4601</td>
<td>Motor Development: Habilitation &amp; Remediation for Exceptional Students</td>
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<td>EEX 3010</td>
<td>Orientation to Special Education</td>
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<td></td>
<td>EEX 3102</td>
<td>Language Development and Common Disorders</td>
<td>3 hours</td>
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<td></td>
<td>EEX 3221</td>
<td>Assessment of Exceptional Learners</td>
<td>3 hours</td>
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<tr>
<td></td>
<td>EEX 4601</td>
<td>Behavioral Management</td>
<td>3 hours</td>
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<tr>
<td></td>
<td>LAE 4314</td>
<td>Language Arts in the Elementary School</td>
<td>3 hours</td>
</tr>
<tr>
<td></td>
<td>EEX 4243</td>
<td>Techniques for the Exceptional Adolescent-Adult</td>
<td>3 hours</td>
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<tr>
<td></td>
<td>EED 4011</td>
<td>Introduction to the Emotionally Disturbed</td>
<td>4 hours</td>
</tr>
<tr>
<td>or</td>
<td>EED 4212</td>
<td>Curriculum and Program Adaptations, E.H.</td>
<td>4 hours</td>
</tr>
</tbody>
</table>
Bachelor of Science: Physical Education

1. Undergraduate Degree Requirements
2. Program Specific Requirement: Human Anatomy
3. Special Methods
   - PET 3461: Teaching Physical Education in the Elementary School (2 hours)
   - PET 3463: Physical Education in the Secondary School (2 hours)
4. Specialization 1. Physical Education (K-12)
   - PET 4640: Adapted Physical Education (3 hours)
   - PET 4401: Administration and Measurement In Physical Education (3 hours)
   - PEO 3011: I/A Team Sports (3 hours)
   - PET 4351: Applied Exercise and Human Physiology (3 hours)
   - PET 4622: Human Injuries (3 hours)
   - PET 4312: Biomechanics (3 hours)
   - PET 4382: Fitness Assessment and Exercise Physiology (3 hours)
   - PEP 3204: Gymnastics (3 hours)
   - PET 4035: Motor Development & Learning (3 hours)
   - DAE 3370: Dance & Rhythms (3 hours)
   - PEO 3041: Games for the Elementary School (3 hours)
   - LEI ---: Outdoor and Leisure Activities (3 hours)
   - PET 3125: History of Sports and Physical Ed. (3 hours)
   - PET 3453: Coaching and Officiating (3 hours)
   - PEO 3031: Individual Sports and Leisure Activities (3 hours)
5. Restricted Electives
   - None
6. Electives
   - None

Minimum Total Semester Hours Required: 120

DEPARTMENT OF INSTRUCTIONAL PROGRAMS

Chair: D. Kirby, ED 346, Phone (407) 823-2939
Faculty: Professors: Anderson, Brumbaugh, Clarke, Hall, Hynes, Joeis, Kirby, McGee, Martin, Palmer, Thompson
Associate Professors: Armstrong, Gurney, Hopkins, Hudson, Paugh, Siebert, Sorg, Williams
Assistant Professors: Bailey, Camp, Cornett, Everett, Kaplan, McGhee, Medin, Ortiz, Ratliff, Sanford, While
Instructors: Buchoff, Fleener, Merritt, Ridener, Robinson, Siciliano

Elementary Education

The career Elementary Education program is planned for students interested in the education of children, six through twelve years of age. Students who major in elementary education are qualified to teach grades one through six upon graduation and receipt of a Florida teaching certificate.

An elementary education major must have the following preparation: (1) a broad general education; (2) a specialized knowledge of content, techniques, and materials needed to teach different elementary school subjects such as art, language arts, reading, mathemat-
ics, music, physical education, science and social studies; and (3) professional study which includes planned laboratory activities with children in schools identified as Teacher Education Centers.

Early Childhood Education (nursery and kindergarten). In combination with preparation to teach grades one through six, requirements may be met for preparation/certification to teach Kindergarten.

Secondary Education
Career programs are available for prospective teachers who have an interest in working with adolescent students in a specific academic area at the middle, junior, or high school levels. Specializations are available in Biology, Business, Chemistry, English, Foreign Language, Mathematics, Physics, and Social Science.

Art/Music
Two programs are designed to prepare specialists to teach at both the elementary and secondary levels (K-12). A major in Art Education is available for students with an interest in art. The Bachelor's degree program in Music Education is located in the Department of Music with the Department of Instructional Programs responsible for professional requirements.

Vocational Education and Training Development
The vocational education degree is for individuals in Business/Office Occupations, Industrial/Technical areas or selected Health Occupations who wish to teach their specialization in secondary or post-secondary schools. To be eligible for the degree, students must have worked full time in the occupation for at least two years and must demonstrate competence through an examination or licensure in the area in which they wish to teach. A maximum of 30 semester hours of credit by examination or credit granted through licensing may count toward the degree.

The Training Development Track is designed for individuals who are or who plan to be trainers in business, industry, or health care facilities. This option will not prepare individuals to meet Florida Teacher Certification requirements.

Bachelor of Science: Art Education
Degree Requirements
1. Undergraduate Degree Requirements
2. Program Specific Requirement: Art 2201C Design Fundamentals I
3. Required Courses
   Specialization
   - ART 2201C Design Fundamentals I 3 hours
   - ART 2202C Design Fundamentals II 3 hours
   - ART 2300C Drawing Fundamentals I 3 hours
   - ART 2301 Drawing Fundamentals II 3 hours
   - ART 3110C Ceramics 3 hours
   - ART 3510C Painting 3 hours
   - ART 4530C Advanced Painting 3 hours
   - ART 5109C Crafts Design 3 hours
   - ART 3280C Graphic Design I 3 hours
   - ARH 2050 History of Art I 3 hours
   - ARH 2051 History of Art II 3 hours
   - ARH 4800 Theory and Criticism of Visual Arts 3 hours
   - ART 3600C Photography 3 hours
   Special Methods
   - ARE 4143 Methodology for Teaching K-12 Art Education I 2 hours
   - ARE 4144 Methodology for Teaching K-12 Art Education II 2 hours
4. Restricted Electives (select two courses)—6 hours
   - ART 3230C Design in Advertising 3 hours
   - ART 2481C Computer Graphic Design 3 hours
   - ART Art Therapy 3 hours
   - ART 3600 Photography 3 hours
ART 3400C
Also:
PHI 3800
PHI 3803
ARH 2050, 2051, or 4700.
5. Electives
None
Minimum Total Semester Hours Required
Bachelor of Science: Elementary Education
Degree Requirements
1. See Undergraduate Degree Requirements
2. Program Specific Requirement: GEO 1200 Physical Geography
3. Required Courses
   Specialization
   ARE 4313 Art in the Elementary School 3 hours
   HLP 4460 Teaching Elementary School Health/Physical Education 3 hours
   LAE 3414 Literature for Children 3 hours
   LAE 4314 Language Arts in the Elementary School 3 hours
   MAE 4326 How Children Learn Mathematics 4 hours
   MUE 3210 Music in the Elementary School 3 hours
   SCE 3310 Teaching Science in the Elementary School 4 hours
   SSE 3312 Teaching Social Science in the Elementary School 4 hours
   Special Methods
   RED 3012 Basic Foundations of Reading 3 hours
   RED 4519 Diagnostic and Corrective Reading Strategies 3 hours
4. Restricted Electives
   Ten semester hours in science are required for majors: GEO 1200, BSC 2010C, and PHY 3014C. Twelve semester hours in mathematics are required for majors: MAE 1810 and MAE 2811 are required in addition to MAC 1104 or MGF 1202 and STA 2014. The AA degree transfer student from a Florida public community college is required to select MAE 3112 in lieu of MAE 1810 and MAE 2811.
5. Electives
None
Minimum Total Semester Hours Required
Bachelor of Science: English Language Arts Education
Degree Requirements
1. See Undergraduate Degree Requirements
2. Program Specific Requirement: CRW 2000 Principles of Creative Writing
3. Required Courses
   Lower Division
   ENC 1101 Composition I 3 hours
   ENC 1102 Composition II 3 hours
   SPC 1600 Fundamentals of Oral Communication 3 hours
   Literature
   AML 3031 American Literature I 3 hours
   AML 3051 American Literature II 3 hours
   AML 4321 Modern American Literature OR 3 hours
   ENL 3031 English Literature I: Beowulf to 1660 3 hours
   ENL 3051 English Literature II: From 1660 to 1870 3 hours
   ENL 4373 Modern British Literature 3 hours
   ENL 4330 Shakespeare 3 hours
   LIT 3000 Literary Analysis 3 hours
   Composition
   ENC 3311 Advanced Expository Writing 3 hours
Select one:
CRW 2000, CRW 3001, CRW 3310 3 hours

Language
LIN 4341 Modern English Grammar 3 hours
or LIN 3340 Grammar and Composition 3 hours
LAE 4342 Teaching Language and Composition 3 hours

Special Methods
LAE 3335 English Instructional Analysis 4 hours

4. Restricted Electives
Recommended: LIT 2110, LIT 2120
Approved: ENL 3213, 4113, 4311, 4341,
LIT 3313, 4312, AML 4113, LIN 3010

5. Electives
None

Minimum Total Semester Hours Required 120

Bachelor of Science: Foreign Language Education

Degree Requirements
1. See Undergraduate Degree Requirements
2. Program Specific Requirements: FRE 2201 Intermediate French Language and Civilization II; SPN 2201 Intermediate Spanish Language and Civilization II

3. Required Courses
AREAS OF SPECIALIZATION (Select One)

French Language
FLE 3063 Foreign Language as Human Behavior 2 hours
FRE 1120 Elementary Language and Civilization I 4 hours
FRE 1121 Elementary Language and Civilization II 4 hours
FRE 2200 Intermediate Language and Civilization I 4 hours
FRE 2201 Intermediate Language and Civilization II 4 hours
FRE 3244 French Conversation 3 hours
FRE 3420 French Composition 3 hours
FRW 3100 Survey of French Literature I 3 hours
FRW 3101 Survey of French Literature II 3 hours

Spanish Language
FLE 3063 Foreign Language as Human Behavior 2 hours
SPN 1120 Elementary Language and Civilization I 4 hours
SPN 1121 Elementary Language and Civilization II 4 hours
SPN 2230 Intermediate Language and Civilization I 4 hours
SPN 2231 Intermediate Language and Civilization II 4 hours
SPN 3241 Spanish Conversation 3 hours
SPN 3420 Spanish Composition 3 hours
SPW 3100 Survey of Spanish Literature I 3 hours
SPW 3101 Survey of Spanish Literature II 3 hours

Special Methods
FLE 3333 Foreign Language Instructional Analysis 4 hours

4. Restricted Electives
Select upper division courses in Area of Specialization.
ANT 3410 Cultural Anthropology 3 hours
LIN 3010 or 4801 Language and Meaning 3 hours

5. Electives
See your advisor concerning courses related to “English for Speakers of other Languages” (ESOL) and Bilingual Education.

Minimum Total Semester Hours Required 123

Bachelor of Science: Mathematics Education

Degree Requirements
1. See Undergraduate Degree Requirements
2. Program Specific Requirement: CGS 1060 Introduction to Computer Science
3. Required Courses
Specialization
Core Requirements
MAC 3311  Calculus w/Analytic Geometry I  4 hours
MAC 3312  Calculus w/Analytic Geometry II  4 hours
MAS 3203  Number Theory  3 hours
MAS 3113  Matrices  3 hours
MHF 2300  Logic/Proof Math  3 hours
MHF 4404  History of Mathematics  3 hours
MTG 4212  Modern Geometry  4 hours
STA 3023  Statistical Methods I  3 hours

Special Methods
MAE 3330  Teach Math HS  4 hours
MAE 4634  Programs in Teaching of Mathematics  3 hours

4. Restricted Electives
Select two (Min. 6 hours): MAC 1104, 1114, 3313, 4301, MAD 4203, MAS 3103, MGF 1203, MTG 2931.

5. Electives
Select in consultation with advisor.

Minimum Total Semester Hours Required  120

Bachelor of Science: Science Education

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses

Program Prerequisites
MAC 1104  College Algebra  3 hours
PSY 2013  General Psychology  3 hours
STA 2014  Principles of Statistics  3 hours

Biology Specialization (50 minimum)

Biology Requirements (32 minimum)
BSC 2010C  General Biology  4 hours
ZOO 2010C  General Zoology  4 hours
BOT 2010C  General Botany  3 hours
PCB 3023  Molecular Cell Biology  3 hours
PCB 3063  Genetics  3 hours
PCB 3063L  Genetics Laboratory  1 hour
PCB 3043  Ecology  3 hours
PCB 3043L  Ecology Laboratory  1 hour
MCB 3013C  Microbiology  5 hours
CHM 2205C  Intro to Organic and Biochemistry  5 hours
PCB 4683  Population Biology and Evolution  4 hours

Support Science Requirements (16 minimum)
CHM 2045  Chemistry Fundamentals I  4 hours
CHM 2046  Chemistry Fundamentals II  3 hours
CHM 2046L  Chemistry Fundamentals Laboratory  1 hour
GLY 1030  Geology and Its Applications  3 hours
PHY 2053C  College Physics I  4 hours

Select minimum of 1 course to complete minimum science requirements
BOT 3154  Local Flora  3 hours
BOT 3800  Ethnobotany  3 hours
BOT 3820  Plants and Urban Environment  3 hours
BOT 4223C  Plant Anatomy  4 hours
BOT 4303C  Plant Kingdom  5 hours
BOT 4713C  Plant Taxonomy  5 hours
BSC 4103  History of Biology  3 hours
ENV 4004C  General Entomology  4 hours
PCB 3233  Immunology  3 hours
PCB 3301C  Aquatic Biology  4 hours
PCB 3703C  Human Physiology  4 hours
PCB 4302C  Limnology I  4 hours
ZOO 3733C  Human Anatomy  4 hours
ZOO 4203C  Invertebrate Zoology  4 hours
PHY 2054C  College Physics II  4 hours
AST 3002  Astronomy  3 hours
Special Methods
SCE 3330  Science Instructional Analysis  4 hours

4. Electives
Select in consultation with advisor.

CHEMISTRY
Program Prerequisites
STA 2014  Principles of Statistics  3 hours
MAC 3311  Calculus with Analytic Geometry I  4 hours

Chemistry Specialization (50 minimum)
Chemistry Requirements (32 minimum)
CHM 2045  Chemistry Fundamentals I  4 hours
CHM 2046  Chemistry Fundamentals II  3 hours
CHM 2046L  Chemistry Fundamentals Laboratory  1 hour
CHM 3120C  Analytical Chemistry  5 hours
CHM 3210  Organic Chemistry I  3 hours
CHM 3211  Organic Chemistry II  3 hours
CHM 3211L  Organic Laboratory Techniques I  2 hours
CHM 4xxxC  Basic Physical Chemistry  4 hours
BCH 4053  Biochemistry I  4 hours
CHS 3501  Introduction to Forensic Science  3 hours

Support Science Requirements (18 minimum)
PHY 2053C  College Physics I  4 hours
PHY 2054C  College Physics II  4 hours
BSC 201 OC  General Biology  4 hours
GLY 1030  Geology and its Applications  3 hours
Special Methods
SCE 3330  Science Instructional Analysis  4 hours

PHYSICS
Program Prerequisites
STA 2014  Principles of Statistics  3 hours
MAC 3311  Calculus with Analytic Geometry I  4 hours
MAC 3312  Calculus with Analytic Geometry II  4 hours
MAC 3313  Calculus with Analytic Geometry III  4 hours
MAP 3302  Differential Equations  3 hours
PSY 2013  General Psychology  3 hours

Physics Specialization (50 minimum)
PHY 2053C  College Physics I  4 hours
PHY 2054C  College Physics II  4 hours
PHY 3048  Physics for Engineers & Scientists I  3 hours
PHY 3048L  Physics Lab for Engineers & Scientists I  1 hour
PHY 3049  Physics for Engineers & Scientists II  3 hours
PHY 3049L  Physics Lab for Engineers and Scientists II  1 hour
PHY 3101  Modern Physics  3 hours
PHY 3752C  Physics of Scientific Instruments  4 hours

Nine S.H. required from following 3 groups
Select 3 S.H. from the following:
PHY 3320  Electricity and Magnetism  3 hours
PHY 4220  Mechanics  3 hours
PHY 4604  Wave Mechanics  3 hours
PHY 5200C  Newtonian Mechanics for Teachers  1 hour
PHY 5302C  Electromagnetism for Teachers  1 hour
PHY 5601  Quantum Physics for Teachers  1 hour

Select 3 S.H. from the following:
PHY 3503  Thermodynamics  3 hours
PHY 4424  Optics  3 hours
PHY 5401C  Optics for Teachers  1 hour
PHY 5500C  Thermal Physics for Teachers  1 hour
PHY 5600  Special Relativity for Teachers  1 hour
PHZ 5800C  Wave Motion for Teachers  1 hour

Select 3 S.H. from the following:
PHZ 3151  Computer Methods in Physics  4 hours
PHY 3802L  Intermediate Physics Laboratory  3 hours
PHY 4803L  Advanced Physics Laboratory  3 hours
PHY 5300C  Electricity for Teachers  1 hour
PHZ 5301C  Nuclear Physics for Teachers  1 hour
PHZ 5150C  Computer Methods in Physics for Teachers  1 hour

Support Science Requirements (16 minimum)
CHM 2045  Chemistry Fundamentals I  4 hours
CHM 2046  Chemistry Fundamentals II  3 hours
CHM 2046L  Chemistry Fundamentals Laboratory  1 hour
BSC 2010C  General Biology  4 hours
GLY 1030  Geology and its Applications  3 hours

Special Methods
SCE 3330  Science Instructional Analysis  4 hours

4. Electives
   Select in consultation with Advisor.
   Minimum Total Semester Hours Required  120

Bachelor of Science: Social Science Education

Degree Requirements
1. See Undergraduate Degree Requirements
2. Program Specific Requirement: SYG 2000 General Sociology
3. Required Courses
   Specialization (52 hours)
   Lower Division Requirements:
   ECO 2013  Principles of Economics I  3 hours
   ECO 2023  Principles of Economics II  3 hours
   EUH 2000  Western Civilization I  3 hours
   EUH 2001  Western Civilization II  3 hours
   AMH 2010  U.S. History 1492-1877  3 hours
   AMH 2020  U.S. History 1877-Present  3 hours
   POS 2041  American National Government  3 hours
   SYG 2000  General Sociology  3 hours

   Upper Division Requirements:
   CPO 3103  Comparative Politics  3 hours
   GEO 3370  Resources Geography  3 hours
   GEO 3470  World Political Geography  3 hours
   AMH 4231  U.S. History 1914-1945  3 hours
   AMH 4270  U.S. History 1945-Present  3 hours

   Special Methods
   SSE 3333  Social Science Instr. Analysis  4 hours

   4. Restricted Electives (9 hours)
   American History (select one)  3 hours
   AMH 3370  American Economic History
   AMH 4130  American Revolution
   AMH 4170  Civil War & Reconstruction
   European History (select one with approval by advisor)  3 hours
   Political Science (select one)  3 hours
State Government & Public Policy  
Voting & Elections  
International Relations

5. Electives
None

Minimum Total Semester Hours Required 120

Bachelor of Science: Vocational Education and Industry Training

Degree Requirements
1. See Undergraduate Degree Requirements
2. This program differs from other programs in the college as noted below in #3. See special college and/or department requirements
3. Required Courses

Business Education
I. Areas of Emphasis (9)
A. Public School Teaching
   - EDF 3603 Analysis of Educational Foundations 3 hours
   - EDF 4214 Classroom Learning Principles 3 hours
   - EDF 4282 Applications of Technology in Education 3 hours
   OR
B. Industry Training
   - EME 5054 Instructional Technology 3 hours
   - EVT 4169 Curriculum Development Techniques for Industry Training 3 hours
   - ADE 4382 Teaching Adult Learners 3 hours

II. Instructional Core (15)
A. Public School Teaching
   - EDG 4321 Teaching Strategies 4 hours
   - EVT 3502 Special Needs of Vocational Students 4 hours
   - EVT 4065 Principles & Practices of Vocational Education 4 hours
   - EDG 4324 Teaching in the Schools 3 hours
   OR
B. Industry Training
   - EVT 3365 General Methods/Testing Evaluation in Vocational Education 4 hours
   - EVT Special Needs of Vocational Students 4 hours
   - EVT 4065 Principles & Practices of Vocational Education 4 hours
   - EVT 4368 Advanced Teaching Techniques for Vocational Education 3 hours

III. Special Methods of Teaching (4)
BTE 4410 Course Construction in Business Education 4 hours

IV. Directed Field Experiences (6-18)
ESE 3940 Junior Student Teaching-Secondary Level 6 hours
ESE 4943 Senior Student Teaching-Secondary Level 12 hours

Health Occupations
I. Areas of Emphasis (9)
A. Public School Teaching
   - EDF 3603 Analysis of Educational Foundations 3 hours
   - EDF 4214 Classroom Learning Principles 3 hours
   - EDF 4282 Applications of Technology in Education 3 hours
   OR
B. Industry Training
   - EME 5054 Instructional Technology 3 hours
   - EVT 4169 Curriculum Development Techniques for Industry Training 3 hours
   - ADE 4382 Teaching Adult Learners 3 hours

II. Instructional Core (15)
   - EVT 3365 Methods of Training in Vocational Subjects 4 hours

160
All students must complete an area of specialization through (1) occupationally specific coursework and/or (2) Credit by Examination. Occupationally specific coursework may be lower or upper division and may be transferred from another accredited educational institution offering college credit. Credit by examination may be completed through occupationally specific examinations, such as state or national registrations/licenses or occupationally specific professional associations. All requirements must be in an approved area of (1) Business, (2) Health Occupations, or (3) Industrial/Technical occupations.

Examples of coursework and credit by examination include:

### I. Business Education

**A. Specified Coursework (for Business Education)**

(Areas: All areas must be completed (24 semester hours)

1. Business Communications (Secretarial) - 3 semester hours
   
   **OST 1335**

2. Typewriting - 6 semester hours
   
   **OST 1110 and OST 2120**

3. Word Processing - 3 semester hours
   
   **OST 1701**

4. Accounting - 6 semester hours
   
   **ACG 2001 and ACG 2011**

5. Economics - 6 semester hours
   
   **ECO 2013 and ECO 2023**

6. Business Law - 3 semester hours
   
   **BUL 3111**

**B. Required Elective Coursework - 9 semester hours**

Any 9 semester hours of upper division courses from the College of Business Administration.

### II. Health Occupations (30 semester hours)

Many of the health occupations offer state or national licensure or registration examinations.
Students must meet the "licensure" requirements for teacher certification as set forth in the Florida Accreditation Codes. A copy of current licensure/registration is required.

III. Industrial/Technical Occupations (30 semester hours)

Competency examinations have been developed for many industrial related occupations. A fee is required to take the written and practical examinations. These examinations will be scheduled within the Central Florida area.

**Occupationally Related Work Experience**

All students must provide written documentation of occupationally related work experience. The amount of hours or years of occupationally related work experience is dependent upon the Occupational Specialization (i.e. Business, Health, Industrial). This is a requirement for graduation from the degree program.
COLLEGE OF ENGINEERING

UNDERGRADUATE PROGRAMS

ENGINEERING
- Aerospace Engineering (BSAsE)
- Civil Engineering (BSCE)
- Computer Engineering (BSCpE)
- Electrical Engineering (BSEE)
- Environmental Engineering (BSEnvE)
- Industrial Engineering (BSIE)
- Mechanical Engineering (BSME)

ENGINEERING TECHNOLOGY
- Computer Engineering Technology (BSET)
- Design Engineering Technology (BSET)
- Electronics Engineering Technology (BSET)
- Information Systems Engineering Technology (BSET)
- Operations Engineering Technology (BSET)

GRADUATE PROGRAMS*

ENGINEERING
- Civil Engineering (MSCE, MCE, Ph.D.)
- Computer Engineering (MSCpE, Ph.D.)
- Computer Integrated Manufacturing (MS)
- Electrical Engineering (MSEE, Ph.D.)
- Engineering (MS)
- Engineering Management (MS)
- Environmental Engineering (MSEnvE, Ph.D.)
- Industrial Engineering (MSIE, Ph.D.)
- Industrial Engineering/Manufacturing Engineering (MSMfgE)
- Mechanical Engineering (MSME, Ph.D.)
- Operations Research (MS)
- Product Assurance (MS)
- Simulations Systems (MS)

*See the Graduate Studies Catalog for information.
PROFESSIONAL COLLEGE OF ENGINEERING

Based on a broad unified core program, the College of Engineering at the University of Central Florida seeks to produce well-qualified graduates in specifically selected professional disciplines. The College also conducts research and service responsive to Florida and national needs.

ENGINEERING CURRICULUM

The Engineering curriculum is directed toward professional objectives which are best met by completing the baccalaureate degree program followed by additional professional education at the graduate level leading to the Master of Science in Engineering.

Requirements:

Students who wish to be admitted to full freshman standing in the College should present the following secondary school credits in addition to the minimum University requirements:

- a total of 3½ units in mathematics, including advanced algebra, geometry, and trigonometry (required)
- calculus (recommended)
- at least one unit in physics (required)
- at least one unit in chemistry (required)
- one unit in biology (recommended)
- one-half unit in computer programming (FORTRAN preferred)

Students who have not met the requirements listed above may be required to complete additional University credit course work which may not be applied toward an engineering degree.
Students receiving a Bachelor of Science in Engineering must successfully complete 132 semester hours of coursework including:

- general education courses (2.000 GPA required)
- a pre-engineering core curriculum (2.250 GPA required)
- an engineering core curriculum (2.250 GPA required)
- required and elective courses in an engineering option of the student's choice (2.250 GPA required)

Transfer Credit

Subject to the general grade and residence requirements of the University, provisional credit will be granted for transferred course work equivalent to that required in UCF's engineering program. These provisional credits will become final only after the student has demonstrated the ability to do satisfactory work at the University. Transfer credits in pre-engineering from a junior college will be used to satisfy freshman and sophomore-level requirements only. Typically, students who have completed the A.A. degree (or equivalent education) with calculus, differential equations, chemistry, physics, engineering graphics, and a course in computer science (with FORTRAN) can complete the B.S.E program in two additional years. The status of a student and the specific credits acceptable toward the degree is determined by a College of Engineering petition approved by the Dean's office.

Student Performance

Prior to enrolling in courses at the professional level, students must receive approval from the office of the Dean of Engineering, and secure an approved course of study from their advisor for their remaining work.

Any student whose written or spoken English in any course is unsatisfactory may be reported by the instructor to the Dean. The Dean may assign supplementary work, including additional course work, consistent with the needs of the student. The granting of a degree may be delayed until the work is satisfactorily completed.

ROTC Program

The College offers a special five-year program to engineering students also enrolled in Air Force ROTC. This plan allows those students to spread their academic load over a five-year period to accommodate certain AFROTC courses which are not creditable to the engineering degree.

ENGINEERING TECHNOLOGY CURRICULUM

Students receiving a Bachelor of Science in Engineering Technology must successfully complete 128 semester hours including:

- general education courses
- an engineering technology core curriculum
- required and elective courses in a selected engineering technology option of the student's choice.

The engineering technology program provides upper level instruction for junior and senior-year students. Students who wish to be admitted to one of the engineering technology options should possess the A.A. degree (preferred) or an A.S. (or equivalent education) degree from a Florida public college or approved out-of-state institution in an appropriate engineering technology area. Prospective transfer students not holding the A.A./A.S. degree from a Florida public college may be considered on an individual basis, and should consult the "Transfer Applicants" portion of the Undergraduate Catalog for additional information. In all cases the status of a student and the specific credits acceptable toward the degree is determined by a College of engineering petition approved by the Dean's office.

MINOR: TECHNOLOGY AND SOCIETY

Contact Persons: Richard N. Miller, ENGR 281, Phone (407) 823-2455
                J. Paul Hartman, ENGR 247, Phone (407) 823-2317

The College of Engineering offers a minor in Technology and Society to interested UCF students. The minor is intended for students not enrolled in the College of Engineering, although students in the College may also be awarded the minor. To meet the requirements,
the student must complete, with a grade point average of 2.0 or higher, a minimum of 18 hours taken from the courses listed. A minimum of 9 hours must be taken from the EGN prefix courses listed below. Students should preferably complete the following general education program coursework prior to taking this minor: ECO 2013, MAC 1104; History or Humanities sequence.

The 18 hours are to be selected from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>EGN 4033</td>
<td>Technology and Social Change</td>
</tr>
<tr>
<td>EGN 4813</td>
<td>Science in History</td>
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<tr>
<td>EGN 4814</td>
<td>Technology in History</td>
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<tr>
<td>EGN 4818</td>
<td>Technology in North America</td>
</tr>
<tr>
<td>EGN 4823</td>
<td>Topics in Urban Development</td>
</tr>
<tr>
<td>EGN 4824</td>
<td>Energy and Society</td>
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<td>EGN 4830</td>
<td>Telecommunications</td>
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<td>EGN 4825</td>
<td>Environment and Society</td>
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<td>EGN 4832</td>
<td>Computers, Cybernetics and Society</td>
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<td>EGN 4843</td>
<td>Systems Modeling</td>
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<td>EGN 4844</td>
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<td>History of Architecture</td>
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</tr>
<tr>
<td>LIT 4433</td>
<td>Survey of Technical and Scientific Literature</td>
</tr>
<tr>
<td>PUP 3204</td>
<td>Environmental Politics</td>
</tr>
<tr>
<td>PUP 4503</td>
<td>Government and Science</td>
</tr>
<tr>
<td>PUP 4510</td>
<td>Space Policy</td>
</tr>
</tbody>
</table>

Bachelor of Science in Engineering

Program Coordinator: Richard N. Miller, ENGR 281, Phone (407) 823-2455.

The principal areas of study in the engineering curriculum are devoted to the basic sciences, mathematics, the fundamentals of engineering problem solving, and specialization in an option. These courses are not training courses for any of the mechanical or manipulative skills, but rather are planned to provide preparation for development, planning, design, research, graduate work, and with certain electives, for operation, production, testing, maintenance, and management. This program prepares the student for professional registration, industrial employment, and the pursuit of graduate work in engineering. In addition, basic engineering programs are increasingly being considered as appropriate preparation for advanced study in other professional areas, e.g., law, medicine, architecture.

ENGINEERING CORE REQUIREMENTS

The engineering core consists of pre-engineering and professional subject matter that is common to all options. Because this requirement is a substantial part of the Bachelor’s degree program, it gives the student time to become adjusted and to choose a field of specialization for which he or she is best suited.

PRE-ENGINEERING CORE

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 2013</td>
<td>Principles of Economics I</td>
<td>3</td>
</tr>
<tr>
<td>EGS 1111C</td>
<td>Engineering Graphics</td>
<td>2</td>
</tr>
<tr>
<td>CHS 1440</td>
<td>Fundamentals of Chemistry For Engineers</td>
<td>4</td>
</tr>
<tr>
<td>PHY 3048</td>
<td>Physics For Engineers and Scientists I</td>
<td>3</td>
</tr>
<tr>
<td>PHY 3049</td>
<td>Physics For Engineers and Scientists II</td>
<td>3</td>
</tr>
<tr>
<td>PHY 3048L or PHY 3049L or CHM 2046L</td>
<td>Laboratory Elective</td>
<td>1</td>
</tr>
<tr>
<td>MAC 3311,3312,3313</td>
<td>Calculus and Analytic Geometry</td>
<td>12</td>
</tr>
<tr>
<td>MAP 3302</td>
<td>Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>Biological or Earth Science Elective</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

1Includes portions of the General Education Program.
2Consult Department Chair for specific course required in option.
3Students without one secondary school unit of Chemistry should enroll in CHM 1034 and CHM 2046L prior to taking CHS 1440. Not for Environmental Engineering students.
4Students without one secondary school unit of Physics should enroll in PHY 2053C prior to taking PHY 3048.
ENGINEERING CORE

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGN 3420</td>
<td>Engineering Analysis</td>
<td>3</td>
</tr>
<tr>
<td>EGN 3310</td>
<td>Engineering Analysis - Statics</td>
<td>3</td>
</tr>
<tr>
<td>EGN 3321</td>
<td>Engineering Analysis - Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>EGN 3613</td>
<td>Engineering Economic Analysis</td>
<td>2</td>
</tr>
<tr>
<td>EGN 3704</td>
<td>Engineering and the Environment</td>
<td>2</td>
</tr>
<tr>
<td>EGN 3365C</td>
<td>Structure and Properties of Materials</td>
<td>3</td>
</tr>
<tr>
<td>EGN 3373</td>
<td>Principles of Electrical Engineering</td>
<td>4</td>
</tr>
<tr>
<td>EGN 3343</td>
<td>Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>or</td>
<td></td>
</tr>
<tr>
<td>EGN 3358</td>
<td>Thermo-Fluids Heat Transfer</td>
<td>2</td>
</tr>
<tr>
<td>EGN 4624</td>
<td>Engineering Administration</td>
<td>3</td>
</tr>
<tr>
<td>PHY 3101</td>
<td>Modern Physics</td>
<td>3</td>
</tr>
<tr>
<td>STA 3032</td>
<td>Probability and Statistics for Engineers</td>
<td>3</td>
</tr>
</tbody>
</table>

5 Requires a secondary school programming course (FORTRAN preferred).
6 Consult Department Chair for specific course required in option.
7 Or approved science course - see option

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

Chair: A.E. Radwan, ENGR 381, Phone (407) 823-2841
Faculty: Block, Carroll, Cooper, Dietz, Hartman, Head, Jackson, Jenkins, Kersten, Kuo, Leftwich, Radwan, Reinhart, J. Taylor, Wanielista, Wayson, Yousef

The Department of Civil and Environmental Engineering offers a major in Environmental Engineering and a major in Civil Engineering. The Environmental Engineering major is concerned primarily with the interaction of humans with their environment, and the planning, design, and control of systems for environmental quality management, with emphasis on the water environment. The Civil Engineering major is primarily concerned with fundamental civil engineering design and analysis in such areas as structures, geotechnical engineering, sanitary engineering, water resources, and transportation.
The undergraduate degree programs in Civil Engineering and Environmental Engineering are accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET).

**Bachelor of Science in Civil Engineering**

**Degree Requirements**

1. See Undergraduate Degree Requirements
2. Special college and/or department requirements—See Engineering Core
4. Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CES 4102</td>
<td>Structural Engineering Analysis</td>
<td>3</td>
</tr>
<tr>
<td>CES 4130L</td>
<td>Structures Lab</td>
<td>1</td>
</tr>
<tr>
<td>CES 4605</td>
<td>Structural Steel Design</td>
<td>3</td>
</tr>
<tr>
<td>CES 4702</td>
<td>Structural Concrete Design</td>
<td>4</td>
</tr>
<tr>
<td>CEG 4101C</td>
<td>Geotechnical Engineering I</td>
<td>4</td>
</tr>
<tr>
<td>EGN 3331</td>
<td>Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>EGN 3353</td>
<td>Fluid Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>CGN 4300</td>
<td>C.E. Systems</td>
<td>3</td>
</tr>
<tr>
<td>CWR 4101C</td>
<td>Hydrology</td>
<td>3</td>
</tr>
<tr>
<td>CWR 4201C</td>
<td>Hydraulics</td>
<td>3</td>
</tr>
<tr>
<td>ENV 4561</td>
<td>Environmental Engineering Process Design</td>
<td>4</td>
</tr>
<tr>
<td>TTE 4004</td>
<td>Transportation Engineering</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Civil Engineering Design Courses (2 hours each)</td>
<td>4</td>
</tr>
</tbody>
</table>

5. Restricted Electives
   Technical Electives are to be courses consistent with department objectives and chosen with the approval of the student’s faculty advisor and department chair.

6. Electives
   None

**Total Semester Hours Required** 132

**Bachelor of Science in Environmental Engineering**

**Degree Requirements**

1. See Undergraduate Degree Requirements
2. Special college and/or department requirements—See Engineering Core
4. Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EES 4202C</td>
<td>Chemical Process Control</td>
<td>3</td>
</tr>
<tr>
<td>EES 4111C</td>
<td>Biological Process Control</td>
<td>3</td>
</tr>
<tr>
<td>EGN 3331</td>
<td>Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>EGN 3353</td>
<td>Fluid Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>EGN 4703</td>
<td>Systems Analysis and Control</td>
<td>3</td>
</tr>
<tr>
<td>ENV 4121C</td>
<td>Air Pollution</td>
<td>3</td>
</tr>
<tr>
<td>ENV 4341</td>
<td>Solid and Hazardous Waste</td>
<td>3</td>
</tr>
<tr>
<td>CWR 4101C</td>
<td>Hydrology</td>
<td>3</td>
</tr>
<tr>
<td>CWR 4201C</td>
<td>Hydraulics</td>
<td>3</td>
</tr>
<tr>
<td>ENV 4433</td>
<td>Water Resources Design</td>
<td>2</td>
</tr>
<tr>
<td>ENV 4562</td>
<td>Environmental Engineering Systems Design</td>
<td>2</td>
</tr>
<tr>
<td>ENV 4561</td>
<td>Environmental Engineering Process Design</td>
<td>4</td>
</tr>
</tbody>
</table>

5. Restricted Electives
   Technical Electives are to be courses consistent with department objectives and chosen with the approval of the student’s faculty advisor and department chair.

6. Electives
   None

**Total Semester Hours Required** 132
The Department of Computer Engineering prepares the student for a career in professional engineering practice or advanced graduate study. Graduates will possess a high degree of training and capability in the application of mathematics and computers to the modeling, simulation, and management of complex technical problems. The undergraduate degree program in Computer Engineering is accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET).

Bachelor of Science in Computer Engineering

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements—See Engineering Core
3. Required Courses
   - ECM 4230: Engineering Data Structures 3 hours
   - ECM 4301: Engineering Applications of Computers Methods 3 hours
   - ECM 4504C: Embedded Computer Systems 4 hours
   - ECM 4708C: Linear Controls and Simulation 4 hours
   - ECM 4804: Engineering Software Design 3 hours
   - EEL 3342C: Introduction to Digital Circuits and Systems 4 hours
   - ECM 4508C: Computer Systems Design I 3 hours
   - ECM 4509C: Computer Systems Design II 4 hours
   - COT 3100: Introduction to Discrete Structures 3 hours
   - ECM 3000: Survey of Computer Engineering 1 hour
   - ECM 4451: Engineering Applications of Intelligent Systems 3 hours
   - ECM 4723C: Computer Control Systems 4 hours
4. Restricted Electives
   Technical Electives are to be courses consistent with department objectives and chosen with the approval of the student’s faculty advisor and department chair.
   Total Semester Hours Required 132

DEPARTMENT OF ELECTRICAL ENGINEERING

Chair: N. S. Tzannes, ENGR 407, Phone (407) 823-2786
Faculty: Alsaka, Bass, Belkerdid, Boreman, Brown, Christodoulou, Dixon, Georgiopoulos, Guenther, Harden, Harris, Harvey, Johnson, Kasparis, Liou, Malocha, Mathews, Mikhail, R. Miller, Moharam, Mortazawi, Petrasko, R. Phillips, Qu, Richie, Soileau, Stickley, Sundaram, Szanier, Wahid, Walker, Yuan.

The major in Electrical Engineering is designed to present the basic electrical engineering principles. Courses are offered which present in-depth studies of specific electrical engineering sub-disciplines such as digital systems, electrical networks, electronics, electromagnetic fields and microwaves, control systems, communication systems and information theory, and solid state systems and devices.

The undergraduate degree program in Electrical Engineering is accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET).

Bachelor of Science in Electrical Engineering

Degree Requirements
1. See Undergraduate Degree Requirements
2. Special college and/or department requirements—See Engineering Core
3. Required Courses
   - EEL 3122C: Electrical Networks 4 hours
DEPARTMENT OF INDUSTRIAL ENGINEERING & MANAGEMENT SYSTEMS

Chair: W. Swart, ENGR 381, Phone (407) 823-2204
Faculty: Armacost, Biegel, Danz, Elshennawy, Hosni, Lee, Mollaghasemi, Morse, Mullens, Rogers, Parkinson, Schrader, Sepulveda, Whitehouse

Industrial engineers design systems which translate a specific product design into a physical reality in the most productive manner and with highest quality possible. In doing so, the industrial engineer deals with decisions regarding the right mix and type of people, materials, machines, and automation (including robotics). Industrial engineers are also skilled in Engineering Economic Analysis and Information Management since they are generally considered to be the natural interface between the technical specialist and management.

Industrial engineers are sought in industrial, service, and government organizations. In the industrial sector, the industrial engineer is concerned with improving productivity and quality of the manufacturing, distribution, and management system of organizations. In the service sector, the industrial engineer is concerned with determining the most productive manner in which to deliver high-quality service to the customer. In government organizations the industrial engineer is active in assuring that tax payers receive maximum service for their tax dollars.

The Industrial Engineering approach is characterized by a systematic evaluation of alternatives using quantitative analysis and computer simulations. As such, quantification and measurement play a key role in the day to day activities of the industrial engineer.

The undergraduate degree program in Industrial Engineering is accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET).

Bachelor of Science in Industrial Engineering

Degree Requirements
1. See Undergraduate Degree Requirements
2. Special college and/or department requirements—See Engineering Core
3. Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>APA 3471</td>
<td>Accounting for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>EIN 3314C</td>
<td>Work Measurement and Design</td>
<td>3</td>
</tr>
<tr>
<td>EIN 4116C</td>
<td>Information Systems Analysis and Design</td>
<td>3</td>
</tr>
<tr>
<td>EIN 4118C</td>
<td>Industrial Engineering Applications of Computers</td>
<td>3</td>
</tr>
<tr>
<td>EIN 4333C</td>
<td>Industrial Control Systems</td>
<td>3</td>
</tr>
<tr>
<td>EIN 4364C</td>
<td>Industrial Facilities Planning and Design</td>
<td>3</td>
</tr>
<tr>
<td>EIN 4391C</td>
<td>Manufacturing Engineering</td>
<td>3</td>
</tr>
<tr>
<td>EIN 4891C</td>
<td>Industrial Senior Design Project</td>
<td>3</td>
</tr>
<tr>
<td>ESI 4234</td>
<td>Quality Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ESI 4312</td>
<td>Operations Research</td>
<td>3</td>
</tr>
<tr>
<td>ESI 4523C</td>
<td>Systems Simulation</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Semester Hours Required: 132
4. Technical Electives
   Technical Electives are to be courses consistent with department objectives and chosen with the approval of the student’s faculty advisor and department chair.

5. Electives
   None

Total Semester Hours Required 132

DEPARTMENT OF MECHANICAL AND AEROSPACE ENGINEERING
Chair: D. W. Nicholson, ENGR 307, Phone (407) 823-2416
Faculty: Anderson, J. Beck, Bishop, Chew, Desai, Eno, Grogan, Gunnerson, Hagedoorn, Henry, Hosler, Kittis, K. Lin, Minardi, Moslehy, Nayfeh, Nicholson, Nuckolls, Rice, W. Smith, Ventre

The Department of Mechanical and Aerospace Engineering offers majors in Mechanical and Aerospace Engineering. Both programs are specifically designed to give the student a broad-based undergraduate engineering program which provides sufficient knowledge to allow him/her to converse with specialists in other fields of engineering and to analyze the basic problems in these fields. The undergraduate degree programs in Mechanical Engineering and Aerospace Engineering are accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET).

Bachelor of Science in Aerospace Engineering

Degree Requirements
1. See Undergraduate Degree Requirements
2. Special college and/or department requirements—See Engineering Core
3. Required Courses
   EAS 3010  Fundamentals of Flight  4 hours
   EAS 3101  Aerodynamics  3 hours
   EAS 3800  Junior Aerospace Laboratory I  2 hours
   EAS 3810  Junior Aerospace Laboratory II  2 hours
   ENG 3331  Mechanics of Materials  3 hours
   EML 4312  Feedback Control Design  3 hours
   EAS 4105  Flight Mechanics  3 hours
   EAS 4200  Flight Structures  3 hours
   EAS 4134  High Speed Aerodynamics  3 hours
   EAS 4300  Aerothermodynamics of Propulsion Systems  3 hours
   EAS 4700  Aerospace Design I  3 hours
   EAS 4710  Aerospace Design II  3 hours

4. Restricted Elective
   Technical electives are chosen from courses normally taught by the department with the prefixes EMA, EML, and EAS. Students who wish to enroll in a 5xxx course should have a minimum UCF GPA of 2.8 and consent of the instructor. Other choices must contain additional design content and must be approved by the faculty advisor and department chair.

5. Electives
   None

Total Semester Hours Required 132

Bachelor of Science in Mechanical Engineering

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements—See Engineering Core
3. Required Courses
   EGN 3331  Mechanics of Materials  3 hours
   EGN 3353  Fluid Mechanics I  3 hours
   EML 3101  Thermodynamics of Mechanical Systems  3 hours
   EML 3262  Kinematics of Mechanisms  3 hours
   EML 3500  Machine Design and Analysis  3 hours
   EML 4142  Heat Transfer  3 hours
   EML 4220  Vibration Analysis  3 hours
4. Restricted Electives
Technical electives are chosen from courses normally taught by the department with the prefixes EMA, EML, EAS, and ENU. Students who wish to enroll in a 5xxx course should have a minimum UCF GPA of 2.8 and consent of the instructor. Other choices must contain additional design content and must be approved by the faculty advisor and department chair.

5. Electives
None

Total Semester Hours Required 132

DEPARTMENT OF ENGINEERING TECHNOLOGY
Chair: J. D. McBrayer, ENGR 207, Phone (407) 823-2269
Faculty: Byers, Debo, Denning, Dixon, Gregg, Osborne, Shaykhian, Strange, Vazquez, Worbs

Engineering Technology is the profession in which a knowledge of the applied mathematical and natural sciences gained by higher education, experience, and practice is devoted to application of engineering principles and the implementation of technological advances for the benefit of humanity. Engineering Technology education at UCF is broad in nature, focusing primarily on analyzing, applying, implementing and improving existing technologies and is aimed at preparing graduates for the practice of engineering closest to the product improvement, manufacturing, and engineering operational functions. This education enhances the graduate’s potential for accepting a wide variety of professional opportunities, for lifelong learning, and for future career advancement.

The five Technology options offered in the Engineering Technology degree program are:

- Computer Engineering Technology
- Design Engineering Technology
- Electronics Engineering Technology
- Information Systems Engineering Technology
- Operations Engineering Technology

The engineering technology core courses are available at both the Orlando and the Brevard campuses. All of the Engineering Technology options are accredited by the Technology Accreditation Commission (TAC) of the Accreditation Board for Engineering and Technology (ABET).

The Bachelor of Science in Engineering Technology is intended for students who have completed an Associate of Arts (A.A.) degree with approximately 24 semester hours in an appropriate area of technology or who have completed an Associate of Science (A.S.) degree in an appropriate area of technology. Potential transfer students who do not hold an Associate degree from a Florida public college will be considered on an individual basis, and should consult the "Transfer Applicants" portion of the Undergraduate Catalog for additional information. Students entering any of the curricula in Engineering Technology should be aware that some lower level technical courses are normally not available at UCF and should be taken at the community college.

Requirements
Completion of UCF’s General Education is required before the BSET degree is granted. If a student completes the General Education Program of a Florida public community college, it will substitute for UCF’s Lower Division General Education Program without a course-by-course match. Students should consult an advisor for specific course requirements.

\(^a\)This option is available only at the Orlando campus.
\(^b\)This option is available at the Orlando campus and at the Brevard Area campus.
\(^c\)This option is available only at the Brevard Area campus.
Bachelor of Science in Engineering Technology

Degree Requirements
1. See Undergraduate Degree Requirements
2. Special college and/or department requirements—See Engineering Technology Core below
3. Required Courses
   A. General Education (Not including Math, Science and Computer Programming) 27 hours
   B. Required Lower Division Technical Courses or Equivalent.
      See areas of specialization below. 2-21 hours
   C. Engineering Technology Core
      *MAC 1104 College Algebra
      *MAC 1114 College Trigonometry
      *MAC 2311/MAC 3311 or MAC 3253 Calculus I
      *MAC 2312/MAC 3312 or MAC 3254 Calculus II
      MAP 3401 Problem Analysis
      *PHY 2053C/PHY 3053C College Physics I (with lab)
      *CHM 1xxxC General Chemistry (with lab)
      *COP 1200, *COP 2500, CGS 3422
      ETG 3541 Applied Mechanics
      ETI 3651C Computer Applications
      ETI 3671 Technical Economic Analysis
      ETI 4110 Industrial Quality Control
      ETM 4331 Applied Thermodynamics and Fluid Mechanics
      *May be taken at a community college SUBTOTAL 46 hours
   D. Technical Specialty (Upper Division Major Courses)
      See areas of specialization below. 26-32 hours
   E. Approved Elective hours. See areas of specialization below. 5-22 hours
      MINIMUM TOTAL SEMESTER HOURS 128 hours
      (60 semester hours minimum senior institution credits-
       12 of which may be waived for students enrolled at area campuses.)

AREAS OF SPECIALIZATION
1. Computer Engineering Technology (CpET)

Program Coordinator: John C. Debo
The Computer Engineering Technology specialty includes both hardware and software applications. Typical functions eventually performed by graduates include PC coordinator, computer applications coordinator, systems integrator, system analyst, and hardware and software designer. Graduates may work in such areas as manufacturing, test, design, product improvement, and automated processing. Typical community college programs for entrance include: Computer Technology, Computer Science, Computer Programming, and Electrical/Electronics Technologies.

The total CpET program consists of a combination of lower level courses, normally taken at a community college (courses numbered 1xxx, 2xxx) and UCF upper level courses (numbered 3xxx, 4xxx).
Lower Level Technical Required courses (15 semester hours)
  EET 1xxxC DC Circuits with lab 4 hours
  EET 1xxxC AC Circuits with lab 4 hours
  CET 1xxxC Digital Circuits with lab 4 hours
  CET 1xxxC (3123C) Microprocessor Electronics I with lab 3 hours
  COP 1xxx Fortran Programming (in core) (3 hours)

*Actual hours for these courses may vary depending upon course transferred.
Upper Level Technical Required Courses (15 semester hours)

- CET 3144C Applied Microprocessor Technology 4 hours
- CET 3303 Microcomputer Technology I 3 hours
- CET 4188 Microcomputer Technology II 4 hours
- CET 4198C Digital Systems 4 hours

Upper Level Technical Elective Courses (11 semester hours minimum)

Courses must be selected so that the combination of lower and upper-level courses provide a balance of hardware and software orientation (other technical elective courses may be selected with the approval of the program coordinator).

- CET 4131C Microprocessor Electronics II 4 hours
- CET 4333C Applied Computer Systems I 4 hours
- CET 4334C Applied Computer Systems II 4 hours
- CET 4915 Senior Design Project 2 hours
- CET 4931 Current Topics in Technology 3 hours
- EET 3716 Network Analysis 3 hours
- ETI 4186 Applied Reliability 3 hours

Approved electives to bring total to 128 semester hours (14 hours)

2. Design Engineering Technology (DET)

Program Coordinator: Joseph H. Dixon, Jr.

The specialization in Design Engineering Technology provides advanced coursework in preparation for employment at the Baccalaureate level in the fields of manufacturing, testing and fabrication of mechanical parts, mechanical drafting, and building construction. Typical community college programs for entrance include those in Drafting and Design, Mechanical, Civil, and Building Construction Technologies.

The total DET program consists of a combination of lower level courses, normally taken at a community college (courses numbered 1xxx, 2xxx) and UCF upper level courses (numbered 3xxx, 4xxx).

Lower Level Technical Required Courses (5 semester hours)

- EDT 1xxxC Engineering Drawing/Drafting/Graphics 5 hours

Upper-Level Technical Required Courses (25 semester hours)

- CET 3123C Microprocessor Electronics I 3 hours
- EET 3035C Electricity and Electronics 4 hours
- EST 4502C Electro-Mechanical Design 3 hours
- ETG 4530C Strength of Materials 4 hours
- ETG 4950 Senior Design Project 2 hours
- ETI 3421 Materials and Processes 3 hours
- ETM 4403C Applied Kinematics 3 hours
- ETM 4512C Applied Design of Machine Elements 3 hours

Upper-Level Technical Electives (7 semester hours minimum)

(Other technical elective courses may be selected with approval of the program coordinator.)

- ETC 4241C Construction Methods, Contracts & Specs. 4 hours
- ETC 4414C Applied Structural Design I 3 hours
- ETC 4415C Applied Structural Design II 3 hours
- CET 4131C Microprocessor Electronics II 4 hours
- ETI 4522C Applied Automated Systems 3 hours
- ETM 4755 Applied Air Conditioning 3 hours
- ETM 4220 Applied Energy Systems 2 hours
- ETD 3350C Applied CADD 3 hours

Approved electives to bring total to 128 semester hours (18 hours)

3. Electronics Engineering Technology (EET)

Program Coordinator: William S. Byers

The program in Electronics Engineering Technology provides advanced level courses in preparation for employment in electronics at the Baccalaureate level. Graduates may work in such diverse fields as aerospace, medical instrumentation, computers, radio and television broadcasting, telecommunications, military electronics, consumer products, and education. They may be involved in applied design, product development, manufacturing, production, and operations, as well as in such activities as field engineering, sales, marketing, and technical services.

The total EET program consists of a combination of lower level courses, normally
taken at a community college (courses numbered 1xxx, 2xxx) and UCF upper level courses (numbered 3xxx, 4xxx). A minimum of ten (10) courses which include laboratory are required for award of the BSET in the Electronics Engineering Technology option.

Lower Level Technical Required Courses (21 semester hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EET 1xxxC</td>
<td>DC Circuits with lab</td>
<td>4</td>
</tr>
<tr>
<td>EET 1xxxC</td>
<td>AC Circuits with lab</td>
<td>4</td>
</tr>
<tr>
<td>EET 1xxxC (3143C)</td>
<td>Electronic Devices and Circuits with lab</td>
<td>4</td>
</tr>
<tr>
<td>CET 2xxxC (3123C)</td>
<td>Microprocessor Electronics I with lab</td>
<td>3</td>
</tr>
<tr>
<td>CET 2xxxC</td>
<td>Digital Fundamentals with lab</td>
<td>3</td>
</tr>
<tr>
<td>ENC 2xxxC (3241)</td>
<td>Technical Report Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

*Actual hours for these courses may vary depending upon course transferred.*

Upper-Level Technical Required Courses (22 semester hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CET 3303</td>
<td>Microcomputer Technology I</td>
<td>3</td>
</tr>
<tr>
<td>CET 4198C</td>
<td>Digital Systems</td>
<td>4</td>
</tr>
<tr>
<td>EET 3716</td>
<td>Network Analysis</td>
<td>3</td>
</tr>
<tr>
<td>EET 4158C</td>
<td>Linear Integrated Circuits</td>
<td>3</td>
</tr>
<tr>
<td>EET 4329C</td>
<td>Electronic Communications I</td>
<td>3</td>
</tr>
<tr>
<td>EET 4349C</td>
<td>Electronics Communications II</td>
<td>3</td>
</tr>
<tr>
<td>EET 4732</td>
<td>Feedback Control Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

Upper-Level Technical Electives (5 semester hours minimum) (other technical elective courses may be selected with the approval of the program coordinator).

(Select 2 courses from the following)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CET 4131C</td>
<td>Microprocessor Electronics II</td>
<td>4</td>
</tr>
<tr>
<td>CET 4333C</td>
<td>Applied Computer Systems I</td>
<td>4</td>
</tr>
<tr>
<td>CET 4381</td>
<td>Digital Signal Processing</td>
<td>3</td>
</tr>
<tr>
<td>CET 4931</td>
<td>Current Topics in Technology</td>
<td>3</td>
</tr>
<tr>
<td>CET 4915</td>
<td>Senior Design Project</td>
<td>2</td>
</tr>
<tr>
<td>EET 4393C</td>
<td>Antennas &amp; Propagation</td>
<td>3</td>
</tr>
<tr>
<td>EET 4389C</td>
<td>Satellite Communications</td>
<td>3</td>
</tr>
<tr>
<td>EET 4548</td>
<td>Power Transmission</td>
<td>3</td>
</tr>
<tr>
<td>ETI 4186</td>
<td>Applied Reliability</td>
<td>3</td>
</tr>
</tbody>
</table>

Approved electives to bring total to 128 semester hours (7 hours)

4. **Information Systems Engineering Technology (ISET)**

**Program Coordinator:** G. Ali Shaykhian

The specialization in Information Systems Engineering Technology provides advanced level courses in preparation for employment in computer systems programming, programmer/analyst and technical systems analysis. Typical community college programs for entrance include those in Computer Information Systems, Computer Science and Computer Programming.

The total ISET program consists of a combination of lower level courses, normally taken at a community college (courses numbered 1xxx, 2xxx) and UCF upper level courses (numbered 3xxx, 4xxx).

Lower Level Technical Required Courses (21 semester hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COP 1xxx</td>
<td>Pascal Programming</td>
<td>3</td>
</tr>
<tr>
<td>COP 1xxx</td>
<td>Pascal Programming - Advanced</td>
<td>3</td>
</tr>
<tr>
<td>COP 2xxx</td>
<td>Cobol Programming</td>
<td>3</td>
</tr>
<tr>
<td>COP 2xxx</td>
<td>Cobol Programming - Advanced</td>
<td>3</td>
</tr>
<tr>
<td>COP 1xxx</td>
<td>Fortran Programming (in core)</td>
<td>3</td>
</tr>
<tr>
<td>COP 1xxx</td>
<td>Fortran Programming - Advanced</td>
<td>3</td>
</tr>
<tr>
<td>COP 2xxx</td>
<td>Assembler Programming</td>
<td>3</td>
</tr>
<tr>
<td>ENC 2xxx (3241)</td>
<td>Technical Report Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

*Actual hours for these courses may vary depending upon course transferred.*

Upper-Level Technical Required Courses (27 semester hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CET 3123C</td>
<td>Microprocessor Electronics I</td>
<td>3</td>
</tr>
<tr>
<td>CET 3303</td>
<td>Microcomputer Technology I</td>
<td>3</td>
</tr>
<tr>
<td>CET 3323C</td>
<td>Computer Organization Technology</td>
<td>3</td>
</tr>
<tr>
<td>CET 3383</td>
<td>Applied Systems Analysis I</td>
<td>3</td>
</tr>
<tr>
<td>CET 4427</td>
<td>Applied Database Systems</td>
<td>3</td>
</tr>
<tr>
<td>CET 4505</td>
<td>Applied Microcomputer Operating Systems</td>
<td>3</td>
</tr>
</tbody>
</table>
CET 4523 Applied Systems Analysis II 3 hours
CET 4915 Senior Design Project 2 hours
EET 3035C Electricity and Electronics 4 hours

Upper/Lower Level Technical electives to bring total to 128 semester hours.
(7 semester hours) (other technical elective courses may be selected with the approval of the program coordinator).

ACG 2xxx Principles of Financial Accounting
CGS 1xxx Computer Management Information Systems
CIS 2xxx System Analysis and Design
COP 1xxx C Programming
COP 1xxx Introduction to Data Processing
COP 2xxx Assembler Programming-Advanced
COP 2xxx Introduction to Database Techniques
CET 4361 Applied Computer Graphics in Technology
CET 4429 Applied Database II
CET 4527 Applied Operating Systems II
ETI 4186 Applied Reliability
MAN 2xxx Business Management Principles

5. Operations Engineering Technology (OET)

Program Coordinator: Richard G. Denning

The Operations Engineering Technology program provides advanced coursework to prepare the Baccalaureate graduates for professional careers in technical management and operations in the manufacturing, sales, service, and construction industries. The curriculum offers required sequential courses in industrial/manufacturing operations and process controls with electives in: automation, sales, safety, construction and energy. The program is designed to accept transfer students from a broad range of associate degree technology programs including Architectural, Building Construction, Aviation, Civil, Computer, Drafting, Fire Science, Quality Control, and Surveying.

The total OET program consists of a combination of lower level courses, normally taken at a community college (courses numbered 1xxx, 2xxx) and UCF upper level courses (numbered 3xxx, 4xxx).

Lower Level Technical Required Courses (2 semester hours)
ETD 1xxxC or EGS 1111C Engineering Drawing/Drafting/ Graphics 2 hours

Upper Level Technical Required Courses (26 semester hours)
CET 3123C Microprocessor Electronics I 3 hours
CET 4131C Microprocessor Electronics II 4 hours
EET 3035C Electricity and Electronics 4 hours
ETG 4950 Senior Design Project 2 hours
ETI 3421 Materials and Processes 3 hours
ETI 4186 Applied Reliability 3 hours
ETI 4661 Applied Facilities Planning and Design 3 hours
ETI 4640 Process Planning and Work Measurement 4 hours

Upper-Level Technical Electives (5 semester hours) (other technical electives may be selected with approval of the program coordinator).
EST 4502C Electro-Mechanical Design 3 hours
ETC 4241C Construction Methods, Contracts, and Specifications 4 hours
ETI 3690 Technical Sales 2 hours
ETI 4522C Applied Automated Systems 3 hours
ETI 4700 Occupational Safety 2 hours
ETM 4220 Applied Energy Systems 2 hours
ETM 4755 Applied Air Conditioning 3 hours

Approved electives to bring total to 128 semester hours. (22 hours)
COLLEGE OF HEALTH AND PUBLIC AFFAIRS

UNDERGRADUATE PROGRAMS
  Cardiopulmonary Sciences (BS)
  Communicative Disorders (BA/BS)
  Criminal Justice (BA)
  Health Services Administration (BS)
  Hospitality Management (BS)
  Legal Studies (BA)
  Medical Record Administration (BS)
  Medical Technology (BS)
  Molecular Biology and Microbiology (BS)
  Nursing (BSN)
  Public Administration (BA)
  Radiologic Sciences (BS)
  Social Work (BSW)

PREPROFESSIONAL PROGRAMS
  Prechiropractic
  Predental
  Premedical
  Preoptometry
  Prepharmacy
  Prepodiatry
  Preveterinary

GRADUATE PROGRAMS*
  Communicative Disorders (MA)
  Health Sciences (MS)
  Molecular Biology and Microbiology (MS)
  Public Administration (MPA)

OTHER PROGRAMS
  Gerontology Certification Program
  Pre-Occupational Therapy
  Pre-Physical Therapy

*See the Graduate Studies catalog for information.
The mission of the College of Health and Public Affairs is to provide quality undergraduate and graduate education, to foster, through research, the development and transmission of knowledge, and to offer continuing education for community professionals and citizens.

To achieve these objectives, the College offers a diversity of programs preparing students for professions in the fields of Communicative Disorders, Criminal Justice, Legal Studies, Health Sciences, Hospitality Management, Nursing, Public Administration, and Social Work.

ADVICEMENT
Advisor/Counselor: Ms. Debbie Phillis, HPB 215, Phone (407) 823-0010
The College of Health and Public Affairs Advisement Office assists students in understanding matters relating to college and university requirements and procedures. Orientation and registration is coordinated through the advisement office. Questions concerning university and college academic policies should be directed through this office.

Pre-Professional Health Coordinator: Dr. O. M. Berringer, BL 103, Phone (407) 823-2968
The College of Health and Public Affairs offers preprofessional programs in the health disciplines leading to further study in schools of chiropractic, dentistry, medicine, osteopathic medicine, optometry, pharmacology, podiatry, and veterinary medicine.

They are administered through the Pre-Health Professions Advisement Office, located in the Biological Sciences Building, Room 103. Other programs associated with the health-related professions (i.e., the allied health sciences) are administered through other departments in the College. Curricular guidelines are listed under the Pre-Health Professions Programs Advisement Office, page 196.

Program Planning
Students should plan their programs of study in consultation with a faculty advisor appointed by the chair of the major department.

General Requirements for the Bachelors Degree
Some Departments or Programs in the College are upper-division, limited access programs. Acceptance by or registration at the University does not constitute admission to the following: Departments of Nursing, Social Work, and the Programs in Medical Laboratory Sciences, Medical Record Administration, and Radiologic Sciences. Application must be made to the appropriate chair or director. Additional information regarding prerequisites and grade point averages may be obtained from the desired Program or Department.

The following Departments and Programs do not have limited access: Departments of Communicative Disorders, Criminal Justice/Legal Studies, Hospitality Management, Molecular Biology/Microbiology, and Public Administration; and the Programs in Cardiopulmonary Sciences and Health Sciences.

DEPARTMENT OF COMMUNICATIVE DISORDERS
Interim Chair: W. D. Tropf, HP 113, Phone (407) 823-2121
Faculty: Hedrick, Ingram, Mullin, Parker, Ratusnik, Utt

The primary goal of the Department of Communicative Disorders is the preparation of clinical specialists in Speech/Language Pathology and Audiology. Undergraduate offerings are consistent with philosophies of the American Speech-Language-Hearing Association in that most coursework is designed to provide the student theoretical foundations on which to build competent clinical skills. An on-campus clinic as well as external affiliations including area public schools, community speech and hearing centers, hospital clinics, physicians’ offices and industrial settings are available for the development of various clinical competencies. Faculty are engaged in generation and transmission of knowledge concerning speech-language-hearing processes and impairments via ongoing research projects. The profes-
ional phase of the program in speech/language pathology and audiology is accredited by the Educational Standards Board of the American Speech-Language Hearing Association.

In addition to coursework for majors, the Department offers a 4-course sequence in Sign Language: SPA 3333, SPA 4380, SPA 4381, SPA 4382.

MINOR

The Department of Communicative Disorders offers a minor consisting of a minimum of 22 semester hours.

Required courses: LIN 3710, 3710L and SPA 3001, 3101, 3112, 3112L, 4030, 4222, 4222L, and 4402, 4402L.

Bachelor of Arts or Bachelor of Science: Communicative Disorders

Degree Requirements

1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIN 3710</td>
<td>Foundations of Language</td>
<td>3</td>
</tr>
<tr>
<td>LIN 3710L</td>
<td>Foundations of Language Lab</td>
<td>1</td>
</tr>
<tr>
<td>SPA 3001</td>
<td>Introduction to Communicative Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SPA 3052</td>
<td>Clinical Observation &amp; Practice</td>
<td>3</td>
</tr>
<tr>
<td>SPA 3101</td>
<td>Physiological Bases of Speech and Hearing</td>
<td>3</td>
</tr>
<tr>
<td>SPA 3112</td>
<td>Basic Phonetics</td>
<td>3</td>
</tr>
<tr>
<td>SPA 3112L</td>
<td>Basic Phonetics Lab</td>
<td>1</td>
</tr>
<tr>
<td>SPA 3550</td>
<td>Clinical Methods</td>
<td>3</td>
</tr>
<tr>
<td>SPA 3550L</td>
<td>Clinical Methods Lab</td>
<td>1</td>
</tr>
<tr>
<td>SPA 4030</td>
<td>Audiology I</td>
<td>3</td>
</tr>
<tr>
<td>SPA 4033</td>
<td>Audiology II</td>
<td>3</td>
</tr>
<tr>
<td>SPA 4011</td>
<td>Speech &amp; Hearing Science</td>
<td>3</td>
</tr>
<tr>
<td>SPA 4201</td>
<td>Communicative Disorders-Articulation</td>
<td>3</td>
</tr>
<tr>
<td>SPA 4201L</td>
<td>Communicative Disorders-Articulation Lab</td>
<td>1</td>
</tr>
<tr>
<td>SPA 4222</td>
<td>Non-Organic Speech Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SPA 4222L</td>
<td>Non-Organic Speech Disorders Lab</td>
<td>1</td>
</tr>
<tr>
<td>SPA 4250</td>
<td>Organic Speech Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SPA 4250L</td>
<td>Organic Speech Disorders Lab</td>
<td>1</td>
</tr>
<tr>
<td>SPA 4323</td>
<td>Aural Habilitation-Rehabilitation</td>
<td>4</td>
</tr>
<tr>
<td>SPA 4402</td>
<td>Communicative Disorders-Language</td>
<td>3</td>
</tr>
<tr>
<td>SPA 4402L</td>
<td>Communicative Disorders-Language Lab</td>
<td>3</td>
</tr>
<tr>
<td>SPA 4336</td>
<td>Augmentative Communication Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

4. Restricted Electives

To be selected from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEP 3212</td>
<td>Psychological Approaches to Mental Retardation</td>
<td>3</td>
</tr>
<tr>
<td>DEP 3202</td>
<td>Psychology of Exceptional Children</td>
<td>3</td>
</tr>
<tr>
<td>EAB 3703</td>
<td>Principles of Behavior Modification</td>
<td>4</td>
</tr>
<tr>
<td>STA 3023</td>
<td>Statistical Methods I</td>
<td>3</td>
</tr>
<tr>
<td>STA 4163</td>
<td>Statistical Methods II</td>
<td>3</td>
</tr>
</tbody>
</table>

The two statistics courses are required for graduation.

5. Electives

Students who wish to obtain a Teachers Certificate for the State of Florida must include necessary coursework as electives.

6. B.A./B.S. Option

Students pursuing the B.A. degree must demonstrate proficiency in a foreign language equivalent to three semesters, while students pursuing the B.S. degree must demonstrate proficiency in a foreign language equivalent to one year plus complete six credit hours of Departmentally approved science courses.

Total Semester Hours Required: 130
DEPARTMENT OF CRIMINAL JUSTICE AND LEGAL STUDIES

Chair: N.G. Holten, PH 116, Phone (407) 823-2603
Faculty: Becker, Brennan, Cook, Duffey, Gonzalez, Holten, Korstad, Mahan, McCarthy, Mozee, Pyle, Slaughter

The Department of Criminal Justice and Legal Studies includes two undergraduate degree programs: Legal Studies and Criminal Justice.

Legal Studies Program
The Legal Studies Program provides students with a broad understanding of basic principles of law and the role and function of the legal system. Two emphases are provided: legal-applied and legal-general. The applied emphasis prepares students for professional positions in law offices, public agencies, and business organizations. The general law emphasis program is designed to provide a general background in American society and government as well as American law. This emphasis, in addition to preparing students for law-related careers, provides a foundation for further professional or graduate education. Satisfactory completion of program requirements in either emphasis leads to the degree of Bachelor of Arts with a major in Legal Studies.

Bachelor of Arts: Legal Studies

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses (15 hours)
   PLA 3013 Law and the Legal System 3 hours
   PLA 3105 Legal Research 3 hours
   PLA 3155 Legal Writing 3 hours
   PLA 3203 Civil Practice and Procedure 3 hours
   PLA 3504 Property and Real Estate Law 3 hours
4. Restricted Electives
   a. 18 additional hours of Legal Studies coursework. (see applied and general emphases below)
   b. 12 semester hours of supporting courses chosen with the approval of the student's advisor. These courses may be selected from any department or program so long as they are relevant to legal studies.
5. Electives
   Total Semester Hours Required 120

Applied Emphasis
Students are strongly urged to take the following courses as restricted electives:
PLA 3273 The Law of Torts
PLA 4408 The Law of Contracts
PLA 4433 Florida Partnerships and Corporations
PLA 4603 Estates and Trusts
PLA 4941 Internship

General Emphasis
Students are strongly urged to select their restricted electives from the following list:
PLA 3308 Criminal Procedure
PLA 3273 The Law of Torts
PLA 4408 The Law of Contracts
PLA 4483 Administrative Law
PLA xxxx Professional Responsibility
PLA xxxx Law and Society
PLA 5937 Seminar in Contemporary Legal Problems

Supporting courses in the general emphasis are to be selected in consultation with the student's advisor but may include course selected from the following areas: Political Science, Criminal Justice, Sociology, Psychology, History, Public Administration, and Philosophy.
Bachelor of Arts: Criminal Justice

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses (12 semester hours)
   - CCJ 3020 Criminal Justice System
   - CCJ 3010 Crime in America
   - CCJ 3290 Prosecution and Adjudication
   - CCJ 3300 Corrections and Penology
4. Restricted Electives
   - 24 additional semester hours of CCJ coursework, of which at least 21 hours must be upper division. Seniors can satisfy up to 9 hours of this requirement with internship and up to 6 hours with directed independent study; however, the combination of these non-class options shall not exceed 12 hours. Program standards must be met to be eligible for either internships or independent study credit.
   - 15-16 additional semester hours of supporting courses to be selected with and approved by the student's advisor. These courses may vary from student to student depending upon individual needs or objectives, but include selected courses from public administration, legal studies, sociology, statistics, and psychology.
5. Students must take a minimum of 30 hours from the department to obtain the UCF degree in Criminal Justice.
6. Electives

Total Semester Hours Required

DEPARTMENT OF HEALTH SCIENCES

Interim Chair: T. Mendenhall, HPB 220 (407) 823-2972
Faculty: Acierno, Barr, Bergner, Core, Crittenden, Douglass, Dunaye, T. Edwards, Hitchcock, Lytle, Mendenhall, Thornton, Welker, Worrell, Youmans

The Department of Health Sciences offers a diversity of baccalaureate programs which prepare students for professions in the fields of Cardiopulmonary Sciences, Health Services Administration, Medical Laboratory Sciences, Medical Record Administration, and Radiologic Sciences. In addition, the Department offers a graduate program in Health Sciences.

The mission of the Department is to provide quality undergraduate and graduate academic and clinical instruction with an accent on educating future leaders of the health care system. The Department seeks first to strengthen existing programs, as well as to identify and develop new programs which fulfill documented need for health care resources and technology. Another goal is to foster the development of knowledge through research, publications, scientific presentations, and grantsmanship. Finally, the Department seeks to provide continuing education for the health care community and consumer health education.

The Health Sciences department provides several courses to broaden the student's understanding of health care and provide counseling in pre-physical and pre-occupational therapy. All undecided and pre-physical and pre-occupational therapy students are strongly encouraged to enroll in HSC 2000 Introduction to the Allied Health Professions the first fall semester they are enrolled. This course provides a broad exposure to guest speakers representing all of the allied health professions. Following this awareness, students are prepared to make informed decisions relative to planning their preprofessional studies.


MINOR

The Department of Health Sciences offers a minor consisting of a minimum of 16 semester hours. In order to be awarded a minor in Health Sciences, a student must complete the required course work and maintain at least a 2.5 GPA and a minimum of "C" on all College of Health course work.
Required Courses: HSA 4121, HUN 3930, HSC 3110 and a minimum of 7 hours of upper-division courses in the Health Science Department. Majors may not count courses presently required in a department program.

The Department of Health Sciences requires a minimum overall GPA of 2.5 for admission to and graduation from its programs. In addition, a minimum grade of "C" is required for prerequisite courses and required courses within the major.

GERONTOLOGY CERTIFICATION PROGRAM - See p. 79

Program in Health Sciences
Director: T. Mendenhall, HP-209, (407) 823-2972

The Program offers a baccalaureate degree in Health Services Administration and a graduate degree (M.S.H.S.) in Health Sciences. The Bachelor of Science in Health Services Administration has two options. One option is Health Care Management. Another option is Long Term Care Administration. The Health Care Management option is designed for graduates of certificate and/or terminal degree, allied health programs who desire upward mobility or articulation into specialized health care fields. These may include, but not limited to: Administration and Supervision, Education, Gerontology, and Clinical Laboratory Sciences. The Long Term Care Administration option is designed to prepare Nursing Home Administrators, who will practice in the state of Florida. The program is designed to meet State requirements for safe practice and adheres to guidelines published for certification for licensing, which will take affect in Florida in 1992.

Bachelor of Science: Health Services Administration
Health Care Management Option

Degree Requirements
1. See Undergraduate Degree Requirements.
2. Prerequisites:
   - STA 2014 Principles of Statistics 3 hours
   - ECO 2013 Principles of Economics 3 hours
3. Required Courses:
   - HSC 3122 U.S. Health Care System 3 hours
   - HSC 3640 Health Law 3 hours
   - HSC 4550 Pathophysiologic Mechanisms 3 hours
   - HSC xxxx Health Data Processing 3 hours
   - HSA xxxx Research Methods for Health Sciences 3 hours
   - HSA 4180 Organization & Management for Health Agencies 3 hours
   - HSA 4243 Analysis of Instruction in the Health Professions 3 hours
   - HSA 3170 Health Care Finances 3 hours
   - HSA 4651 Health Care Ethics 3 hours
   - COM 3110 Business and Professional Communication 3 hours

Directed Field Experience Cognate or Electives

Directed Field Experience
All students must complete an area of health specialization through: 0-30 hours
1. Allied Health occupationally specific coursework, and/or
2. Credit by examination.

Occupationally specific coursework may be lower or upper division and may be transferred from another accredited educational institution offering college credit. Credit by examination may be completed through Allied Health specific examination, such as state or national registration/licensure, or occupationally specific professional associations. All students must provide written documentation of health related work experience. This is a requirement of admission to the degree program. Admission to the degree program occurs upon acceptance into the Directed Field Experience.

182
Cognate: *MLT Articulation
Chemistry 8 hours
Biological Sciences 8 hours
*Meets requirements for State certification exam.

Cognate: Certificate in Gerontology
DEP 3464 Psychology of Aging 3 hours
HSC 4564 Health Care Needs of the Elderly 3 hours
SYP 4730 Sociology of Aging 3 hours
SOW 4644 Social Services for the Elderly 3 hours

Cognate: Health Services Administration
ACG 3301 Management Accounting 3 hours
MAR 3023 Marketing 3 hours
HSA 4941 Health Care Management Internship 6 hours

Cognate: Health Sciences Education
EVT 3371 Essential Teaching Skills in Vocational Education 3 hours
EVT 3365 Methods of Training in Vocational Subjects 4 hours
HSC 4244 Curriculum Planning in the Health Professions 2 hours
HSC 4941 Health Sciences Instruction Internship 3 hours

Long Term Care Administration Option

Degree Requirements
1. See Undergraduate Degree Requirements.
2. Prerequisites:
   STA 2014 Statistics 3 hours
   CGS 1060 Introduction to Computer Science 3 hours
3. Requirements:
   ACG 3301 Management Accounting 3 hours
   APB 3600 Introduction to Pharmacology 3 hours
   DEP 3464 Psychology of Aging 3 hours
   HSA xxxx Research Methods for Health Sciences 3 hours
   HSA 4180 Organization and Management for Health Agencies 3 hours
   HSA 3170 Health Care Finance 3 hours
   HSA 4651 Health Care Ethics 3 hours
   HSA 3122 U.S. Health Care Systems 3 hours
   HSA xxxx Long Term Care Administration 3 hours
   HSA 4120 Community and Public Health Services 3 hours
   HSA 4243 Analysis of Instruction in the Health Sciences 3 hours
   HSA xxxx Long Term Care Patient Management 3 hours
   HSC 3640 Health Law 3 hours
   HSC 4500 Pathophysiologic Mechanisms 3 hours
   HSC xxxx Epidemiology 3 hours
   HSC 4564 Health Care Needs of the Elderly 3 hours
   HSC 3531 Medical Terminology 3 hours
   HUN 3011 Human Nutrition 3 hours
   MAN 3301 Personnel Management 3 hours
   MAR 3023 Marketing 3 hours
   MRE 4420 Health Legislation 3 hours
   ECB 3703C Human Physiology 4 hours
   SOW 4644 Social Services for the Elderly 3 hours
   SYP 4730 Sociology of Aging 3 hours
   ZOO 3733C Human Anatomy 3 hours
   HSA 4941 Internship - Nursing Home Administration 6 hours
   Total Semester Hours 132
Program in Medical Record Administration

Director: C. Barr, HP 125, Phone (407) 823-2359

Medical Record Administrators are professional members of the modern health care team responsible for: (1) the acquisition and supervision of complete medical records on each patient, (2) the design and management of health information systems which collect, process, store, retrieve, and release health information and statistics, (3) assistance to administration, other health professionals, and medical staff in developing quality assurance programs by abstraction of medical data, preparation of statistical reports, and analysis of information, and (4) assistance in collection and analysis of data for public health services planning.

The curriculum of the Medical Record Administration program is approved by the Committee on Allied Health Education and Accreditation of the American Medical Association in collaboration with the Council on Education of the American Medical Record Association.

Before acceptance to the professional phase of the program, students are required to complete the following prerequisite courses: biology with lab, anatomy with lab, physiology with lab, statistics, an introduction to data processing or computer science, and an introduction to accounting or finance.

Application and acceptance to the University does not constitute admission to the program. SEPARATE APPLICATION must be made directly to the upper-division, limited access MRA program prior to February 1st of the year in which prerequisites will have been met to be considered an applicant. A personal interview is also required.

Upon completion of the approved program, the student is eligible to submit an application for writing the national registration examination administered by the American Medical Record Association to qualify as a Registered Record Administrator.

Bachelor of Science: Medical Record Administration

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>APB 3600</td>
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<td>COM 3110</td>
<td>Business and Professional Communication</td>
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<td>ENC 3210</td>
<td>Business Report Writing</td>
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<td>HSA 3170</td>
<td>Health Care Finance</td>
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<tr>
<td>HSA 4211</td>
<td>Health Data Processing</td>
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</tr>
<tr>
<td>HSC 3640</td>
<td>Health Law</td>
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<tr>
<td>HSC 3531</td>
<td>Medical Terminology</td>
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<tr>
<td>HSC 4550</td>
<td>Pathophysiologic Mechanisms</td>
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<tr>
<td>HSC 4850</td>
<td>Research Methods in Health Sciences</td>
<td>3</td>
</tr>
<tr>
<td>MAN 3025</td>
<td>Management of Organizations</td>
<td>3</td>
</tr>
<tr>
<td>MAN 3301</td>
<td>Personnel Management</td>
<td>3</td>
</tr>
<tr>
<td>MRE 3000</td>
<td>Introduction to Medical Records</td>
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<tr>
<td>MRE 3110</td>
<td>Medical Record Organization &amp; Management</td>
<td>5</td>
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<tr>
<td>MRE 3433</td>
<td>Pathophysiology</td>
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<td>MRE 3800</td>
<td>Directed Practice I</td>
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<tr>
<td>MRE 3810</td>
<td>Directed Practice II</td>
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<tr>
<td>MRE 4202</td>
<td>Coding Procedures</td>
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<tr>
<td>MRE 4203</td>
<td>Coding Procedures II</td>
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<tr>
<td>MRE 4304</td>
<td>Medical Record Department Management</td>
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<tr>
<td>MRE 4312</td>
<td>Analysis of Medical Record Department Operations</td>
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<tr>
<td>MRE 4400</td>
<td>Health Records and Standards</td>
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<tr>
<td>MRE 4420</td>
<td>Health Legislation</td>
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<td>MRE 4500</td>
<td>Quality Assessment</td>
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<td>MRE 4830</td>
<td>Directed Practice III</td>
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<tr>
<td>MRE 4832</td>
<td>Directed Practice IV</td>
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<tr>
<td>MRE 4835</td>
<td>Management Affiliation</td>
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</table>
Program in Medical Laboratory Sciences
Director: D. Hitchcock, HP 105, Phone (407) 823-2359

Medical technologists are involved in medical diagnosis, treatment, surveillance, management, research, and education. They use highly sophisticated equipment such as electronic cell counters, automated analyzers, computers, and microscopes in the examination of body tissues and fluids.

The curriculum is designed to give students a thorough background in the physical and biological sciences; to develop the understanding, skills, and abilities essential to assume leadership roles in management and education; to develop a high level of proficiency in the clinical laboratory; and to develop an awareness for continuing education needed for professional growth.

Admission to the University does not constitute admission to the upper-division, limited access Medical Laboratory Sciences Program. SEPARATE APPLICATION must be made through the Medical Laboratory Sciences Office prior to February 1st of the year for which admission is sought. For the last seven months of the program the students will be assigned to a hospital laboratory for clinical experience. The affiliated hospitals are located in Lakeland, Orlando, and Winter Haven. It may be necessary for the student to move to Lakeland, Orlando, or Winter Haven for this period.

The degree in Medical Laboratory Sciences will be awarded upon completion of the University’s didactic program and the clinical program in an affiliated hospital.

Upon receiving the degree in Medical Laboratory Sciences, the graduate will be eligible to write a national certification examination and the State of Florida licensure examination.

Bachelor of Science: Medical Laboratory Sciences

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses

Prerequisites for professional phase admission
- BSC 2010C General Biology 4 hours
- MCB 3013C General Microbiology 5 hours
- MCB 3203 Pathogenic Microbiology 3 hours
- MCB 3203L Pathogenic Micro Lab 1 hour
- CHM 2045, 2046 Chemistry Fundamentals I & II 7 hours
- CHM 2046L Chemistry Fundamentals Laboratory 1 hour
- CHM 2205 Introduction to Organic & Biochemistry 5 hours
- MAC 1104 College Algebra 3 hours
- STA 3023 Statistical Methods I 3 hours

Upper Division Professional Phase
- PCB 3233 Immunology 3 hours
- PCB 3233L Immunology Lab 1 hour
- PCB 3703C Human Physiology 4 hours
- MLS 3220 Clinical Microscopy 2 hours
- MLS 3305C Hematology 4 hours
- MLS 4830C, 4831C, 4832C, 4833C, 4834C Clinical Practice I, II, III, IV, & V 15 hours
- MLS 4405 Clinical Pathogenic Microbiology 4 hours
- MLS 4625C, 4630C Advanced Clinical Chemistry I & II 10 hours
- MLS 4334C Hemostasis 2 hours
- MLS 4550C Clinical Immunohematology 4 hours
- MLS 4420C Clinical Mycology 1 hour
- MLS 4431C Clinical Parasitology 2 hours
- MLS 4511C Immunodiagnostics 2 hours
- HSC 4910 Fundamentals of Research for Health Professionals 3 hours

Total Semester Hours Required: 135
Registered Technologists

Up to 45 semester hours of credit may be awarded to Registered Technologists (ARRT). Registered technologists with an A.S. degree in Radiologic Technology from a Florida public community college have the same choice of catalog options as students with an A.A. degree. Registered technologists may complete the general education and prerequisite courses concurrently with the professional courses. Courses for registered technologists are offered in Orlando and through Hillsborough Community College, Tampa.
Bachelor of Science: Radiologic Sciences

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required courses

Prerequisites
- CGS 1060 Introduction to Computer Science 3 hours
- MAC 1104 College Algebra 3 hours
- PCB 3703C Human Physiology 4 hours
- PHY 3053C College Physics I 4 hours
- ZOO 3733C Human Anatomy 4 hours

Professional Phase
Radiography Program of Study

JUNIOR LEVEL
- RTE 1002 Introduction to Radiologic Sciences 3 hours
- RTE 3123 Introduction to Patient Care 2 hours
- RTE 3528C Radiographic Procedures I 3 hours
- RTE 3412C Principles of Radiographic Exposure I 3 hours
- RTE 3806 Clinical Education I 4 hours
- RTE 3549C Radiographic Procedures II 3 hours
- RTE 3457C Principles of Radiographic Exposure II 3 hours
- RTE 3684 Physics of Image Production 2 hours
- ACG 2001 Principles of Accounting I 3 hours
- HSC 3640 Health Law 3 hours
- RTE 3387 Medical Physics 3 hours
- RTE 3564 Special Radiographic Procedures 2 hours
- RTE 3816 Clinical Education II 4 hours
- STA 3023 Statistical Methods I 3 hours
- HSA 3122 US Health Care Systems 3 hours
- PHY 3054C College Physics II 4 hours

SENIOR LEVEL
- RTE 4826 Clinical Education III 5 hours
- RTE 4566 Advanced Imaging Modalities 3 hours
- RTE 4876 Clinical Education IV 6 hours
- RTE 4362 Radiobiology 1 hour
- RTE 4207 Methods of Radiology Management 3 hours
- HSC 4550 Pathophysiologic Mechanisms 3 hours
- EDG 4321 Teaching Strategies 4 hours
- RTE 4843 Clinical Education V 6 hours
- RTE 4156 Radiographic Pathology 2 hours
- RTE 4569 Quality Assurance 3 hours
- RTE 4720 Anatomy for the Medical Imager 3 hours

Select One:
- RTE 4209 Radiological Administrative Practice 2 hours
- RTE 4256 Directed Study in Clinical Education 2 hours

Radiation Therapy Technology Program of Study

JUNIOR LEVEL
- RTE 1002 Introduction to Radiologic Sciences 3 hours
- RTE 3123C Introduction to Patient Care 2 hours
- RTE 3528C Radiographic Procedures 3 hours
- RTE 3412C Principles of Radiographic Exposure I 3 hours
- RTE 3806 Clinical Education I 4 hours
- RTE 3549C Radiographic Procedures II 3 hours
- RTE 3457C Principles of Radiographic Exposure II 3 hours
- RTE 3684C Physics of Image Production 2 hours
PHY 3054C  College Physics II  4 hours
RAT 3001  Introduction to Radiation Oncology  3 hours
RAT 3242  Oncologic Pathology  2 hours
RAT 3241  Clinical Radiobiology  3 hours
RAT 3614  Radiation Therapy Physics I  2 hours
RTE 3816  Clinical Education II  4 hours
HSC 4550  Pathophysiologic Mechanisms  3 hours

SENIOR LEVEL
RAT 4027  Radiation Oncology I  3 hours
RAT 4618C  Radiation Therapy Physics II  4 hours
RTE 4826  Clinical Education III  5 hours
RAT 4028  Radiation Oncology II  3 hours
RAT 4619C  Radiation Therapy Physics III  4 hours
EVT 3371  Essential Teaching Skills in Voc. Ed.  3 hours
RTE 4876  Clinical Education IV  6 hours
STA 3023  Statistical Methods I  3 hours
RTE 4843  Clinical Education V  6 hours
RTE 4720  Anatomy for the Medical Imager  3 hours
RTE 4256L  Directed Study in Clinical Education  2 hours
HSC 3640  Health Law  3 hours
Total Semester Hours Required  138

Program In Cardiopulmonary Sciences
Director: S. Douglass, HP 350, Phone (407) 823-2214

Cardiopulmonary Sciences currently encompasses two academic areas: the undergraduate curriculum leading to the Bachelor of Science Degree in Cardiopulmonary Sciences and a cardiopulmonary science emphasis in one option in the Master of Science Degree in Health Sciences (see graduate catalog for further information).

Cardiopulmonary Sciences (Respiratory Therapy Program) is accredited with the Joint Review Committee for Respiratory Therapy Education.

As the health industry changes, Respiratory Therapists must continue to grow and change. In order to meet these rapid, sophisticated changes, the baccalaureate individual should possess the necessary clinical skills, the desire to acquire more knowledge, and a solid foundation in the sciences.

This Department accepts Associate in Arts (AA) and Associate in Science (AS) transfers. Students should seek advisement from the program advisor as soon as they declare Cardiopulmonary Sciences as their major.

Students must be accepted by the University and meet all requirements for admission to the upper division. No separate application is necessary. A 2.5 GPA is required for admission to and graduation from the program.

Bachelor of Science: Cardiopulmonary Sciences

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Prerequisites

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<td>MAC 1104</td>
<td>College Algebra</td>
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<td>BSC 2010C</td>
<td>General Biology</td>
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<td>MCB 3013C</td>
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<td>ZOO 3733</td>
<td>Human Anatomy</td>
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<td>PCB 3703C</td>
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<td>CHM 1032</td>
<td>General Chemistry</td>
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<td>CHM 2045L</td>
<td>Chemistry Fund Lab</td>
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<td>PHY 3053C</td>
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4. Professional curriculum

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<td>RET 3484</td>
<td>Cardiopulmonary Physiology</td>
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<td>APB 4650</td>
<td>Medical Pharmacology</td>
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<td>HSC 3593</td>
<td>AIDS: A Human Concern</td>
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<td>RET 3874</td>
<td>Clinical Practice I</td>
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<td>RET 4244</td>
<td>Life Support Systems</td>
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<td>RET 4414C</td>
<td>Pulmonary Function Studies</td>
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<tr>
<td>RET 4503</td>
<td>Chest Medicine and Patient Assessment</td>
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<tr>
<td>RET 3714</td>
<td>Pediatric Respiratory Care</td>
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<tr>
<td>RET 4715</td>
<td>Neonatal Medicine</td>
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<tr>
<td>HSC 4243</td>
<td>Analysis of Instruction for Health Professions</td>
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<tr>
<td>RET 3264C</td>
<td>Mechanical Ventilation</td>
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<tr>
<td>RET 3875</td>
<td>Clinical Practice II</td>
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<tr>
<td>RET 4034</td>
<td>Problems in Patient Management</td>
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<td>RET 4284</td>
<td>Cardiopulmonary Diagnostics I</td>
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<td>HSC 4211</td>
<td>Health Data Processing</td>
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<td>RET 4285</td>
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<td>RET 4876</td>
<td>Clinical Practice III</td>
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<td>RET 4933</td>
<td>Medical Research Seminar</td>
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5. Restricted Electives

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<td>Total Semester Hours Required</td>
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DEPARTMENT OF HOSPITALITY MANAGEMENT

Interim Chair: A. Milman, CEBA II 409, Phone (407) 823-2188
Faculty: Ashley, Chesser, Ellis, Farsad, Lebruto, Melton, Milman, Pizam, Quain

The hospitality industry is comprised of the many business organizations that provide services to individuals away from home. The hospitality industry, the number one employer in the United States, requires high technical and managerial competence for managing the numerous services provided by the varied organizations in the field.

The study of hospitality management prepares students for a broad range of managerial positions in hotels, motels, restaurants, catering services, resorts, country clubs, airlines, travel agencies, state and local convention and visitors bureaus, hospital and college food services, as well as supportive industries, such as consulting and research firms, public accountants, computer firms, or sales and marketing organizations. The program provides students opportunities to complete studies in all hospitality management areas as well as for “hands-on” laboratory experience and for study in advanced specialized courses. In addition, “real world” experience is provided through a requirement of 1360 hours of paid employment in the hospitality field during each student’s course of study.

Bachelor of Science in Hospitality Management

Degree Requirements
1. See Undergraduate Degree Requirements
2. Special department requirements:
   a. For Hospitality Management majors the mathematical foundations requirements are:
      MAC 1104—College Algebra and CGS 3000—Computer Fundamentals for Business Applications.
   b. For Hospitality Management majors the foreign language requirements are two semesters of one foreign language
3. Required Courses:
   a. Business Administration Studies
      ECO 2013—Principles of Economics I .................................................. 3
      ECO 2023—Principles of Economics II .................................................. 3
      ACG 2001—Principles of Accounting I .................................................. 3
      ACG 2071—Principles of Managerial Accounting II .................................. 3
      MAN 3025—Management of Organizations ............................................ 3
      MAR 3023—Introduction to Marketing .................................................. 3
b. Hospitality Management Core
   HFT 1000—Introduction to Hospitality Management .......................... 3
   FSS 2202C Food Production Techniques ........................................ 3
   HFT 2252—Rooms Division Management ........................................... 3
   HFT 2750—Fundamentals of Conventions and Conferences ........................ 3
   HFT 3444—Hospitality Information System ....................................... 3
   HFT 3603—Legal Environment in the Hospitality and Tourism Industry .......... 3
   HFT 3700—Travel and Tourism Administration ................................... 3
   HFT 3930—Guest Lecture Series .................................................. 1
   HFT 4420—Profit Planning & Decision Making .................................... 3
   HFT 4503—Hospitality and Tourism Marketing .................................... 3

c. Hospitality Management Cooperative Education
   The Coop Education program provides students the opportunity to blend theory with practice by combining classroom education with study-related work experience. The work assignments enable hospitality students to gain career experience in the field of their choice. All students majoring in Hospitality Management must complete a minimum of 1360 clock hours (equivalent to 34 full-time weeks of paid study-related work experience in a hospitality or tourism enterprise. All work experience assignments have to be approved in advance by the departmental coop coordinator. The coop education requirement can be fulfilled partially in units of 1 credit or more.

d. Restricted Electives
   Seven courses in one of the following tracks:
   1. Lodging Management Track
      FSS 3223 Quantity Food Management ............................................ 3
      HFT 3313 Physical Property Management ....................................... 3
      HFT 4210 Hospitality Human Resource Development .......................... 3
      HFT 4343 Facility Planning & Design .......................................... 3
      HFT 4473 Hotel Development Analysis ......................................... 3
      HFT 4932 Current Topics in Hospitality Management ........................ 3
      MAN 4932 Business Policies for Hospitality Management .................... 3
   2. Food Service Management Track
      FSS 3120 Quantity Food Purchasing ............................................ 3
      FSS 3232 Intermediate Techniques .............................................. 3
      FSS 3223 Quantity Food Management ........................................... 3
      Four From: FSS 3241C, FSS 3301, FSS 4226, FSS 4284C, FSS 3313, HFT 4210, HFT 4343, HFT 4860
   3. Conference and Convention Management Track
      HFT 3754 Convention/Conference Operations .................................. 3
      HFT 4752 Convention/Promotion and PR ........................................ 3
      HFT 4753 Convention/Conference Services ..................................... 3
      HFT 4754 Exhibit and Trade Operations ....................................... 3
      Three From: FSS 4284C, HFT 4210, HFT 4860, HFT 4932
   4. Travel and Tourism Track
      AVM 4510 Airline Management .................................................. 3
      HFT 3754 Convention and Conference Operations .............................. 3
      HFT 4210 Hospitality Human Resource Development .......................... 3
      HFT 4717 Tourism Planning and Development .................................. 3
      HFT 4722 Travel Agency Management .......................................... 3
      HFT 4932 Current Topics in Hospitality Management ........................ 3
      MAN 4932 Business Policies for Hospitality Management .................... 3

4. Electives ................................. 3

Total semester hours 125

*Hospitality Management majors are restricted to the listed courses offered by the College of Business Administration. No other courses offered by the College of Business Administration may be applied towards a degree in Hospitality Management.
MINOR

The Hospitality Management Department offers a minor consisting of 24 semester hours.

Required courses: HFT 1000, HFT 2252, FSS 2202C, HFT 2750, HFT 3603, HFT 3444, HFT 3700, one 3000/4000 level hospitality restricted elective. A GPA of 2.0 is required for these courses. Nine (9) semester hours must be taken at UCF.

DEPARTMENT OF MOLECULAR BIOLOGY AND MICROBIOLOGY

Chair: R. N. Gennaro, BL 330, Phone (407) 823-5932
Faculty: Berringer, Charba, Gennaro, Laird, Sweeney, Washington, White, Wodzinski

The Department of Molecular Biology and Microbiology offers curricular programs leading to a minor, a Bachelor of Science degree, and a Master of Science degree, each in Molecular Biology and Microbiology. The Core Curriculum in the baccalaureate program, with its broad and thorough grounding in the physical, computational, and life sciences, provides a solid foundation in concepts and applications of modern biology to contemporary and future problems. The Restricted Electives component of the baccalaureate program allows each student to enhance his/her academic preparation in areas of morphological, clinical, analytical or investigative applications. Students are also encouraged to gain research experience and exposure to specialized topics not taught in formal courses through the mechanism of directed research and independent study contracts with selected faculty. This thorough, but flexible, program, provides an excellent preparation for industry, graduate education, and for medical/dental/veterinary and so forth professional education.

MINOR IN MOLECULAR BIOLOGY AND MICROBIOLOGY

The Department of Molecular Biology and Microbiology offers a minor consisting of a minimum of 30 semester hours.

Required courses (22 hours) include: BSC 2010C, MCB 3013C, PCB 3233, PCB 3233L, PCB 3523, PCB 4524, and PCB 3X2C (QBM).

Restricted Electives (8 hours minimum): at least two courses from the Restricted Elective category of the baccalaureate curriculum.

To be eligible for a minor in Molecular Biology and Microbiology, a student must have a GPA of at least 2.0 in all courses taken for the minor, subject to the following constraints:
A. At least 15 of the required 30 hours must be taken in the Department of Molecular Biology and Microbiology at UCF;
B. No “D” grades from other institutions will be accepted;
C. No CLEP, TSD or AP credit will be accepted.

Bachelor of Science: Molecular Biology and Microbiology

Degree Requirements:
1. See Undergraduate Degree requirements.
2. To be eligible for a major in Molecular Biology and Microbiology, a student must complete all coursework in the baccalaureate curriculum as shown, and, with respect to the Life Sciences portion of the Core Curriculum and the Restricted Electives, earn a GPA of at least 2.0 for all coursework in each of those categories subject to the following constraints:
A. No CLEP, TSD, or AP credit may be used;
B. No “D” grades from other institutions will be accepted;
C. A maximum of 3 hours of independent study, directed research, or similar credit may be used as a Restricted Elective or as a substitute for any stated Core Curriculum requirement unless prior Departmental approval is obtained;
D. A minimum of 20 hours must be taken at UCF in the department of the major.

Molecular Biology and Microbiology Undergraduate Curriculum

I. University Requirements
   A. General Education Program (Communication, C&H, and Soc. Sci.) [27]
   B. Foreign Language Proficiency (this is a proficiency requirement, not a credit requirement) [0]
   II. Departmental Requirements 82-92
      A. Core Curriculum [65-66]
         Life Sciences (29-30)

191
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<td>BOT or ZOO 2010C</td>
<td>General Botany or General Zoology</td>
<td>(3 or 4)</td>
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<td>MCB 3013C</td>
<td>General Microbiology</td>
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<td>PCB 3063, 3063L</td>
<td>Genetics + Genetics Lab</td>
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<td>PCB 3233, 3233L</td>
<td>Immunology + Immunology Lab</td>
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<td>PCB 3523, 4524</td>
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<td>PCB 3XX2C</td>
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<td>CHM 2045, 2046, 2046L</td>
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<td>CHM 3210, 3211, 3211L</td>
<td>Organic Chemistry I, II, + Lab</td>
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<td>B. Restricted Electives (Select 6 courses in consultation with advisor)</td>
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<td>Biochemical Methods</td>
<td>(2)</td>
</tr>
<tr>
<td>MCB 3203, 3203L</td>
<td>Pathogenic Microbiology + Lab</td>
<td>(4)</td>
</tr>
<tr>
<td>MCB 4114C</td>
<td>Microbial Systematics and Diagnostics</td>
<td>(4)</td>
</tr>
<tr>
<td>MCB 4404</td>
<td>Microbial Metabolism</td>
<td>(3)</td>
</tr>
<tr>
<td>MCB 4603</td>
<td>Environmental Microbiology</td>
<td>(3)</td>
</tr>
<tr>
<td>MCB 5205</td>
<td>Infectious Process</td>
<td>(3)</td>
</tr>
<tr>
<td>MCB 5505C</td>
<td>Virology</td>
<td>(3)</td>
</tr>
<tr>
<td>PCB 3703C</td>
<td>Human Physiology</td>
<td>(4)</td>
</tr>
<tr>
<td>PCB 5235C</td>
<td>Immunopathology</td>
<td>(4)</td>
</tr>
<tr>
<td>PCB 5806C</td>
<td>Endocrinology</td>
<td>(3)</td>
</tr>
<tr>
<td>ZOO 3733C</td>
<td>Human Anatomy</td>
<td>(4)</td>
</tr>
<tr>
<td>ZOO 4603C</td>
<td>Vertebrate Embryology</td>
<td>(5)</td>
</tr>
<tr>
<td>ZOO 4753C</td>
<td>Vertebrate Histology</td>
<td>(5)</td>
</tr>
<tr>
<td>ZOO 5745C</td>
<td>Essentials of Neuroanatomy</td>
<td>(4)</td>
</tr>
</tbody>
</table>

Note (1): Those students interested in pursuing graduate or professional education are strongly advised to select the following courses: Physics for Scientists and Engineers I & II (PHY 3048, 3049, 3048L, 3049L); Applied Calculus I & II (MAC 3253, 3254) or Calculus with Analytic Geometry I & II (MAC 3311, 3312).

**DEPARTMENT OF NURSING**

Chair: J.C. Kijek, HP 410, Phone (407) 823-2744

Faculty: Browne-Krimsley, Brunell, Covelli, Dorner, Eldredge, Giovinco, Guarda, Hennig, Judkins, Koch, Moore, Peterson, Primus, Ramey, Smith, Wink

The nursing curriculum leads to the Bachelor of Science in Nursing degree, the basis of professional nursing practice. The BSN graduate is prepared to provide comprehensive care in a variety of acute, community, and rehabilitative settings. Program emphasis includes clinical nursing practice, health promotion and maintenance, and preparation for assuming leadership roles. The baccalaureate curriculum provides the foundation for graduate study in nursing.

Acceptance to the University does not constitute admission to the upper-division, limited access nursing major. SEPARATE APPLICATION must be made directly to the Admissions Office prior to February 1st of the year in which Fall admission is sought. R.N.s and minority applicants receive special consideration. Completion of the A.A. degree or General Education Program is required along with prerequisite courses with a grade of "C" or better. Graduates are eligible to take the licensing examination for registered nurses.

Courses for nurses registered in the State of Florida are offered at the Orlando, UCF
**Bachelor of Science: Nursing**

**Degree Requirements**
1. See Undergraduate Degree Requirements
2. See special college and or department requirements
3. Required Courses

Prerequisites to Nursing Major to be satisfactorily completed prior to admission to the major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCB 3013C</td>
<td>General Microbiology</td>
<td>5</td>
</tr>
<tr>
<td>ZOO 3733C</td>
<td>Human Anatomy</td>
<td>4</td>
</tr>
<tr>
<td>PCB 3703C</td>
<td>Human Physiology</td>
<td>4</td>
</tr>
<tr>
<td>CHM 2205</td>
<td>Introduction to Organic/Biochemistry</td>
<td>5</td>
</tr>
<tr>
<td>STA 2014</td>
<td>or 3023</td>
<td></td>
</tr>
<tr>
<td>SOW 3104</td>
<td>Principles of Statistics</td>
<td>3</td>
</tr>
<tr>
<td>DEP 3004</td>
<td>Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>HUN 3011</td>
<td>or</td>
<td></td>
</tr>
</tbody>
</table>

**Upper-Division Professional Phase**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSC 4550</td>
<td>Pathophysiologic Mechanisms</td>
<td>3</td>
</tr>
<tr>
<td>NUR 3119</td>
<td>Introduction to Baccalaureate Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NUR 3748C</td>
<td>Concepts Basic to Nursing Practice (Generic Students)</td>
<td>6</td>
</tr>
<tr>
<td>NUR 3066</td>
<td>Health Assessment</td>
<td>3</td>
</tr>
<tr>
<td>NUR 3166</td>
<td>Critical Inquiry</td>
<td>3</td>
</tr>
<tr>
<td>*NUR 3809</td>
<td>Transitional Concepts in Nursing (RN Students)</td>
<td>6</td>
</tr>
<tr>
<td>*NUR 3749C</td>
<td>Scientific Theories of Nursing I</td>
<td>6</td>
</tr>
<tr>
<td>*NUR 3795C</td>
<td>Scientific Theories of Nursing II</td>
<td>6</td>
</tr>
</tbody>
</table>
The Public Administration course of study is designed to provide students with a broad understanding of the roles and functions of administrative agencies in the American system of government as well as prepare them for professional careers in public service at the federal, state, regional, or local level. Satisfactory completion of program requirements leads to the degree of Bachelor of Arts with a major in Public Administration. The baccalaureate program in Public Administration is offered on the Orlando and Brevard campuses.

Bachelor of Arts: Public Administration

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses (27 semester hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAD 3003</td>
<td>Introduction to Public Administration</td>
<td>3</td>
</tr>
<tr>
<td>PAD 4034</td>
<td>Administration of Public Policy</td>
<td>3</td>
</tr>
<tr>
<td>PAD 4104</td>
<td>Administrative Theory</td>
<td>3</td>
</tr>
<tr>
<td>PAD 4204</td>
<td>Fiscal Management</td>
<td>3</td>
</tr>
<tr>
<td>PAD 4414</td>
<td>Public Personnel Administration</td>
<td>3</td>
</tr>
<tr>
<td>POS 2041</td>
<td>American National Government</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2013</td>
<td>Principles of Economics I</td>
<td>3</td>
</tr>
<tr>
<td>CGS 1060</td>
<td>Introduction to Computer Science or Business Application</td>
<td>3</td>
</tr>
<tr>
<td>CGS 3000</td>
<td>Computer Fundamentals for Business Application</td>
<td>3</td>
</tr>
<tr>
<td>STA 2014</td>
<td>Principles of Statistics or Statistical Methods I</td>
<td>3</td>
</tr>
<tr>
<td>STA 3023</td>
<td>Statistical Methods I or a course in social science research with an emphasis on statistical methods</td>
<td></td>
</tr>
<tr>
<td>PAD 4270</td>
<td>Survey Research or a course in social science research with an emphasis on statistical methods</td>
<td></td>
</tr>
</tbody>
</table>

4. Restricted Electives
30 additional semester hours taken from: (1) Public Administration electives including the internship; and (2) one or more allied public science fields. All courses are selected with and approved by the student's advisor. Among such supporting fields are accounting, legal studies, communications, computer sciences, criminal justice, economics, political science, social work, sociology, and statistics.

5. Electives

Total Semester Hours Required 120
MINOR

The public administration program offers a minor in public administration consisting of 21 hours:

1. All five of the required core courses for the PAD major will be required of the PAD minor.
   These are: PAD 3003, PAD 4414, PAD 4104, PAD 4204, and PAD 4034.

2. Two additional courses may be selected from among the list of PAD restricted electives or related courses in other fields. These courses will be chosen with the consent of the PAD undergraduate advisor.

DEPARTMENT OF SOCIAL WORK

Chair: K. J. Kazmerski, FA 215, Phone (407) 823-2114
Faculty: Abel, Boyer, Green, Suh, Tropf

The Department of Social Work offers a professional degree program which is nationally accredited by the Council on Social Work Education. Its primary focus is the preparation of students for entry-level professional social work practice within diverse human service organizations such as hospitals, schools, correctional settings, public welfare departments, child placement organizations, community centers, and counseling agencies.

Before applying for the professional phase of the program, students must have completed courses in biology, computer science, economics, political science, psychology, and sociology. Applications to this limited access program may be obtained at the Department of Social Work.

Bachelor of Social Work

Degree Requirements

1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses (45 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOW 3104</td>
<td>Assessing Human Development</td>
<td>3</td>
</tr>
<tr>
<td>SOW 3111</td>
<td>Assessing Human Systems</td>
<td>3</td>
</tr>
<tr>
<td>SOW 3203</td>
<td>Social Welfare and Community Resources</td>
<td>3</td>
</tr>
<tr>
<td>SOW 3232</td>
<td>Social Welfare Policies and Issues</td>
<td>3</td>
</tr>
<tr>
<td>SOW 3401</td>
<td>Social Work Research</td>
<td>3</td>
</tr>
<tr>
<td>SOW 4431</td>
<td>Evaluating Social Work Practice and Service Programs</td>
<td>3</td>
</tr>
<tr>
<td>SOW 3300</td>
<td>Generalist Practice in Social Work</td>
<td>3</td>
</tr>
<tr>
<td>SOW 3352</td>
<td>Interpersonal Skills in Social Work Practice</td>
<td>3</td>
</tr>
<tr>
<td>SOW 4341</td>
<td>Micro-level Roles and Interventions in Social Work</td>
<td>3</td>
</tr>
<tr>
<td>SOW 4343</td>
<td>Macro-level Roles and Interventions in Social Work</td>
<td>3</td>
</tr>
<tr>
<td>SOW 4620</td>
<td>Social Work with Minorities</td>
<td>3</td>
</tr>
<tr>
<td>SOW 4510</td>
<td>Field Education</td>
<td>9</td>
</tr>
<tr>
<td>SOW 4522</td>
<td>Field Education Seminar</td>
<td>3</td>
</tr>
</tbody>
</table>

4. Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Semester Hours Required</td>
<td>120</td>
</tr>
</tbody>
</table>

Social Welfare Enhancement Options

Students desiring additional studies in a social welfare area must satisfy the requirements of the basic curriculum while concurrently completing the optional area.

1. Child Welfare Option

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYO 4100</td>
<td>The Family</td>
<td>3</td>
</tr>
<tr>
<td>SOW 4654</td>
<td>Children’s Services</td>
<td>3</td>
</tr>
<tr>
<td>EDF 3603</td>
<td>Analysis of Educational Foundations</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDF 4003</td>
<td>Overview of Education</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective from approved list -- see advisor

In addition, SOW 4510 Field Education must be completed in a child welfare agency

9 hours
CHOOSING A MAJOR AND ACADEMIC ADVISEMENT

The advantage of declaring a major early is to be linked with a UCF faculty member who will serve as the student's academic advisor within his chosen degree tract. Problems are less likely when students remain in contact with conscientious advisors.

Students are encouraged to investigate several degree pathways and to talk with a number of students who have selected those majors. Thorough investigation at the start of the student's academic career will help him or her in making a reasonable choice. The following information offers a general guideline in selecting an academic major.

Choice of Major: The aspiring pre-health professional student is expected to declare a major within one of the degree-granting departments of the University. Terms such as premed or prevet are simply descriptive labels, as UCF does not award pre-health professional degrees.

Students may elect any major described in the UCF Catalog. This includes such varied pursuits as Psychology, Engineering, or Liberal Studies.

Traditional vs. Non-Traditional Majors: Traditional majors for pre-health professionals are characterized by degree requirements which overlap most professional school admission requirements. Chemistry, Biology, Molecular Biology and Microbiology are the majors most often chosen at UCF, but others such as Psychology, Physics and Mathematics are also appropriate choices.

Non-Traditional Majors: Such majors as English, Philosophy, Music, Engineering, and so forth, have the disadvantage of not overlapping with admission requirements. If a student elects a non-traditional pathway and does not complete more than the minimum science requirements, s/he will be expected to have accomplished an outstanding performance record in the science classes taken.

Ultimately, the choice belongs to the student. Professional schools are less concerned with what undergraduate major one chooses than with how well s/he performed and his/her choice of enrichment electives. Factors to consider are personal interests, finances for college, and career alternatives. The curriculum for the first two years is very similar for all pre-health professions students.

PREPROFESSIONAL SCREENING COMMITTEE

Faculty members representing Chemistry, Biology, Molecular Biology and Microbiology, Psychology, English, Humanities, Anthropology and Sociology, and Mathematics along with a physician, a member of the clergy, and the preprofessional coordinator serve on a screening committee. This committee reviews all "paper credentials" organized in an extensive applicant file and participates in a one-hour interview for each applicant. In addition to providing for a preliminary interview, the committee also determines an overall rating of the applicant. Each committee member completes an evaluation form addressing applicant strengths and weaknesses. These evaluations are combined with all letters of recommendation, transcripts, biographical questionnaires, and computer graphics to formulate a descriptive COMPOSITE EVALUATION packet in support of each applicant. This document is sent to the admissions office of all professional schools the student applies to. This service is optional and not a requirement.

DATES OF IMPORTANCE

All pre-health professions students should be aware of registration deadlines and test dates for their specific admissions exam (DAT, MCAT, OAT, GRE, etc.) In addition, most four-year health professions schools subscribe to professional application services (AAMCAS, ADDSAS, ACOMAS, etc.). The applicant must be aware of which schools are members of the service and thus require completion of a thorough application packet provided by the
various Application Services. Some professional schools do NOT subscribe and therefore, the student applicant must deal directly with the admissions office of such schools.

The preprofessional screening committee process is initiated in April. Application packets are available at the Pre-Health Professions Advisement Office during the month of April. Dental applicants must return completed packets by the first Friday in May. All other applicants (Chiropractic, Medical, Optometry, Podiatry, Pharmacy, and Veterinary) must return completed packets by the third Friday in May.

Student applicants are scheduled for their Screening Committee interviews in the order of their return of completed application packets. A master schedule of all interviews for Fall term is posted on the Pre-Health Professions Advisement Office bulletin board and copies are available at the Pre-Health Professions Advisement Office, 103 Biology.

ADMISSIONS EXAMINATIONS
Various standardized examinations are required of applicants as a part of the admissions process to the professional schools (dentistry-DAT; medicine-MCAT; optometry-OAT; pharmacy-PCAT; podiatry-MCAT; veterinary medicine-GRE or VAT). These examinations are generally offered twice each year: in the Spring and Fall.

ADMISSIONS EXAMINATIONS
Various standardized examinations are required of applicants as a part of the admissions process to the professional schools [dentistry-DAT; medicine-MCAT; optometry-OAT; pharmacy-PCAT; podiatry-MCAT; veterinary medicine-GRE or VAT]. These examinations are generally offered twice each year: in the Spring and Fall. Pre-health professions students are advised to take the appropriate examination in the Spring preceding application to the professional school rather than waiting for the Fall examination. There are numerous support systems and review programs available to assist applicants with their preparation. All applicants are encouraged to maximize their preparation before registering to take any of these exams the first time. Taking an admissions exam on a trial basis is not recommended.

RELATED REFERENCES
Publications of special interest and usefulness to preprofessional students include the following:
1. Admission Requirements of U.S. and Canadian Dental Schools, published by the American Association of Dental Schools, 1625 Massachusetts Avenue, N.W., Washington, D.C. 20036;
2. Medical School Admission Requirements, United States and Canada, published by the Association of American Medical Colleges; One Dupont Circle, N.W., Washington, D.C. 20036;
4. Information for Applicants to Schools and Colleges of Optometry, published by the Association of Schools and Colleges of Optometry; 213 East Ohio Street, Chicago, Illinois 60611;
5. Pharmacy School Admission Requirements, published by the American Association of Colleges of Pharmacy; 1730 ‘M’ Street, N.W., Washington, D.C. 20036;
7. Veterinary Medicine, A Career Of Choices: A Handbook for Advisors, prepared by the Office of Student Affairs and Admissions, New York State College of Veterinary Medicine, Cornell University, Ithaca, New York 14853.

Preprofessional students are encouraged to obtain a copy of the admissions publication appropriate to their preprofessional area. Several of these publications are available in the University bookstore. Examination copies are available in the Pre-Health Professions Advisement Office, BL 103.

Other Health Professions
For Nursing and other Allied Health Services, see College of Health and Professional Studies.

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The College of Extended Studies develops, coordinates, and implements noncredit and sponsored credit institute programs of extension, outreach, and continuing education in cooperation with academic colleges and departments of the University. Learners wishing to continue their education are offered, as an alternative to regular credit courses, opportunities for academic credit, professional and personal growth, and enrichment at off-campus locations. The primary purpose is to provide lifelong learning opportunities by using university resources to benefit nontraditional and traditional learners.

A broad spectrum of programs, many designed specifically for individuals and groups, include short courses, in-service training, conferences, seminars, institutes, special training programs, study-travel programs, and workshops. Educational courses are conducted in cooperation with outside agencies for non-matriculated and nontraditional students who wish to complete baccalaureate degree requirements. Professional level courses are offered to meet the educational needs of business, professional, government, service, and civic organizations. To substantiate the content of professional programs as well as to offer credentials to verify the learner’s participation, Continuing Education Units (CEU) are offered to qualified and eligible participants.

Additionally, training activities can be custom designed for specific professional groups or organizations desiring to complement their internal personnel training and development programs. Specialized certification courses, in response to legislative mandates (e.g., certified risk managers in certain health care facilities) are also offered.

The College of Extended Studies administers the Center for Multilingual Multicultural Studies, the Institute of Government, and the Real Estate Institute, which is located at the University’s Winter Park Campus. Registration in the College of Extended Studies courses does not require admission to the University, nor does it imply acceptance.

The College of Extended Studies manages UCF’s newest facility: the Winter Park Center. Located in the heart of Central Florida’s growth area, it is the University’s primary conference/workshop center. Six meeting rooms serve groups from 10 to 100 in a modern, urban setting. Adjacent to the center, Valencia Community College has classroom and computer labs used on a shared basis. This facility is available for use by the public and the university community. For more information, please contact the UCF Winter Park Center (407) 623-1200.

Center for Multilingual Multicultural Studies

Director: Consuelo Stebbins, PC 530, Phone (407) 823-5515

The Center provides English instruction for foreign students and area business persons. The intensive English program combines the latest in teaching methodology with computer-assisted instruction. Full-time students enrolled at the Advanced level may elect to take courses as nondegree-seeking students while enrolled in the English language program. Student (F-1) visas are extended to qualified applicants. Special attention is given to preparing students for academic coursework in their specialized fields of study. Four levels of instruction are offered which range from Beginning to Advanced. Students are required to take an entry placement test to determine their level of proficiency. The Center also offers special courses in Accent Reduction, TOEFL Preparation, and Foreign Languages: Spanish for Business purposes and French for Hospitality Management for community residents.

Institute of Government

Director: Marilyn Crotty, Winter Park Center, Phone (407) 623-1204

Through the College of Extended Studies, the Institute of Government, an affiliate of the Florida Institute of Government, offers training and technical assistance to elected and appointed officials in state and local government on topics selected by the UCF Institute of Government Steering Committee. The Institute provides workshops, conferences, seminars, technical assistance and liaison between UCF and the governmental community in an eleven-county service area.

The UCF Institute of Government sponsors, in conjunction with the Florida City/County
Managers Association, an annual statewide public policy forum for selected elected officials and city/county managers to improve the effectiveness of local governments in the state of Florida.

Real Estate Institute

**Director:** Jan Pirtle, Winter Park Center, Phone (407) 623-1200

The Real Estate Institute, through the College of Extended Studies, offers continuing education courses, workshops, and institute for the Real Estate profession. Pre-license courses offered satisfy Florida Real Estate Commission requirements; post-licensing courses develop expertise in specialized areas such as appraising, property management, and mortgage brokering.

The institute offices are housed in the University's newest facility: the Winter Park Center in Winter Park. Courses, workshops, and institutes are offered throughout the eleven-county service area of the University of Central Florida.

Credit: Charles Morrow
INSTITUTES AND CENTERS FOR RESEARCH

AIDS Education Information and Research Institute

The AIDS Education Information and Research Institute is an interdisciplinary organization established in the College of Health and Public Affairs to facilitate the promotion of AIDS information and to serve as a principal coordinator in cooperation with local, regional, and state organizations, for AIDS education and other issues of particular interest to Central Florida.

Major goals of the institute are to promote and provide educational research, and service programs for professionals, the general public, and private organizations; to serve as a regional information and educational center; to aid the educational community in promoting, securing, and maintaining up-to-date literature concerned with AIDS.

Contact Person: Sharon E. Douglass, Director, HPB 350, (407) 823-AIDS

Center for Research in Electro-Optics and Lasers (CREOL)

CREOL was established in 1986 for the purpose of bringing together diverse disciplines into a cohesive optics and laser research and education program. The program was initiated by a $2 million grant from the Florida legislature to support 21 additional faculty lines in optics and lasers as well as seven support positions.

Faculty members span the disciplines of electrical engineering, physics, computer engineering, mechanical engineering, mathematics, and related fields. CREOL: conducts research in such fields as laser propagation; laser/materials interaction, nonlinear optics; fiber optics; optical processing; laser development; detector technology; ultrafast phenomena; stimulated scattering; nonlinear optical spectroscopy; diffractive optics; thin-film optics; growth of nonlinear and laser host materials; superconductivity; and other areas. The center also participates in the industrial affiliates program, providing access to expertise and facilities to corporate members that contribute to its program.

CREOL operates 51 laboratories equipped with a full range of lasers, including YAG, pulsed-ruby, argon, krypton, CO₂, HeNe, nitrogen pumped-dye; spectroscopes; spectrophotometer with computer data station; laser doppler velocimeters; hotwire anemometer and temperature and velocity measurement systems; optics tables; microscopy; photographic equipment and darkroom; large aperture collimator, phase screen, and peripherals; ion-plating thin-film deposition system; and a frequency conversion WEX system. Laboratories include the following:

- Femtosecond Lab
- Nanosecond YAG Laboratory
- Analysis Laboratory
- Optics Laboratory
- Turbulence Laboratory
- Propagation Laboratory
- Crystal Growth Laboratory
- Metal-Vapor Laboratory
- Single Mode and Picosecond CO₂ Laser Laboratory
- High-Rep-Rate Picosecond YAG Laboratory
- Picosecond YAG Laboratory
- Electro-Optics Laboratory
- Experimental Mechanics Laboratory
- Solid State Laser Laboratory
- Thin-Film Laboratory
- Free-Electron Laser Laboratory
- Laser Spectroscopy Laboratory
- Laser Plasma Laboratory
- Diode-Pumped Laser Laboratory

CREOL has established a three-tiered industrial affiliates program for members, sustaining members, and senior members. Benefits depend upon the level of funding, but include direct access to CREOL research results, laboratories and equipment, opportunities to influence future CREOL directions through membership on advisory boards, assistance in recruiting graduates of CREOL-related programs, and advance access to nonproprietary research results. For information contact CREOL, 12424 Research Parkway, Suite 400, Orlando, FL 32826;

Contact Person: Dr. M. J. Soileau, Director Phone (407) 658-6800

Institute For Simulation and Training (IST)

IST was formed in 1982 in response to the need for a university affiliated institute to serve as a focal point for the emerging simulation and training community. IST serves as a link among academia, government and industrial organizations and provides a broad range
of research and academic services. Research that advances the state-of-art in affordable, effective simulation and training systems is conducted and sponsored by the Institute.

The talents of an interdisciplinary pool of researchers with expertise in computer science, human factors, psychology, visual systems, instructional technology and other specialties are utilized to work in key technologies that are the basis of simulation and training research. These technologies include: simulator networking, visual simulation, training systems effectiveness, artificial intelligence/expert systems, team training, computer architectures, user interface design, modeling/simulation programming, cognitive/information processing, database design and development, and instructional systems design.

Currently, six laboratories occupying over 8,400 square feet in Central Florida Research Pavilion are operated by IST. These facilities include:

- Networking communications laboratory
- Classroom education laboratory
- Visual systems laboratory
- Team training laboratory
- Low cost flight trainer laboratory
- Mathematics simulation laboratory

In its role as a leader in the simulation and training community, the Institute has undertaken a program of technology transfer. Included in this effort is the development of research projects with potential commercial applications, adaptation of military technology to civilian educational markets, and the communication of research results through seminars, publications and workshops.

Resources for the IST's operation are provided by the Naval Training Systems Center, the Army's PM TRADE, the DOD's Training and Performance Data Center, the Central Florida Research Park, and the many new technology firms moving into the Orlando area. The IST has been named a Center of Excellence by the DOD and designated by the Florida legislature as the leading state agency for simulation services and research.

**Contact Person:** Dr. A. Louis Medin, Director, Phone (407) 658-5000; FAX (407) 658-5059

**Space Education and Research Center**

The Space Education and Research Center (SERC) is an interdisciplinary organization that relies on faculty participation from all five colleges of the University. SERC's mission is to:

- Perform research to advance space technology
- Provide researchers with greater access to the upper atmosphere and space
- Help commercialize space services
- Positively affect educational opportunities and experiences
- Upgrade capability through training and development programs
- Become an active participant in the international space community.

Research areas of interest include advanced launch systems, communications, the earth system sciences, educational technology, and space optics. The goal is to maximize space research opportunities for UCF faculty and students, while providing highly valued results to the space community.

In education, SERC serves as a catalyst for the development of new space related courses and programs. SERC also works with industry, government and the Central Florida school districts to improve science and mathematics education through the use of space applications and technology.

**Contact Person:** Jerry Ventre, Acting Director, 12424 Research Parkway, Suite 157, Orlando, FL 32826, Phone (407) 658-5599, FAX (407) 658-5595.

**Center for Applied Human Factors in Aviation**

The Center for Applied Human Factors in Aviation (CAHFA) has as its mission the enhancement of safety in the nation's airspace system through applied human factors research systems design and training strategies. Chartered in 1990, CAHFA is a joint endeavor between UCF and Charter partner Embry-Riddle Aeronautical University, Daytona Beach, Florida. Pooling the complimentary strengths of the two universities creates a research resource that is without peer for solving a vast assortment of aeronautical human factors problems. CAHFA research initiatives are aimed at significantly reducing human factors related accidents and incidents by determining the efficacy of and by developing
strategies for achieving improvements in human performance in three general areas: airspace system automation, aviation risk management, and team performance for flight crews and air traffic control personnel.

Contact Person: Dr. Richard Gilson, Director, Phone (407) 823-1011

Florida Solar Energy Center (FSEC)
The Florida legislature created the FSEC in 1974 to conduct research on alternative energy technologies, to improve the quality of available solar energy equipment, and to educate the public about energy options. Located on a 16-acre complex at Cape Canaveral, the center serves as a statewide institute administered by the University of Central Florida.

The FSEC conducts state, federal, and privately supported research in photovoltaics, energy use in buildings, electrical and uses, solar water heating, power electronics, innovative air conditioning systems, and the production and use of hydrogen. In addition, the center has developed and administers state-mandated programs that require the testing, certification, and approval of all solar energy equipment manufactured or sold in Florida. Through its public information office, FSEC responds to more than 15,000 requests for energy information each year. The center also conducts seminars and workshops for teachers and professionals statewide, and its technical library boasts one of the nation's most extensive holdings on solar and alternative energy. Current projects involve solar thermal systems, electric utilities research, hydrogen and energy systems, among others.

For information contact the Florida Solar Energy Center, 300 State Road 401, Cape Canaveral, FL 32920-4099.

Contact Person: Dr. David Block, Director, Phone (407) 783-0300; FAX (407) 783-2571

Florida-Canada Institute
The Florida-Canada Institute is hosted by the University of Central Florida for the Florida Department of Education. The purpose of the Institute is to create and foster educational and commercial cultural and social exchanges between Canada and Florida. The Institute offers such programs as the Canadian Speakers Series and two Summer Seminars on Canadian Studies for school teachers. It provides opportunity for the state-wide dissemination of information about Canada to K-12 schools. Palm Beach Community College is the Florida State Division of Community Colleges co-host for the Florida-Canada Institute.

Contact Person: Dr. Henry Kennedy, Director, Phone (407) 823-2079

Florida-USSR Institute
The Florida-USSR Institute is hosted by the University of Central Florida for the Florida Department of Education. The purpose of the Institute is to create and foster educational and commercial cultural and social exchanges between USSR and Florida. The Institute plans to offer programs such as the USSR Speakers Series and exchange programs for teachers and scientists between the USSR and the State of Florida. It provides opportunity for the state-wide dissemination of information about USSR to K-12 schools.

Contact Person: Dr Henry Kennedy, Director, Phone (407) 823-2079

Florida Sinkhole Research Institute
The Florida Sinkhole Research Institute acts as a central clearinghouse for data and professional expertise on the sinkhole problem. The Institute provides a public service by aiding homeowners and local governments with information and advice, and also conducts extensive sinkhole related research.

Contact Person: Dr. Barry F. Beck, Director, Phone (407) 823-5644.

Small Business Development Center
The Small Business Development Center (SBDC) was established as part of a statewide program in cooperation with the U.S. Small Business Administration. The resources of the SBDC are utilized to counsel and train small business clients and prospective owners in a variety of areas, including finance and accounting, marketing, production, engineering, and technical and paralegal problems.

Contact Person: Aloyse T. Polfer, Director, CEBA II, Phone (407) 823-5554.
Center for Economic Education

The Center for Economic Education strives to increase public knowledge of economic principles and their applications in daily life. Researchers at the Center develop, collect, and distribute economic educational materials. They also consult with and provide instruction to area schools (K-12), community colleges, and community organizations. Instruction focuses on the principles of economics and their use in making rational economic decisions. Additionally, the Center conducts research in economic education.

Contact Person: Dr. Robert L. Pennington, Director, BA 325, Phone (407) 823-2870

Institute for Statistics

The Institute for Statistics provides statistical consulting and analytical support to all areas of the University. The Institute makes valuable contributions to research by supporting non-statistical researchers with statistical consulting assistance during the planning of experiments and investigations, analysis of data, and the evaluation of results. The Institute also provides statistical support to various governmental agencies and private organizations.

Contact Person: Dr. Mark E. Johnson, Director, Phone (407) 823-2289.

Dick Pope, Sr. Institute for Tourism Studies

The Dick Pope Sr. Institute for Tourism Studies serves Florida tourism through research, promotion, public awareness programs, and education. The Institute conducts studies in domestic and international tourism, such as the decision-making process of the economic impact of tourism. It also conducts marketing research for theme parks, hotels and restaurants.

The educational needs of the tourism industry are met by offering credit and non-credit courses. A four-year baccalaureate program in hospitality management prepares students to work as managers in the hospitality and tourism industries. Non-credit, non-degree programs tailored to the needs of specific enterprises and professional associations of the tourism industry include short courses, seminars, workshops, conferences, in-service training programs, and executive development programs.

Contact Person: Dr. Ady Milman, Acting Director, Phone (407) 823-2982

Small Business Institute

Business schools have for some years been interested in getting students out of the classroom and involved with real business problems rather than "textbook" situations. By sponsoring the Small Business Institute program, the Small Business Administration does not only satisfy this need, but at the same time provides free professional help to small businessmen who are in need of managerial guidance.

The SBI program uses a team of senior-level undergraduate or graduate-level students who, under faculty supervision, provide management counseling and technical assistance to small business clients. Examples of these services are: general management audits, development of business plans, establishment of accounting systems, design of inventory systems, cost analysis, pricing strategies, and evaluation of alternative markets.

The major objective of the College of Business Administration at the University of Central Florida is to educate men and women for positions of productive responsibility in business and the professions. UCF's Small Business Institute program stresses analytic ability and the student's learning skills in recognizing and coping with change. The Small Business Institute program at the same time provides on the job experience and sound academic training for the student.

Contact Person: Dr. Ron Rubin, Director, Phone (407) 823-2682

Institute for Technical Documentation

The Institute for Technical Documentation offers a variety of services of client companies, including the development of original technical documentation, the translation of documentation written in foreign languages, and the development of seminars to assist clients in writing their own documentation.

The Institute consists of a core of permanent professional staff, supplemented by University faculty, staff, and students, all of whom have demonstrated expertise in technical writing of documentation. These services are enhanced by the cooperative efforts of
educators, engineers, foreign language experts, psychologists, and scientists who act as consultants to the Institute.

Computer-assisted processing aids in translating foreign languages, word processing and editing text, gathering reference material, and conducting information searches. Trained writers, established facilities, and continued contact with personnel in industry and research enable the Institute to engage in a wide variety of documentation projects.

Contact Person: Gloria W. Jaffe, Director, FA 450, (407) 823-2212.

Center for Executive Development

The Center for Executive Development of the College of Business Administration provides seminars, workshops, and conferences on business and management-related topics. The Center is designed to support an organization's needs relating to every aspect of business management. This support may be in the form of short, intensive seminars presented on site or on campus; special topic seminars prepared for particular needs; or specially scheduled workshops and seminars. Excellence in programming and individual attention are key objectives of the Center. Examples of seminars and workshops held include: Time Management, The Supervisor Manager, Management Skills for Women, CPA Review, and Tax and Accounting Conference.

Contact Person: Mr. David J. Roberts, Director, Phone (407) 823-2446.
COURSE DESCRIPTIONS

CLASSIFICATION OF COURSES
The University course numbering system is as follows:
1000-2999 are freshman and sophomore level courses and are designed primarily for these students.
3000-4999 are junior- and senior-level courses and are designed primarily for these and other advanced students. When approved for inclusion in an individual program of graduate study by a supervisory committee approved by the Dean of Graduate studies, selected 4000-4999 courses may serve the needs of individual graduate students.
5000-5999 are beginning graduate and advanced undergraduate level courses—open to graduate students and those seniors who receive approval of the appropriate Dean(s).
6000-6999 are beginning and professional level courses open only to graduate students and do not apply toward a baccalaureate degree. (See Graduate Catalog)

FLORIDA STATEWIDE COURSE NUMBERING SYSTEM
The course numbers appearing in the catalog are part of a statewide system of prefixes and numbers developed for use by all public postsecondary and participating private institutions in Florida. One of the major purposes of this system is to make transferring easier by identifying courses which are equivalent, no matter where they are taught in the state. All courses designated as equivalent will carry the same prefix and last three digits.
The classifying and numbering of courses was done by community college and university faculty members in each academic discipline. Their work was reviewed by faculty members in all of Florida’s postsecondary institutions who made suggestions and criticisms to be incorporated into the system.
The course numbering system is, by law, descriptive and not prescriptive. It in no way limits or controls what courses may be offered or how they are taught. It does not affect course titles or descriptions at individual schools. It seeks only to describe what is being offered in postsecondary education in Florida in a manner that is intelligible and useful to students, faculty, and other interested users of the system.
The course numbering system was developed so that equivalent courses could be accepted for transfer without misunderstanding. Each public institution is to accept for transfer credit any course which carries the same prefix and last three digits as a course at the receiving institution. For example, if a student has taken SYG-000 at a community college, he cannot be required to repeat SYG-000 at the school to which he transfers. Further, credit for any course or its equivalent, as judged by the appropriate faculty task force and published in the course numbering system, which can be used by a native student to satisfy degree requirements at a state university can also be used for that purpose by a transfer student regardless of where the credit was earned.
It should be noted that a receiving institution is not precluded from using nonequivalent courses for satisfying certain requirements.

General Rule for Course Equivalencies
All undergraduate courses bearing the same alpha prefix and last three numbers (and alpha suffix, if present) have been agreed upon to be equivalent. For example, an introductory course in sociology is offered in over 40 postsecondary institutions in Florida. Since these courses are considered to be equivalent, each one will carry the designator SYG-000.

First Digit
The first digit of the course number is assigned by the institution, generally to indicate the year it is offered—i.e., 1 indicates freshman year, 2 indicates sophomore year. In the sociology example mentioned above one school which offers the course in the freshman year will number it SYG 1000; a school offering the same course in the sophomore year will number it SYG 2000. The variance in the first number does not affect the equivalency. If the prefix and last three digits are the same, the courses are substantially equivalent.
Titles
Each institution will retain its own title for each of its courses. The sociology courses mentioned above are titled at different schools "Introductory Sociology," "General Sociology," and "Principles of Sociology." The title does not affect the equivalency. The courses all carry the same prefix and last three digits; that is what identifies them as equivalent.

Lab Indicators
Some courses will carry an alpha suffix indicating a lab or field experience. The alpha suffixes "L." and "C." are used as follows to indicate laboratories:
"L." means either (a) a course, the content of which is entirely laboratory or (b) the laboratory component of a lecture-lab sequence in which the lab is offered at a different time/place from the lecture course.
"C." means a combined lecture-lab course in which the lab is offered in conjunction with the lecture at the same time/place.
Examples: Marine Biology
Marine Biology
with lab
Therefore, OCB 013C is equivalent to OCB-013 plus OCB-013L.

An alphabetical listing of prefixes:

ACG Accounting General
ACO Accounting: Occupational/Technical
ADE Adult Education
ADV Advertising
AFH African History
AFR Air Force ROTC
AMH American History
AML American Literature
ANT Anthropology
APA Applied Accounting
APB Applied Biology
ARE Art Education
ARH Art History
ART Art
ASH Asian History
AST Astronomy
AVM Aviation Management
BCH Biochemistry
BCN Building Construction
BOT Botany
BSC Introductory Biology
BTE Business Teacher Education
BUL Business Law
CAP Computer Applications
CBH Comparative Psychology & Animal Behavior
CCJ Criminal Justice & Criminal Justice
CDA Computer Design/Architecture
CEG Civil Geotechnical Structures
CES Civil Engineering Structure
CET Computer Engineering Technology
CGN Civil Engineering
CGS Computer General
CHI Chinese
CHM Chemistry
CHS Chemistry-Specialized
CIS Computer & Information Systems
CJT Criminal Justice Technology
CLA Classical and Ancient Studies
CLP Clinical Psychology
COC Computer Concepts
COE Cooperative Education
COM Communications
COP Computer Programming
COT Computer Theory
CPO Comparative Politics
CRM Computer Resources/Management
CRW Creative Writing
CWR Civil Water Resources
CYP Communication Psychology
DAA Dance Activities
DAE Dance Education
DEP Development Psychology
EAB Experimental Analysis of Behavior
EAS Engineering: Aerospace
ECM Engineering: Computer Mathematics
ECO Economics
ECP Economic Problems & Policy
ECS Economic Systems & Development
EDA Education: Administration
EDE Education: Elementary
EDF Education: Foundation
EDG Education: General
EDH Education: Higher
EDM Education: Middle School
EDP Education: Psychology
EDS Education: Supervision
EED Education: Emotional Disorders
EEL Engineering: Electrical
EES Environmental Engineering Science
EET Electrical Electronic Technology
EEX Education: Exceptional Child-Care Competencies
EGC Guidance & Counseling
EGM Engineering: Mechanical
EGN Engineering: General
<table>
<thead>
<tr>
<th>Code</th>
<th>Program Name</th>
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<td>EGS</td>
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<td>EIN</td>
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<td>ETC</td>
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<td>ETI</td>
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<td>ETM</td>
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<td>EUH</td>
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<td>EVI</td>
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<td>EVT</td>
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<td>Experimental Psychology</td>
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<td>FIN</td>
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<td>FRW</td>
<td>French Literature (Writings)</td>
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<td>GEO</td>
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<td>HLP</td>
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<td>HMW</td>
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<td>HSC</td>
<td>Health Science</td>
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<td>HUM</td>
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<td>LEI</td>
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<td>MAD</td>
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<td>MAT</td>
<td>Mathematics</td>
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<td>MCB</td>
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<td>MGF</td>
<td>Mathematics: General &amp; Finite</td>
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<td>MIF</td>
<td>Mathematics: History &amp; Foundations</td>
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<td>Military Science</td>
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<td>MLS</td>
<td>Medical Laboratory Science</td>
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<td>MMC</td>
<td>Mass Media Communication</td>
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<td>MRE</td>
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<td>MTG</td>
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<td>MUC</td>
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<td>Music: History/Musicology</td>
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<td>MUH</td>
<td>Music: Music Literature</td>
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<td>MUN</td>
<td>Music: Musical Ensembles</td>
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<td>Music: Theory</td>
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<td>MVB</td>
<td>Music: Applied-Brasses</td>
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<td>MVK</td>
<td>Music: Applied-Keyboard</td>
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<td>MVO</td>
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<td>Music: Applied-Percussion</td>
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<td>MVS</td>
<td>Music: Applied-Strings</td>
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<td>Music: Applied-Voice</td>
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<td>Music: Applied-Woodwinds</td>
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<td>OCE</td>
<td>Oceanography</td>
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<td>OST</td>
<td>Office Systems Technology</td>
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<td>PAD</td>
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<td>PCB</td>
<td>Process Cell Biology</td>
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<td>PCQ</td>
<td>Psychology for Counseling</td>
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<td>PEM</td>
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<td>PEN</td>
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<td>PEQ</td>
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<td>PGY</td>
<td>Photography</td>
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<td>PHH</td>
<td>Philosophy, History of</td>
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<tr>
<td>PHI</td>
<td>Philosophy</td>
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</tbody>
</table>
Depending upon previous background and test scores earned, individual students may be required to complete more than the minimum number of credits required for graduation in their respective programs. Courses numbered less than 1000 (Statewide Common Course Numbers) are of subcollegiate level and may not be counted in meeting degree credit hour requirements for graduation.

SPECIAL COURSES

In addition to the regular courses listed in this bulletin, special courses may be available. Consult your academic advisor for details.

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<tr>
<td>Directed Independent Research</td>
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<tr>
<td>Special Topics/Seminars</td>
<td>3930 4932 5937</td>
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<tr>
<td>Internships, Practicums, Clinical Practice</td>
<td>3940 4941 5944²</td>
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<tr>
<td>Directed Independent Research</td>
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<tr>
<td>Cooperative Education (COE)³</td>
<td>1949, 2949, 3949, 4949 5949</td>
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<tr>
<td>Honors Undergraduate Thesis</td>
<td>3970 4970</td>
</tr>
</tbody>
</table>

These courses may be assigned variable credit. Some may be repeated upon approval.

¹The Special Graduate Courses are primarily for graduate students, but may be taken by advanced seniors with the consent of their deans.

²Enrollment is limited to those students who are fully admitted to the Graduate Program.

³Enrollment is limited to those students who are admitted into the co-op program.

PR: PREREQUISITE

A course in which credit must be earned prior to enrollment in the listed course.

CR: COREQUISITE

A course which must be taken concurrently with or prior to the listed course.

CI: CONSENT OF INSTRUCTOR

HOURS CODE

Each course listed is followed by a code which shows hours credit, and contact hours. Example:
Cost Accounting and standards. Cross-country differences in accounting treatments are compared.

International Financial Accounting

ACG 5206

ACG 5255
International and Multinational Accounting: PR: ACG 4123 or C.I. and meet school admission requirements. An examination of the environmental factors affecting international accounting concepts and standards. Cross-country differences in accounting treatments are compared.

ACG 5346
Cost Accounting II: PR: ACG 3361, ACG 4123, FIN 3403, ECO 3411 or C.I. and meet school...
admission requirements. Overhead allocation, capital budgeting and analysis, EOQ analysis, decentralization, and quantitative decision analysis.

ACG 5435  BA 3(3,0)
Accounting Control Systems: PR: Graduate standing, ACG 3361 and ACG 4401, or ACG 5625, or C.I. An integrative course designed to provide a systematic approach to the integration of financial accounting, managerial accounting, taxation, and general business courses.

ACG 5506  BA 3(3,0)
Accounting for Governmental and Nonbusiness Organizations: PR: ACG 4123 and meet School admission requirements. (Not open to students with credit for ACG 3501 or equivalent)

ACG 5625  BA 3(3,0)
Auditing and EDP: PR: ACG 4401, ACG 4123, ACG 4651 and meet school admission requirements. An examination of auditing procedures followed when a company uses a computer to process financial records.

ACG 5636  BA 3(3,0)
Advanced Auditing: PR: ACG 4401, ACG 4123, ACG 4651, STA 3023 and meet school admission requirements. Special topics relative to the standards, practices, and procedures followed in the audit function.

ACG 5675  BA 3(3,0)
Operational Auditing: PR: ACG 4123, ACG 4651 and meet school admission requirements. The examination of techniques and applications within the internal audit function.

ADE 4382  ED 3(3,0)
Teaching Adult Learners: Effective teaching techniques including technology, distance instruction, and support systems appropriate to the special needs of adult learners.

ADV 4000  AS 3(3,0)
Principles of Advertising: Overview of the field of advertising; purposes, techniques, the role of agencies, advertisers and the media.

ADV 4003  AS 3(3,0)
Advertising Layout and Preparation: PR: ADV 4000 or C.I. Advertising design and layout for print media; reproduction methods and requirements; art background not required.

ADV 4101  AS 3(3,0)

ADV 4103  AS 3(3,0)
Radio-Television Advertising: PR: ADV 4000 or C.I. Radio and television advertising sales, including interpretation of rate structures, program audiences, and creative approaches to sponsor needs.

AFR 1101  US 1(1,1)
The Air Force Today I: PR: Qualification for Air Force ROTC or permission of Professor of Aerospace Studies. History, mission, organization, and doctrine of the United States Air Force and a study of U.S. Strategic Offensive and Defensive Forces.

AFR 1111  US 1(1,1)
The Air Force Today II: PR: AFR 1101 or permission of Professor of Aerospace Studies. A brief review of the Army, Navy, and Marine force. An introduction to special operations and counterinsurgency.

AFR 2130  US 1(1,1)
The Development of Airpower I: PR: AFR 1111 or approval of the PAS. A study of the development of airpower from experiments by 18th-century balloonists to the achievement of combat airpower capabilities during World War II.

AFR 2131  US 1(1,1)
The Development of Airpower II: PR: AFR 2130 or approval of PAS. A study of the development of aerospace capabilities since World War II, highlighting technological advancements and the role of aerospace power in the contemporary world.

AFR 3220  US 3(3,1)
Air Force Leadership and Management I: PR: GMC or Two-Year Program Selection and/or approval of the PAS. An introductory study of Air Force management fundamentals, communications skills, and basic leadership styles.

AFR 3230  US 3(3,1)
Air Force Evaluation and Management II: PR: AFR 3220 or approval of the PAS. A concluding study of Air Force management fundamentals, including performance evaluation skills.

AFR 4201  US 3(3,1)
National Security Forces in Contemporary American Society I: PR: AFR 3230 or approval of PAS. Examination of the military and its role in American society. A study of the framework and formation of defense strategy.

AFR 4210  US 3(3,1)
National Security Forces in Contemporary American Society II: PR: AFR 4201 or approval of PAS. An examination of defense implementation and its impact on the decision-making process. A study of the military justice system and its protection of individual rights.

AMH 2010  AS 3(3,0)
U.S. History: 1492-1877: Survey of U.S. history from 1492-1877.
AMH 2020

AMH 2020H
Honors U.S. History: 1877-Present: PR: AMH 2010 or C.I. Same as AMH 2020 with honors-level content.

AMH 3316
Sport in America: History of sport from colonial times to present. Emphasis on social and economic development, intercollegiate and professional sport, and changing attitudes toward work, sport, and play.

AMH 3370
American Economic History: PR: AMH 2010 and 2020 or C.I. An introduction to the economic development of the U.S., with emphasis on agriculture, labor, industrialization, transportation, and banking.

AMH 3402
History of the South to 1865: PR: AMH 2010 or 2020 or C.I. Development of the southern colonies, beginning sectionalism, the cotton economy, and slavery. Calhoun's constitutional theories, secession, Civil War and its aftermath.

AMH 3403
History of the South Since 1865: PR: AMH 2010 and 2020 or C.I. Reconstruction, the "solid South" and the racial dilemma, progressivism for whites only, southern literature, 20th-century economic, political and social changes, and the new Reconstruction.

AMH 3421
History of Florida to 1845: PR: AMH 2010 and 2020 or C.I.

AMH 3423
Florida History 1845-Present: PR: AMH 2010 and 2020 or C.I.

AMH 3441
History of the Frontier: Eastern America: PR: AMH 2010 and 2020 or C.I. The progression of the westward movement from the colonial settlements to the Mississippi, considered as an interpretive approach to American history.

AMH 3442
History of the Frontier: Western America: PR: AMH 2010 and 2020 or C.I. The development of the trans-Mississippi West and its impact upon American history.

AMH 3460
History of Urban America: Cities as "spearheads in the wilderness, antiurban bias, urban promotion, rivalry, industrialization, ethnicity, reform movements including public health, housing, planning." Metropolism and demographic trends.

AMH 3540
Military History: A survey of U.S. military history from the European background of the colonial period through the contemporary military experience.

AMH 3560
Women in American History: Women in colonial America, "republican" motherhood, "separate spheres," suffrage battle, entry into paid labor force, new educational and professional opportunities, changing family pattern, "new" feminism.

AMH 3570
Black American History: PR: AMH 2010 and 2020 or C.I. History of Negroes from their African heritage through American slavery to freedom and their role in 20th-century America.

AMH 3586
History of the Hispanic Minorities in the U.S.: Course begins with 16th century through the modern period. Special emphasis on Chicanos, Puerto Ricans, and Cubans.

AMH 3800
Canadian History: Canada since Colonial times and the present, but with emphasis on the period since the British North America Act, 1867.

AMH 4110
Colonial America, 1607-1763: PR: AMH 2010 and 2020 or C.I. The voyages of discovery, the origins of the thirteen colonies, and their political, economic, social, and religious life in the 17th and 18th centuries.

AMH 4130
The Age of the American Revolution, 1763-1789: PR: AMH 2010 and 2020 or C.I. The American Revolution — its origins, course, and impact upon American society — the Articles of Confederation, the Philadelphia Convention and its work.

AMH 4140
Jeffersonian America: PR: AMH 2010 and 2020 or C.I. The Confederation era, the Federalists, Jeffersonian Democracy, and the War of 1812.

AMH 4160
Jacksonian America: PR: AMH 2010 and 2020 or C.I. The risk of American nationalism, Jacksonian Democracy, the Mexican War, and sectional conflict.

AMH 4170
Civil War and Reconstruction: PR: AMH 2010 and 2020 or C.I. Reconstruction, and impact of industrialism.
AMH 4201
Robber Baron Era: PR: AMH 2010 and 2020 or C.I. The Agrarian Revolt, the Spanish-American War, and the Progressive Era.

AMH 4231
United States History: 1914-1945: PR: AMH 2010 and 2020 or C.I. The progressive Reforms of Woodrow Wilson, World War I, post-war prosperity, the Depression, and the New Deal; World War II.

AMH 4270
United States History: 1945-Present: PR: AMH 2010 and 2020 or C.I. Contemporary America from World War II.

AMH 4311
American Culture I: PR: AMH 2010 and 2020 or C.I. The European Backgrounds; Puritanism; Enlightenment; the Great Awakening; Revolutionary Thought; Romanticism; the Southern Mind and the Yankee Response; Popular Culture and the rise of recreation.

AMH 4313
American Culture II: PR: AMH 2010 and 2020 or C.I. The Darwinian Revolution; revolt of the intellectuals; the media explosion; mass entertainment in mass culture; the loss of community, the nuclear age, and presentism.

AMH 4510
Rise of the United States to World Power, 1776-1914: PR: AMH 2010 and 2020 or C.I. The evolution of basic American policies. American expansion, America's major wars, and the emergence of America as a world power.

AMH 4511
United States as a Great Power: 1914-Present: PR: AMH 2010 and 2020 or C.I. American foreign policy in World War I, the interwar period, World War II, and the Cold War.

AMH 5116
Colloquium in U.S. Colonial History: PR: Senior Standing or C.I. Reading and discussion of the literature on selected topics in U.S. history.

AMH 5137
Colloquium in U.S. Revolutionary Period: PR: Senior Standing or C.I. Reading and class discussion of the literature on selected topics in the Revolutionary Era, 1763-1789.

AMH 5149
Colloquium in Early U.S. Hist., 1789-1815: PR: Senior Standing or C.I. Reading and class discussion of the literature on selected topics of the early national period.

AMH 5169
Colloquium Age of Jackson: PR: Senior Standing or C.I. Intensive reading and class discussion on selected topics of the Jacksonian age.

AMH 5176
Colloquium in Civil War and Reconstruction: PR: Senior Standing or C.I. Intensive reading and class discussion on selected topics of the Civil War and Reconstruction era.

AMH 5219
Colloquium in Late 19th Century U.S.: PR: Senior Standing or C.I. Reading and class discussion of the literature on selected topics of late 19th-century U.S.

AMH 5296
Colloquium in 20th Century U.S.: PR: Senior Standing or C.I. Reading and class discussion on selected topics in 20th-century U.S.

AMH 5391
Colloquium in U.S. Cultural History: PR: Senior Standing or C.I. Students will read and discuss a common or diverse body of the significant literature in the field.

AMH 5407
Colloquium in American South: PR: Senior Standing or C.I. Intensive reading and class discussion on selected topics of Southern history from colonial origins to the present.

AMH 5446
Colloquium in U.S. Frontier: PR: Senior Standing or C.I. Reading and class discussion of the literature on selected topics of frontier history.

AMH 5515
Colloquium in U.S. Diplomatic History: PR: Senior Standing or C.I. A survey of the historical literature of American foreign policy.

AMH 5566
Colloquium: Women in American History: Intensive reading and class discussion on selected topics of Women in American History from colonial time to the present.

AML 3031
American Literature I: PR: ENC 1102. Major American writers from beginning through Whitman.

AML 3051
American Literature II: PR: ENC 1102. Major American writers from Twain to present.

AML 4101

AML 4261
Literature of the South: PR: ENC 1102 or C.I. Development of Southern literature from its beginnings
in the "Old South" through the post-Civil War and the Southern Renaissance to the present. Emphasizes reading from Poe, Ransom, Tate, Faulkner, Porter, Warren, O'Connor, Percy, and Styron.

AML 4321 AS 3(3,0)

ANT 2003 AS 3(3,0)
General Anthropology: An introductory survey of the four major subfields of anthropology: Social Anthropology, Physical Anthropology, Linguistics, and Archaeology.

ANT 3122 AS 3(3,0)
Archaeological Method and Theory: A survey of archaeological field and laboratory techniques, including the interpretation of written archaeological reports.

ANT 3141 AS 3(3,0)
The Emergence of Civilizations: The emergence of high civilizations in Europe, Africa, Asia, and the ancient Americas.

ANT 3142 AS 3(3,0)
Old World Prehistory: A comparative study of social evolution in Africa, Europe, and Asia from the earliest humans to the beginnings of recorded history.

ANT 3144 AS 3(3,0)
Prehistory of the American Indians: The trajectory of New World society from the earliest big game hunters to the European conquest of the American civilizations.

ANT 3145 AS 3(3,0)
Archaeology of Complex Society: Theoretical perspectives on ancient hierarchies of power.

ANT 3163 AS 3(3,0)
Mesoamerican Archaeology: An introduction to the prehistory of Mexico, Guatemala, and upper Central America from earliest times through the Spanish conquest.

ANT 3211 AS 3(3,0)
Human Origins (Anthropology I): The evolution of human society from foraging and hunting groups to the earliest cities and states.

ANT 3241 AS 3(3,0)
Magic, Ritual, and Belief: Patterns in religious behavior in various societies, with primary emphasis on myth, rite, taboo, and festival social phenomena.

ANT 3282 AS 3(3,0)

ANT 3271 AS 3(3,0)
Law and Culture: An introduction to law as an organizing force in society, including a study of primitive forms of law and social control.

ANT 3302 AS 3(3,0)
Sex, Gender and Culture: The traditional and changing roles of women and men viewed in a cross-cultural perspective.

ANT 3311 AS 3(3,0)
Indians of the Southeastern United States: A study of the social and cultural history of the Indians of the Southeast.

ANT 3312 AS 3(3,0)
Ethnology of North American Indians: A survey of the aboriginal cultures of North America, with emphasis on the pre-contact cultural condition.

ANT 3313 AS 3(3,0)

ANT 3328 AS 3(3,0)
Maya Archaeology: An examination of the Prehistoric Maya culture focusing on both the archaeology and current issues in the field.

ANT 3332 AS 3(3,0)
People and Cultures of Latin America: An overview of the history and society of the peoples of Latin America, emphasizing patterns of subsistence and social organization.

ANT 3360 AS 3(3,0)
Peoples of the Far East: A survey of the peoples of China, Japan, and Korea from the anthropological perspective.

ANT 3363 AS 3(3,0)
Anthropology of Japan: An examination of Japanese culture and its contemporary behavioral and organizational patterns by drawing upon archaeology, cultural history, linguistics, cultural anthropology, and social organization.

ANT 3410 AS 3(3,0)
Cultural Anthropology (Anthropology II): An introduction to human diversity as exemplified among various cultures and ethnic groups.

ANT 3422 AS 3(3,0)
ANT 3432 Culture and the Individual: Focus on the socio-cultural dimensions of child rearing, mental illness/mental health, sexual behavior, personality, and testing.

ANT 3462 Medical Anthropology: The therapeutic environment examined in a cross-cultural perspective. The implications of the comparative approach to health care in the industrialized world.

ANT 3511 The Human Species: Human biological variation in an evolutionary perspective.

ANT 3512 Biobehavioral Anthropology: An introduction to the study of human behavior in terms of mutual interaction between human biology and cultural environments.

ANT 3510 Language and Culture: PR: Sophomore standing. The study of language in a non-western setting; language and behavior; language and perception.

ANT 4084 Anthropological Method and Theory: Method, theory, research design and field techniques in the anthropological endeavor.

ANT 4124 Advanced Archaeological Fieldwork: Supervised archaeological fieldwork. Students admitted only with permission of instructor.

ANT 4180 Seminar in Laboratory Analysis: The processing of archaeological finds from excavation through publication.

APA 3471 Accounting for Engineers: General Accounting principles and practice, cost accounting, budgeting, and control techniques. Not usable for BSBA degree credit.

APB 3342C Quantitative Biological Methods: PR: BSC 2010, MCB 3013, CHM 2046, CHM 4053. A laboratory course which presents modern methods and instrumentation used in quantitative biological experimentation.

APB 3600 Introduction to Pharmacology: Review of terminology and regulations. Study of drug types and usage.

APB 4651 Medical Pharmacology I: Drugs in pulmonary diseases; effects on nervous system, and neuroeffectors, depressants & stimulants; influence on metabolism and endocrines. Bronchodilators, mycolytics, etc.

APB 4651 Medical Pharmacology II: PR: APB 4651 or C.I. Drugs used in cardiovascular disorders. Includes inotropic, chronotropic agents, beta blocker drugs, calcium channel antagonists.

APB 5236 Applied Microbiology: PR: MCB 3013C or C.I. Microbial biochemistry of industrial processes including: economics, screening, scale up, quality control and applied genetics.

ARE 3550 Introductory to Art Therapy: A survey of the literature, theories and practices of art therapy.

ARE 3554 Art Therapy Methods: This course presents methodologies used by the Art Therapists and demonstrates how Art Therapy is put into practice.

ARE 3662 Community Arts I: A Survey of the basic theoretical issues related to community arts programming.

ARE 3663 Community Arts II: A survey of the basic methodologies for applying the theoretical issues to community arts programming taught in Community Arts I.

ARE 3944 Community Arts Practicum: A supervised experience for students to facilitate art programming in a variety of community settings.

ARE 4143 Methodology for Teaching K-12 Art Education I: Methods and curriculum materials for teaching art in elementary and secondary schools.

ARE 4144 Methodology for Teaching K-12 Art Education II: Continuation of ARE 4143.

ARE 4145 Art in the Elementary School: Basic principles, purposes, scope and sequence; organization for instruction; evaluation of activities; selected art experiences.

ARE 4945 Community Arts Internship: An on-site in-depth experience for community arts majors with a concentration in administration, education, or therapeutic experience.

ARE 5251 Art for Exceptionalities: Concepts, principles, and methods of integrating art processes into the education of the physically, emotionally, and mentally handicapped.
Arts in Recreation: Art activities and experiences appropriate for use in playground, leisure services, occupational orientation and other recreational areas.

Art and Leisure: PR: C.I. Materials available for instruction in the public schools will be explored in depth in relation to their appropriateness and productive qualities.


Contemporary Visual Arts Education: PR: C.I. Continued study of current programs and innovations in public school Visual Arts Programs.

The History of Art I: Painting, sculpture and architecture from the Prehistoric Era through the Renaissance period.

The History of Art II: Painting, sculpture and architecture from the Baroque through the 20th century.

Honors History of Art II: Same as ARH 2051 with honors-level content.

History of Architecture: History of Architecture - Survey of Western architectural styles.

Art After 1945: A seminar for upper-level art students to examine historically the art of Post WWII.

African Art: Teach the continuities between African, Afro-Caribbean and Afro-American Arts.

Asian Art: History of visual arts of China, Japan, India, and other Eastern cultures.

Southern Folk Arts: History of Folk Architecture, Ceramics, Painting, Sculpture, Textiles and Toys in three main Southern ethnic cultures: Euro-American, Afro-American, and American Indian.

History of Photography: The development of still photography in terms of historical, aesthetic and social content from 1839 to the present.

History of Prints: History of printmaking in the Western world, surveying works by the "great printmakers:"

Happenings Art: To study the aesthetic and social significance of "Total Art" in its attempt to break down the customary distinctions between life and art.

Visual Arts Administration: Vitas; grant applications; Personnel; copyright laws; museum practices, etc.

Symbolism in the Visual Arts: A study of the origin, migration, and transmutation of signs, symbols and images in art history.

Greek & Roman Art: A study of the art and architecture of the ancient civilizations of the Mediterranean, comprising Greece, Etruria, and Rome.

Early Italian Renaissance Art: A survey of Italian Art and Architecture from 1300 to 1500.

Later Italian Renaissance Art: A survey of Art in Italy, from the High Renaissance through Mannerism.

Baroque Art: A study of European Art in the 17th and 18th centuries.

19th Century Art: A survey of the trends and developments in art during the 19th century, including the art of America and of Western Europe.

20th Century Art: A survey of the art from Fauvism, Futurism, Cubism to the art of the present.

Women and Art in 20th Century America: A course on women artists, feminist aesthetics, and women's artistic cultures, focusing on 20th century America.

Meso American Art: A survey of the art of Mexico and Central America, from the Pre-Colombia, through the Spanish Colonial, to the 20th century.

Mexican Art—Fieldwork: A field trip in connection with ARH 4655.
ARH 4730  AS (4,0)
Environmental Art: Analysis of aesthetic design factors related to city planning, architecture, product design, and experimental environmental arts.

ARH 4800  AS (3,0)

ARH 4821  AS (3,0)
Methods in Art Administration: PR: ARH 3820. Theories and methodologies for designing, implementing and administering art programs for a variety of populations.

ARH 4892  AS (3,0)
Women in Art: A survey of women artists from ancient times to the present as well as a study of the role aesthetics and ideology have played in determining the ways in which women have been represented in art.

ARH 5451  AS (3,0)
Artistic Worldviews: PR: Post-Bac. status, 9 hours of art courses, or C.I. Art from individual and cultural perspectives of varying ethnic, religious, occupational, regional, and generational groups.

ARH 5479  AS (3,0)
Contemporary Women Artists: PR: 6 credits of art courses or C.I. An in-depth study on contemporary women artists from a feminist perspective.

ART 2201C  AS (2,3)
Design Fundamentals I: Materials, processes, form. Emphasis on two-dimensional design problems, including problems in black and white and basic color theory.

ART 2202C  AS (2,3)
Design Fundamentals II: Continuation of color theory and basic three-dimensional design using the various sculptural media.

ART 2300C  AS (2,3)
Drawing Fundamentals I: Drawing as a means of formal organization. Introduction to problems in drawing methods and media. Emphasis on description techniques.

ART 2301C  AS (2,3)
Drawing Fundamentals II: Continuation of ART 2300C.

ART 3133C  AS (3,2)
Webers & Fabrics: Design and production training in surface design, floor loom weaving and fiber sculpture.

ART 3280C  AS (3,2)

ART 3331C  AS (3,2)
Intermediate Drawing II: PR: C.I. Continuation of Intermediate Drawing I.

ART 3400C  AS (2,3)
Printmaking: PR: Three semester hours of Drawing Fundamentals or C.I.

ART 3484C  AS (2,3)

ART 3510C  AS (2,3)
Painting: PR: Three semester hours in Design Fundamentals and three semester hours in Drawing Fundamentals or C.I. Concentration of basic techniques and aesthetic factors in painting.

ART 3701C  AS (2,3)
Sculpture: PR: Six semester hours in Design Fundamentals, to include three semester hours in three-dimensional work, or C.I.
Advanced Three-Dimensional Design: PR: ART 3100C. May be repeated for credit. Advanced problems in three-dimensional materials, processes, and forms.

Advanced Ceramics: PR: ART 3110C. May be repeated for credit.

Fibers, Fabrics, Textiles and Synthetics: Textile design and production, including non-loom weaving processes. May be repeated for credit.

Advanced Fiber & Fabrics: Textile design and production, including non-loom weaving processes. May be repeated for credit.

Local Flora: Designed for majors and non-majors.

Ethnobotany: PR: C.I. Historical and modern uses of plants economically important in various cultures. Designed for majors and non-majors.

Behavioral Weight Control: Application of behavioral techniques to produce weight loss. Diet, exercise, and behavioral self-regulation principles are used in an individual student case study approach.

Plant Science: Plant life related to biological principles and the physical and cultural impact of plants on human individuals and civilization. Designed for non-majors.

General Botany: PR: High school biology or C.I. Introduction to botany; plant structure and function, with emphasis on forms and applications important to man and science.

Local Flora: PR: BOT 2010C or C.I. Recognition and identification of Florida higher plants, especially those common to central Florida, stressing environmental and ethnobotanical significance. Weekend field trips may be required.

Ethnobotany: PR: C.I. Historical and modern uses of plants economically important in various cultures. Designed for majors and non-majors.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>BOT 3820</td>
<td>Plants and the Urban Environment</td>
<td>PR: C.I. The selection, placement, propagation and care of ornamental plants in residential and industrial areas. Designed for majors and non-majors.</td>
</tr>
<tr>
<td>BOT 4223C</td>
<td>Plant Anatomy</td>
<td>PR: BOT 2010C. A study of development, structure and function of the principal organs and tissue of vascular plants.</td>
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<tr>
<td>BOT 4303C</td>
<td>Plant Kingdom</td>
<td>PR: BOT 2010C. A survey of the plant kingdom utilizing comparative morphology, structure and functions to demonstrate relationships among extant and extinct forms.</td>
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<tr>
<td>BOT 4503C</td>
<td>Plant Physiology</td>
<td>PR: PCB 3023 or C.I. A study of mechanisms used by plants to cope with the environment.</td>
</tr>
<tr>
<td>BOT 4623C</td>
<td>Plant Geography and Ecology</td>
<td>PR: 8 hours Botany or C.I. The major climatic plant formations of the world, historical and contemporary plant geography, and ecology.</td>
</tr>
<tr>
<td>BOT 4713C</td>
<td>Plant Taxonomy</td>
<td>PR: BOT 2010C. An introduction to systematic classification and identification of vascular plants, with emphasis on the flora of peninsular Florida.</td>
</tr>
<tr>
<td>BUL 3111</td>
<td>Bryology</td>
<td>PR: BOT 4303C or C.I. A lecture-laboratory survey course on the diversity and classification of mosses, liverworts, and hornworts, with special emphasis on those found in Florida.</td>
</tr>
<tr>
<td>BUL 3112</td>
<td>Business Law II</td>
<td>PR: BUL 3112. Coverage of the Uniform Commercial Code; the law of commercial transactions, including sales, commercial paper, secured transactions and suretyship, contracts, wills and trusts, and property law.</td>
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<tr>
<td>BUL 3301</td>
<td>Property Law</td>
<td>PR: BUL 3111. An analysis of real and personal property law, bailments, and insurance.</td>
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**Eligibility:**

- **BOT 1020C:** Basic 1010C.
- **BOT 1030C:** Basic 1010C.
- **BOT 1050C:** Basic 1010C.
- **BOT 1070C:** Basic 1010C.
- **BOT 3010C:** Basic 1010C.
- **BOT 4010C:** Basic 1010C.
- **BOT 4030C:** Basic 1010C.
- **BOT 4050C:** Basic 1010C.
- **BOT 4070C:** Basic 1010C.
- **BOT 4100C:** Basic 1010C.
- **BOT 4120C:** Basic 1010C.
- **BOT 4140C:** Basic 1010C.
- **BOT 4160C:** Basic 1010C.
- **BOT 4180C:** Basic 1010C.
- **BOT 4200C:** Basic 1010C.
- **BOT 4220C:** Basic 1010C.
- **BOT 4240C:** Basic 1010C.
- **BOT 4260C:** Basic 1010C.
- **BOT 4280C:** Basic 1010C.
- **BOT 4300C:** Basic 1010C.
- **BOT 4320C:** Basic 1010C.
- **BOT 4340C:** Basic 1010C.
- **BOT 4360C:** Basic 1010C.
- **BOT 4380C:** Basic 1010C.
- **BOT 4400C:** Basic 1010C.
- **BOT 4420C:** Basic 1010C.
- **BOT 4440C:** Basic 1010C.
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- **BOT 5440C:** Basic 1010C.
- **BOT 5460C:** Basic 1010C.
- **BOT 5480C:** Basic 1010C.
Legal and Social Environment of Business: PR: Admission to graduate program. Analysis of the legal and ethical environment of business, the effects of legislation and regulation on business activity, and the role of law and ethics in the decision-making process.


Computer Vision: PR: COP 3530. Image formation, binary vision, region growing and edge detection, shape representation, dynamic scene analysis, texture, stereo and range images, and knowledge representation.

Artificial Intelligence and Prolog: PR: CAP 4630. Analysis of deductive databases, applications of logic programming to knowledge representation and "expert systems."


Computer Graphics Systems I: PR: COP 3530 or equivalent. Architecture of graphics processors; display hardware; principles of programming and display software; problems and applications of graphic systems.

Comparative Psychology: PR: PSY 2013. A study of comparative behaviors of lower animals.

Construction Engineering I: PR: EGN 3331 and CEG 4101C. Building construction, materials and types of construction, soils in construction and handbook applications in the field of construction engineering. Also form work design.


Construction Scheduling: Project planning, scheduling and cost management for building construction.

Construction Materials: Structural steels, concrete mixes, wood, masonry, concrete reinforcement, steel decks, formwork, insulation, and interior finish materials.

Construction Engineering II: PR: CCE 4004 or C.I. Construction planning, equipment, and methods used in heavy construction.

Construction Law and Project Management: PR: C.I. Contracts, specifications, and law for engineers. Strategic planning, management, development, design, and production of construction projects. Value engineering, project funding and cash flow.

Crime in America: A survey of crime and criminality in the United States, with emphasis on crime data, its weaknesses, and types of criminal behavior.

Criminal Justice System: An examination of the components and of their interdependence in light of their traditional autonomy.

Criminal Law in Action: Basic concepts of criminal law: elements of major crimes, criminal responsibility, defenses, and parties to crime.

Prosecution and Adjudication: Examination of structures and goals of offices and prosecution and criminal trial courts, and of the processes of charging, adjudicating, and sentencing defendants.

The Corrections and Penology: Theories, structures, and methods of institutional and non-institutional processing and treatment of convicted criminals and juvenile offenders.
CCJ 3341 HPA 3(3,0)
Community-Based Corrections: An overview and analysis of correction interventions and treatment programs in the community.
CCJ 3451 HPA 3(3,0)
Justice System Technology: Examination of the relevance of scientific and technological developments to justice systems and their applicability to the operations and management of the systems.
CCJ 3452 HPA 3(3,0)
The Criminal Justice Manager: PR: C.I. Elements of first-line supervision and executive development. Administrative leadership; its nature; methods, and traits. Recent theories and research in leadership.
CCJ 3483 HPA 4(3,1)
Public Sector Labor Relations in Criminal Justice: Examine the role of public sector labor relations in criminal justice to include management-employee relationships, collective bargaining process, employee organizations, and federal-state laws.
CCJ 4459 HPA 3(3,0)
Justice Agency Operations: Elements, functions, and processes essential to the continuing management of various criminal justice agencies, institutions and court systems.
CCJ 4481 HPA 3(3,0)
Police and Society: PR: CCJ 3020. Examination of the dynamics of public expectations of police, the impact of community demographic changes and police alienation from the community.
CCJ 4540 HPA 3(3,0)
Delinquency Control: Examination of programs and institutions including juvenile court process, intake services, and remedial procedures and practices.
CCJ 4630 HPA 3(3,0)
Comparative Justice Systems: A survey of contemporary foreign criminal justice and differences emerging from various political, cultural and legal systems.
CCJ 4640 HPA 3(3,0)
Organized Crime: An examination of organized crime, including structures, history and activities, and of issues surrounding efforts to define and control it.
CCJ 4670 HPA 3(3,0)
Women and Crime: This course covers women in criminal justice as offenders and prisoners, as well as crime victims and professionals working in the system.
CCJ 4701 HPA 3(3,0)
Research Methods in Criminal Justice: Overview of the social science research methodology used in criminal justice, covers the major forms of research designs used by social science and evaluates their strengths and weaknesses.
CCJ 4941 HPA 6-9(0,12-36)
Criminal Justice Internship: PR: C.I. Internship in municipal, county, state or federal criminal justice agency. Includes assignments in police, courts, corrections components.
CCJ 5406 HPA 3(3,0)
Research and Technology Implementation: Changing roles of social and physical sciences as related to the objectives and administration of public safety agencies.
CCJ 5466 HPA 3(3,0)
Finance and Planning for Public Safety: Acquisition, control, and management of resources for criminal justice and public safety agencies; organization of finance systems, planning mechanisms and strategies for the budgetary process.
CCJ 5467 HPA 3(3,0)
Justice and Safety System Manpower: Processes essential to administration to human resources in criminal justice and public safety agencies: structure and processes for acquisition, training, and maintenance of personnel.
CCJ 5485 HPA 3(3,0)
Issues in Justice Policy: Examination of selected issues of public policy regarding the functions and roles of criminal justice agencies vis-a-vis other government departments or agencies and public purposes.
CDA 4131 AS 3(3,0)
Programming for Large Scale Digital Systems: PR: Computer Science Major or C.I. and COP 3402C.
Programming techniques and instruction sets for large scale digital computers.
CDA 4150 AS 3(3,0)
Introduction to Computer Architecture: PR: Computer Science Major or C.I. and COP 3402C and EEL 3341C. Survey of machine instructions, processor characteristics, and microprogramming concepts.
CDA 4300 AS 3(2,2)
Microprocessor Fundamentals: PR: Computer Science Major or C.I., COP 3402C and EEL 3341C. Semiconductor Technology, 8-bit and 16-bit Microprocessor Architectures and programming, memory system design, I/O methods, interrupts, development system concepts.
CDA 4311 AS 3(2,2)
Microprocessor Application: PR: Computer Science Major or C.I. and CDA 4300. Total system design methodology and applications, advanced topics on microprocessors, patent search and applications.
CDA 4312 AS 3(2,2)
Microprocessor Interface: PR: Computer Science Major or C.I. and CDA 4300. Interfacing of CPU to
various devices, CPU support devices, peripheral devices and controllers, BUS concepts and standards, single chip computers.

CDA 5106
Advanced Computer Architecture I: PR: CDA 4150. Evolution of computer architecture; memory organization; cache; virtual memory; high-speed processor design; pipeline multi-functional and array machines; special architecture case studies; overview of channel architecture.

CDA 5110
Parallel Architecture & Algorithms: PR: COT 4210, CDA 5106. General-purpose vs. special-purpose parallel computers; arrays, message-passing; shared-memory; Taxonomy; parallelization techniques; communication synchronization and granularity; parallel data structures; automatic program restructuring.

CDA 5210
Architecture and Design of VLSI Systems: PR: CDA 4150 or equivalent. Overview of VLSI technology. Stick diagrams; logical design of basic subsystems; integrated system design tools; design of a VLSI computer system.

CDA 5212
VLSI Design Tools: PR: CDA 5210, a strong programming background and C.I. VLSI implementation systems; layout languages; graphic tools; sticks compiler; design rule checking algorithms; simulation models; routing algorithms; silicon compilers; knowledge-based VLSI tools.

CDA 5213
VLSI Testing and System Integration: PR: CDA 5210. Test vectors; fault models; design for testability; LSSD; languages for testing; performance measurements; interrupts, BUS concepts and standards; testing and systems integration.

CEG 3301
Engineering and Environmental Geology: PR: CHS 1440 or equivalent. Principles of physical geology, with emphasis on engineering and environmental topics. Study of land forms, geologic maps, geologic structure, weathering, groundwater, mass wasting, and earthquakes. Lab sessions are practical applications.

CEG 4101C

CEG 5015
Geotechnical Engineering II: PR: CEG 4101C. Continuation of CEG 4101C with emphasis on shear strength and design factors for earth pressures bearing capacity, and slope stability.

CEG 5805
Geotechnical Engineering Design: PR: CEG 4101C and CEG 5015. Project course on design of foundations and other soil structures using geotechnical design methodologies.

CES 4102

CES 4130
Structures Laboratory: PR: EGN 3331; CR: CES 4102. Laboratory exercises on the behavior of structures and structural materials.

CES 4144

CES 4605
Structural Steel Design: PR: CES 4102 or C.I. Design of steel structural members. Selected topics in beam design, column design, plastic design, connections and built-up members.

CES 4608
Steel Design: PR: CES 4605. Project course on design of steel structures using steel and structural analysis methodologies.

CES 4702
Structural Concrete Design: PR: CES 4102 or C.I. Principles of designing reinforced concrete members. Selected topics in concrete mixes, beams, columns, and ultimate analysis.

CES 4709
Concrete Design: PR: CES 4702. Project course on design of concrete structures using concrete and structural analysis methodologies.

CES 5143
Matrix Structural Analysis: PR: CES 4102 or equivalent. Optimization and matrix methods applied to the design of real structures.

CET 3123C
Microprocessor Electronics I: CR: EET 3035C. Introduction to microprocessors. Includes machine language programming, an introduction to microprocessor-based system architecture, and binary and hexadecimal arithmetic.

CET 3144C
Applied Microprocessor Technology: PR: DC Circuit Analysis and Microprocessor Fundamentals. Analysis and design of the components, architecture, and interfacing of a microcomputer. Specific
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Description</th>
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<tbody>
<tr>
<td>CET 3303</td>
<td>Microcomputer Technology I: PR: CET 3123C</td>
<td>Microcomputer assembly programming, including overview of architecture and operating system environment.</td>
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<tr>
<td>EN 3(0,3)</td>
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<tr>
<td>CET 3323C</td>
<td>Computer Organization Technology: PR: EET 3035C</td>
<td>Digital logic gates, memory devices, Karnaugh Maps, combinational logic, arithmetic units, registers and sequential logic.</td>
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<tr>
<td>EN 3(2,2)</td>
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<tr>
<td>CET 3838</td>
<td>Applied Systems Analysis I: PR: Programming II (Pascal II)</td>
<td>Study of system analysis, design, development and implementation cycle. Includes Object Oriented Programming (OOP) to implement system programs.</td>
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<tr>
<td>EN 3(3,0)</td>
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<tr>
<td>CET 4131C</td>
<td>Microprocessor Electronics II: PR: CET 3123C</td>
<td>A continuation of CET 3123C, with emphasis on applications of microprocessor applications in engineering technologies.</td>
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<tr>
<td>EN 4(2,4)</td>
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<tr>
<td>CET 4188</td>
<td>Microcomputer Technology II: PR: CET 3303</td>
<td>Continuation of CET 3303. Advanced assembly language programming including macros, system subroutines, high-level language interfacing, device drivers, and operating system enhancements.</td>
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<tr>
<td>EN 4(4,0)</td>
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<tr>
<td>EN 4(3,2)</td>
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<tr>
<td>CET 4333C</td>
<td>Applied Computer Systems I: PR: CET 3303 and CET 3144C</td>
<td>Microprocessor based systems design and implementation. System components; memory, input/output devices, busses, process control architecture, timing and troubleshooting.</td>
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<tr>
<td>EN 4(3,2)</td>
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<tr>
<td>CET 4345</td>
<td>Applied Computer Systems II: PR: CET 4333C</td>
<td>Continuation of computer systems with emphasis on advanced hardware and I/O devices and serial/parallel communications.</td>
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<tr>
<td>EN 2(2,0)</td>
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<tr>
<td>CET 4351</td>
<td>Minicomputer Applications in Technology: PR: CET 3323C</td>
<td>Utilization of minicomputers in real time industrial and business environments. Analysis of data communications methods.</td>
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<tr>
<td>EN 3(3,0)</td>
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<tr>
<td>EN 3(3,0)</td>
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<tr>
<td>CET 4381</td>
<td>Digital Signal Processing: PR: EET 4329C and COP 1200 or equivalent</td>
<td>Introductory treatments of the concepts of digital signal processing. Survey of current applications, including consideration of available hardware and software.</td>
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<tr>
<td>EN 3(3,0)</td>
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<tr>
<td>CET 4427</td>
<td>Applied Database I: PR: CET 3383</td>
<td>Design and implementation of data base systems within the concept of central administration, structured data storage. Programming project.</td>
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<tr>
<td>EN 3(3,0)</td>
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<tr>
<td>CET 4427</td>
<td>Applied Database II: PR: CET 4427</td>
<td>Continuation of CET 4427—Study of Hierarchical database system. Programming project is required.</td>
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<tr>
<td>EN 3(3,0)</td>
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<tr>
<td>CET 4505</td>
<td>Applied Operating Systems I: PR: COP 2001</td>
<td>Modifying the operating systems to support new types of devices. Analysis of limitations and strengths of commercial mass storage operating systems in industry. O.S. tool box usage.</td>
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<td>EN 3(3,0)</td>
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<tr>
<td>CET 4505</td>
<td>Applied Operating Systems II: PR: CET 3383</td>
<td>Continuation of CET 3383, with emphasis on distributed processing which includes the interfacing of minis, mainframes, software, communications, and data base technology into a responsive information system.</td>
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<tr>
<td>EN 3(3,0)</td>
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<tr>
<td>CET 4505</td>
<td>Applied Operating Systems II: PR: CET 4505</td>
<td>Continuation of CET 4505, with emphasis on multitasking. Multi-users environmental programming project is required.</td>
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<tr>
<td>EN 3(3,0)</td>
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<tr>
<td>CET 4915</td>
<td>Senior Design Project: PR: Computer, Electronics, or Information Systems Engineering Technology</td>
<td>Senior within 18 semester hours of graduation. Supervised individual or group projects involving project definition, planning, design, development, testing and evaluation. Progress reports and final report are required.</td>
</tr>
<tr>
<td>EN 2(0,4)</td>
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<tr>
<td>CET 4931</td>
<td>Current Topics in Technology: PR: C.I.</td>
<td>Study of recent state-of-the-art computer related topics from recognized electronics and computer oriented technical journals and texts. Requires written and verbal communication.</td>
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<tr>
<td>EN 3(3,0)</td>
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<tr>
<td>CGN 3501</td>
<td>Civil Engineering Materials: PR: C.I.</td>
<td>The characterization of materials used in civil engineering works to include concrete, soils, bituminous, polymers and composite materials.</td>
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<tr>
<td>EN 3(2,3)</td>
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</tbody>
</table>
Civil Engineering Systems: PR: EGN 3331, EGN 3353, and STA 3032. Application of mathematical techniques associated with operations research to the design and operation of systems that concern civil and environmental engineers.

Civil Engineering Materials: PR: C.I. Structure, properties and applications of materials used in civil engineering including concrete, steel, asphalt, wood, soils, and composite materials.

Asphalt Concrete Mix Design: PR: CEG 4101. Properties of asphalt, aggregate and asphalt mixtures, Marshall mix design, Hveem mix design, pavement rehabilitation.

Introduction to Computer Science: History, typical computer, number systems, control and data flow, peripheral components, memory devices, effects of computers on society, applications of computers. Not open to Computer Science Majors.

Computer Fundamentals for Business Applications: Hardware/software for business data processing; survey use of business applications programs utilizing prewritten programs. Not open to Computer Science Majors.

Personal Computing: Survey of personal computers on the market; applications for education, entertainment and clerical work; programming in BASIC with exercises. Not open to Computer Science Majors.


Programming and Numerical Methods: CR: MAC 3312. Programming with a high-level language (e.g., FORTRAN). I/O, formatting and manipulation of one and two-dimensional arrays, with emphasis on numerical problems. Not open to Computer Science Majors.

Computerized Health Information Systems: PR: CGS 3000 or equivalent. Analyses of computerized health information systems, with emphasis upon the design and implementation phases. On-site visitations of several local computerized health information systems. Not open to Computer Science majors.

Elementary Chinese Language and Civilization I: Designed to initiate the student to the major language skills: listening, speaking, reading and writing.

Elementary Chinese Language and Civilization II: PR: CHI 1120 or equivalent.

Concepts in Chemistry: PR: MAC 1104 or MGF 1203. Concepts will be examined to provide insight into the significant role that chemistry plays in our culture. Intended as a general education course.

General Chemistry: PR: MAC 1104, MGF 1203 or equivalent. An introductory study of the fundamental concepts of chemistry, primarily oriented toward COH and Biology Education majors.

Chemistry Fundamentals I: PR: High school chemistry or CHM 1032. Basic physical theory of chemical reactivity, atomic structure, chemical bonding, periodicity, stoichiometry, equilibria, thermodynamics, and kinetics.

Honors Chemistry Fundamentals I: PR: Admission to University, Honors Program and high school chemistry. Same as CHM 2045 with honors-level content.

Chemistry Fundamentals II: PR: CHM 2045. Continuation of CHM 2045.

Chemistry Fundamentals Laboratory: PR: CHM 1032 or CR: CHM 2046. Illustration of chemical principles and introduction to the techniques of inorganic and physical chemistry.

Honors Chemistry Fundamentals II: PR: 2045H. Same as CHM 2046 with honors-level content.
Introduction to Organic and Biochemistry: PR: CHM 1032 or equivalent. An introduction to organic chemistry, stressing the chemistry of functional groups and a survey of the biochemistry of proteins, carbohydrates, lipids, and nucleic acids.

CHM 3120C Analytical Chemistry: PR: CHM 2046, 2046L. Laboratory practices of classical and instrumental analysis. Choice of preferred analytical methods and techniques is emphasized through applications involving both inorganic and organic systems.


CHM 3211 Organics Chemistry II: PR: CHM 3210. Continuation of CHM 3210.

CHM 3211L Advanced Laboratory Techniques I: PR: CHM 3210. An introduction to the laboratory techniques of organic chemistry, including the preparation, reaction, and analysis of organic compounds.

CHM 3212L Advanced Laboratory Techniques II: PR: CHM 3211 and 3211L. Open-end laboratory to develop techniques and structure elucidation skills.

CHM 3410 Physical Chemistry I: PR: CHM 2046, PHY 3049, and MAC 3312. Rigorous treatment of atomic and molecular structure, thermodynamics, kinetics, and chemical bonding.

CHM 3410L Physical Chemistry Laboratory I: PR: CHM 3120C and COP 1200 or CGS 3422. CR: CHM 3410A. A practical course in the use of computers for collecting and analyzing data from a select number of physical chemistry experiments.

CHM 3411 Physical Chemistry II: PR: CHM 3410. Continuation of CHM 3410.

CHM 3411L Physical Chemistry Laboratory II: PR: CHM 3410L. Classical as well as modern instrumental techniques coupled with computer data processing to measure physical properties and determine atomic and molecular parameters.

CHM 4130C Advanced Analytical Laboratory Technique: PR: CHM 3211, CHM 3120C and CHM 3411. A lecture-laboratory course designed to give in-depth coverage to modern methods of analysis including electrochemistry, spectroscopy, and separation techniques.


CHM 5450 Polymer Chemistry: PR: CHM 3211. An introduction to the chemistry of synthetic polymers. Synthetic methods, polymerization mechanisms, characterization techniques, and polymer properties will be considered.


CHM 5711 The Chemistry of Materials: PR: CHM 3211, CHM 4130C, and CHM 3411. Structure and properties of chemical products, with an emphasis on the correlation between molecular form and the functional properties deemed desirable for the product.

CHS 1440 Fundamentals of Chemistry for Engineers: PR: One year of high school chemistry or CHM 1032. Basic concepts of chemistry, with emphasis on problem solving and engineering applications. Atomic and molecular structure, states of matter, stoichiometry, equilibria, electrochemistry and thermodynamics.

CHS 3501 Introduction to Forensic Science: Intended for majors and non-majors to provide an overview of the specialty areas in Criminalistics (crime lab).
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHS 3505</td>
<td>Forensic Microscopy</td>
<td>CHM 2046 or C.I.</td>
<td>3(1,6)</td>
</tr>
<tr>
<td>CHS 3511</td>
<td>Forensic Analysis of Controlled Substances</td>
<td>CHM 3120C</td>
<td>3(1,6)</td>
</tr>
<tr>
<td>CHS 3531</td>
<td>Nuclear and Radiochemistry</td>
<td>CHM 3120C and CR: CHM 3411.</td>
<td>3(2,3)</td>
</tr>
<tr>
<td>CHS 4200</td>
<td>Concepts in Industrial Chemistry</td>
<td>CHM 3410.</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>CHS 4591</td>
<td>Forensic Science Internship</td>
<td>C.I.</td>
<td>6(0,40)</td>
</tr>
<tr>
<td>CHS 5241</td>
<td>Chemical Dynamics II</td>
<td>CHS 5240.</td>
<td>2(2,0)</td>
</tr>
<tr>
<td>CHS 5250</td>
<td>Chemical Synthesis I</td>
<td>CHM 3211, and 3411; or equivalent.</td>
<td>2(2,0)</td>
</tr>
<tr>
<td>CIS 4321</td>
<td>Data Processing Systems Analysis and Design</td>
<td>Computer Science Major or C.I. and COP 3530.</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>CIS 4322</td>
<td>Data Processing Systems Implementation</td>
<td>Computer Science Major or C.I. and CIS 4321.</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>CIS 5101</td>
<td>Computational Techniques in Management Information Systems</td>
<td>COP 4710.</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>CIS 5420</td>
<td>Managing the Computer Professional</td>
<td>COP 5711 and MAN 5051; or C.I.</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>CIS 5610</td>
<td>Software Engineering</td>
<td>COP 4020 and knowledge of Ada.</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>CJT 3820</td>
<td>Security Administration</td>
<td>COP 4020 and knowledge of Ada.</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>CJT 3821</td>
<td>Practical Security Applications</td>
<td>COP 4020 and knowledge of Ada.</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>CLP 3302</td>
<td>Clinical Psychology</td>
<td>PPE 3003 or CLP 3143.</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>CLP 3003</td>
<td>Psychology of Adjustment</td>
<td>PSY 2013.</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>CLP 3143</td>
<td>Abnormal Psychology</td>
<td>PSY 2013.</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>CLP 3143</td>
<td>Abnormal Psychology</td>
<td>PSY 2013.</td>
<td>3(3,0)</td>
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</tbody>
</table>
CLP 3413: Contemporary Behavior Therapy: PR: CLP 3143. Emphasis on the underlying principles and the specific intervention procedures which are utilized in contemporary behavior therapy, including treatment strategies for particular behavior disorders.

CLP 5004: Psychology of Adult Adjustment: A survey of situations encountered during adulthood, including marriage, birth, parenthood, trauma, illness, death, etc. Effective adjustment.

CLP 5168: Advanced Abnormal Psychology: Consideration of classification, causation, management and treatment of emotional disorders. Review of theories and research in the field. Lecture/Laboratory.

COM 3011: Communication and Human Relations: Introduction to semantics; symbols and meaning and the relationship with human behavior.

COM 3110: Business and Professional Communication: PR: SPC 1600 or C.I. Theoretical and practical training in effective presentational speaking for business and professions.

COM 3120: Organizational Communication: A study of communication functions and problems within the contexts of hierarchies.

COM 3311: Communication as a Behavioral Science: Basic principles of the behavioral science approach to the study of contemporary communication.

COM 4463: Communication and Court Room Advocacy: A study of the application of communication theory and practice to the judicial setting.

COP 2500: Programming I: PR: Knowledge of Modula-2, college algebra and college trigonometry. Techniques of algorithm development; structured programming concepts; algorithms for searching and sorting procedures; computer experience with a procedure-oriented language.

COP 2501: Programming II: PR: COP 2500. Continuation of COP 2500: recursion; simple data structures; program verification; continued experience with a procedure-oriented language.


COP 3200: Computer Programming: PR: College algebra and trigonometry or equivalent. Problem definitions, algorithms, flow charts, digital computer programming using a higher level language (FORTRAN). Not open to Computer Science Majors.

COP 3400: Assembly Language: PR: COP 2501 or equivalent programming experience. Computer structure, number systems, data representation, arithmetic and logic instructions, addressing schemes, looping techniques, sequential input/output, subroutines, macros, and other topics.

COP 3402C: Computer Systems Concepts/Programming: PR: COP 3400C, Data Structures and Knowledge of C. Linker, loader, assembler design and development. Detailed examinations of one computer's operating system and its associated architecture. Advanced topics in assembly language, including file input/output.

COP 3530: Computer Science II: PR: COP 2501 and COT 3100. Design and analysis of implementation techniques of abstract data types, such as stacks, queues, linear lists, arrays, trees, and heaps.


COP 4124: COBOL Environment: PR: Computer Science core. Basic and advanced features; creation of user libraries; system utilities; file processing; sub-program linkage; programming efficiencies; compiler study; assembly interfaces, and JCL.

COP 4600: Programming Systems: PR: COP 3402 and COP 3530. The function and organization of operating systems. Design and implementation considerations regarding operating systems, compilers, assemblers and loaders.

COP 4710: Databases: PR: COP 3530. Basic concepts of databases, I/O processing, file organization and access, study of selected database systems, database project.

COP 5021: Programming Languages II: PR: COP 4020 and COT 4210. Introduction to compiler construction.
parsing, parser generators, attributed grammars and the implementation of block structures and recursion. Students write a high-level language translator.

COP 5570 Software Tools: PR: COP 4600 and COP 5021. Systems programming languages, concurrent programming, design and implementation of software development/maintenance tools. A large programming project is required.

COP 5611 Operating System Design Principles: PR: COP 4600. Structure and functions of operating systems, process communications techniques, high-level concurrent programming, virtual memory systems, elementary queueing theory, security, distributed systems, case studies.


COT 3100 Introduction to Discrete Structure: PR: MAC 3311 and knowledge of a programming language. Logic, sets, functions, relations, combinatorics, graphs, Boolean algebras, finite-state machines, Turing machines, unsolvability, computational complexity.


COT 5310 Formal Languages and Automata Theory: PR: COP 4020 and COT 4210. Classes of formal grammars and their relation to automata, normal forms, closure properties, decision problem, LR(K) grammars.


COT 5501 Computational Methods/Applications: PR: COT 4500. Computational solution techniques for algebraic equation, ODE and PDE Models of applications selected from science, engineering, applied mathematics, and computer science.

COT 5510 Computational Methods/Linear Systems: PR: COT 4500 and MAS 3113. Mathematical models for linear systems, linear programming, the simplex method, integer and mixed-integer programming, introduction to nonlinear optimization and linearization.

CPO 3034 Politics of Developing Areas: Comparative analysis of theories, problems and politics of development in Third World nations.

CPO 3103 Comparative Politics: Government and politics in selected nations, with emphasis upon comparative analysis of contemporary problems, politics, political culture, behavior, and institutions.

CPO 3132 Introduction to Canadian Studies: A multi-disciplinary approach to the study of Canada, its people, culture, government, and economy.

CPO 4062 Comparative Judicial Policies: Study of courts and judges in cross national context. Focus upon judicial recruitment, decisional patterns, and policy outcomes.

CPO 4123 Government and Politics of Great Britain: A survey of British government, society, politics and institutions, emphasizing parliamentary traditions. Britain's foreign policy and European role will be discussed.

CPO 4133 Government & Politics of Canada: Examines the origins and development of Canadian government. Focuses on the functioning of federalism, nationality politics, foreign policy, and relations with the United States.

CPO 4303 Comparative Latin American Politics: Comparative analysis of politics, society and culture in Latin America and selected countries of the region.

CPO 4643 Government and Politics of the Soviet Union: Study of the origins, institutions, and functioning of the Soviet system, including the role of the Communist party and its influence on domestic and foreign policy formation and implementation.
Theatre Modern Dance: including Intermediate Classical Ballet; creative movement.

Theatre Dance: the 1980s. Demonstration and performance of students highlighting segments of Broadway shows. May include practical class work and history lectures.

Intermediate Classical Ballet: PR: DAA 2200 or C.I. In-depth study of classical ballet technique, including principles, theory, and practice technique.

Intermediate Jazz Dance: PR: DAA 2200 or C.I. Introduction of the basic movements of American Jazz Dance, including practical class work as well as Jazz Dance history.
DAA 3600  AS 3(2,2)
Theatre Tap Dance: Exploration of form, style, and technique in the basic fundamental movements of tap dance. May be repeated for credit.

DAA 4591  AS 3(2,2)
Advanced Jazz Dance: PR: DAA 2200 & DAA 3500 or C.I. In-depth study of Jazz Dance as a major style of dance, using theory and practice in jazz technique.

DAA 4710  AS 3(2,2)
Theatre Dance Choreography and Performance: PR: By audition. Students will create and present a piece choreographed and performed by other dancers in concert. May be repeated for credit.

DAE 3300  ED 3(2,1)
Dance Techniques: Analysis of creative dance and movement techniques as they relate to the teaching of physical education.

DAE 3370  ED 3(1,2)
Dance and Rhythms: The development of skill proficiency and instructional strategies in rhythms and dance techniques, and fundamental movement patterns for grades K-12.

DEP 3004  AS 3(3,0)

DEP 3202  AS 3(3,0)
Psychology of Exceptional Children: Psychological problems of exceptional children, including diagnosis, associated emotional problems, effects of institutionalization, special class placement, attitudes, and appropriate intervention methods.

DEP 3212  AS 3(3,0)
Psychological Approaches to Mental Retardation: The problems of mentally retarded citizens, including diagnosis, environment versus heredity, legal restrictions, institutionalization, as well as methods of behavioral remediation.

DEP 3464  AS 3(3,0)
Psychology of Aging: PR: PSY 2013. An examination of basic psychological processes related to the aging process, with emphasis on the applied implications of changes in perceptual-motor, social-emotional and cognitive-intellectual function.

DEP 5057  AS 3(2,2)
Developmental Psychology: PR: Graduate admission or C.I. Psychological aspects of development including intellectual, social, and personality factors.

EAB 3703  AS 4(3,2)
Principles of Behavior Modification: PR: EXP 3404. An examination of the control of behavior through applications of principles and theories of learning. Examples are drawn from clinical and social psychology and from child rearing. Lecture/Practicum.

EAB 3704  AS 3(3,0)

EAB 5765  AS 3(3,0)
Applied Behavior Analysis with Children and Youth: PR: DEP 5057 and EXP 5445 or C.I. Advanced survey of principles, procedures, and techniques of applied behavior analysis, with special attention to applications with children and youth.

EAS 3010  EN 4(4,0)
Fundamentals of Flight: PR: MAP 3302, EGN 3321. Aerodynamics as applied to the performance of flight vehicles in the atmosphere. Introduction to space vehicle trajectories and re-entry.

EAS 3101  EN 3(2,2)

EAS 3530  EN 2(2,0)

EAS 3800  EN 2(1,3)

EAS 3810  EN 2(1,3)

EAS 4105  EN 3(3,0)

EAS 4134  EN 3(3,0)
High-Speed Aerodynamics: PR: EGN 3353, EAS 4xxx (Aerodynamics). Fundamental analysis and design criteria, internal and external flows. Isentropic, fanno line and raleigh line flows. Shocks and nozzles.
EAS 4200 EN 3(3,0)

EAS 4210 EN 3(2,2)

EAS 4300 EN 3(3,0)

EAS 4505 EN 3(3,0)
Orbital Mechanics PR: EGN 3321, MAP 3302. The solar system; coordinates and time-keeping; observational data; the two-body and many-body problems; perturbations.

EAS 4700 EN 3(2,3)
Aerospace Design I: PR: EAS 3810. Application of the design process to the team solution of a state-of-the-art problem. Aeronautical and astronautical vehicles, systems and devices are considered.

EAS 4710 EN 3(2,3)
Aerospace Design II: PR: EAS 4700. Continuation of the design process in the tram building and testing of a prototype. A test plan and a test report are completed.

ECM 3000 EN 1(2,3)
Survey of Computer Engineering: Introduction to the field of computer engineering, including appreciation of its breadth, depth, and scope in modern engineering practice.

ECM 4507C EN 3(2,2)
Computer-Aided Engineering Design: PR: ECM 4804 and EEL 3342 or C.I. Review of currently available CAE tools for digital hardware and software design applications.

ECM 4230 EN 3(3,0)
Engineering Data Structures: PR: ECM 4804. Design of algorithms and data structures, with emphasis on performance analysis, memory organization, stacks, queues, linked lists, searches, and sorts.

ECM 4301 EN 3(3,0)
Engineering Applications of Computer Methods: PR: MAP 3302, STA 3032, ECM 4804. Engineering applications of numerical methods, including solution of differential equations, simulation, optimization, and multidimensional root-finding, integration and series approximations.

ECM 4411 EN 3(3,0)

ECM 4451 EN 3(3,0)
Engineering Applications of Intelligent Systems: PR: ECM 4230. Intelligent models, computer vision, natural language understanding, pattern analysis, knowledge-based systems, symbolic programming, and advanced architectures.

ECM 4504C EN 4(3,3)
Embedded Computer Systems: PR: ECM 4509C, ECM 4230, ECM 4723C. Computer Applications in Systems role, sensor and actuator interfacing. Design projects, including problem statements and specifications, design methodology, implementation, testing, and documentation.

ECM 4508C EN 3(2,3)
Computer System Design I: PR: EEL 3342. Basic computer architecture and organization. Introduction to design of computer systems at gate, register, and processor level. Assembly language programming in support of micro design.

ECM 4509C EN 4(3,3)
Computer System Design II: PR: ECM 4508C, ECM 4804. Continuation of ECM 4508C. The study of instructions, interrupts and DMA for I/O subsystem development in the design of microcomputer systems. Role of high-level languages.

ECM 4703C EN 4(3,3)
Linear Controls and Simulation: CR: ECM 4301. A first course in the analysis and design of linear control systems. Introduction to continuous simulation languages. Emphasis on simulation as a design tool.

ECM 4723C EN 4(3,3)
Computer Control Systems: PR: ECM 4708C. Discrete-time systems, the z-transform, and single loop computer control systems. Digital simulation in the analysis and design of processes with embedded controllers.

ECM 4804 EN 3(3,0)
Engineering Software Design: PR: COT 3100, EGN 3420. Software design, development, testing and documentation; introduction to a modern programming language; design and development of a large software project.

ECM 4910 EN 3(2,2)
Senior Project in Computer Engineering: PR: Senior Standing and C.I. Front-end analysis, design, implementation, and documentation of a representative industrial system design project.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>PR Requirements</th>
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</thead>
<tbody>
<tr>
<td>ECM 5135</td>
<td>Engineering Math Analysis I: PR: MAP 3302. Topics in advanced engineering</td>
<td>EN 3(3,0)</td>
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<tr>
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<td>mathematics, including systems of differential equations, phase plane, linear</td>
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<td>algebra, and vector differential calculus</td>
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<tr>
<td>ECM 5365</td>
<td>Introduction to Digital Systems: PR: EEL 3342C or equivalent. Analysis and</td>
<td>EN 3(3,0)</td>
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<td></td>
<td>synthesis of combinational, synchronous and asynchronous sequential logic</td>
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<td>circuits. Introduction to controller design using a digital design language.</td>
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<tr>
<td>ECM 5431</td>
<td>Expert Systems and Knowledge Engineering: PR: ECM 4451 or C.I. Introduction to</td>
<td>EN 3(3,0)</td>
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<tr>
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<td>expert systems in engineering. Expert systems tools and interviewing techniques.</td>
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<td>This course is hands-on and project-oriented.</td>
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<tr>
<td>ECM 5441</td>
<td>Image Processing: PR: MAP 3302. EGN 3420. Two-dimensional signal processing</td>
<td>EN 3(3,0)</td>
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<td></td>
<td>techniques; pictorial image representation; spatial filtering; image</td>
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<td>enhancement and encoding; segmentation and feature extraction; introduction to</td>
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<td>image understanding techniques.</td>
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<tr>
<td>ECM 5453</td>
<td>Pattern Recognition: PR: MAP 3302, EGN 3420. Graph-theoretic and syntactic</td>
<td>EN 3(3,0)</td>
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<td>methods of pattern analysis. Decision functions; optimum decision criteria;</td>
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<td>training algorithms; feature extraction; unsupervised learning; data</td>
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<td>reduction and potential functions.</td>
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<tr>
<td>ECM 5505C</td>
<td>Microcomputer-based Monitoring and Control Systems: PR: EEL 3342; ECM 4508 or</td>
<td>EN 3(2,3)</td>
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<td>C.I. Machine-language programming; software development aids; systems design;</td>
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<td>interfacing considerations.</td>
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<tr>
<td>ECM 5506C</td>
<td>Engineering Applications of Computer Graphics: PR: EGN 3420 or C.I. Computer</td>
<td>EN 3(2,3)</td>
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<tr>
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<td>graphics in engineering applications. Laboratory assignments.</td>
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<tr>
<td>ECM 5806</td>
<td>Software Engineering I: PR: EGN 3420, ECM 4230 or C.I. Design, implementation,</td>
<td>EN 3(3,0)</td>
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<td>and testing of computer software for Engineering applications.</td>
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<tr>
<td>ECO 2013</td>
<td>Principles of Economics I: An introduction to macroeconomics, including an</td>
<td>BA 3(3,0)</td>
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<td>overview of the market economy; national income, employment, and price level</td>
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<td>determination, stabilization policies, and international economics.</td>
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<td>ECO 2013H</td>
<td>Honors Principles of Economics I: PR: Open to Honor Students only. Same as</td>
<td>BA 3(3,0)</td>
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<td>ECO 2013 with honors-level content.</td>
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<tr>
<td>ECO 2023</td>
<td>Principles of Economics II: The determination of prices in a market economy;</td>
<td>BA 3(3,0)</td>
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<td>their role in allocating consumer and producer goods and in distributing</td>
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<td>incomes, including attempts to improve market efficiency through public</td>
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<td>policy.</td>
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<tr>
<td>ECO 3101</td>
<td>Intermediate Price Theory: PR: ECO 2023 and ECO 2013. Theoretical study of</td>
<td>BA 3(3,0)</td>
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<td></td>
<td>the behavior of households, firms, and the markets in which they operate with</td>
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<td>issues and applications.</td>
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<td>ECO 3203</td>
<td>Aggregate Economic Conditions Analysis: PR: ECO 2013 and ECO 2023. A study of</td>
<td>BA 3(3,0)</td>
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<td>the measurement, analysis, and control of aggregate economic activity.</td>
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<tr>
<td>ECO 3233</td>
<td>Money and Banking: PR: ECO 2013. Nature of money, commercial banking system,</td>
<td>BA 3(3,0)</td>
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<td>and monetary theory, and their relationship to the level of economic activity</td>
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<td>and activities of the Federal Reserve and U.S. Treasury.</td>
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<tr>
<td>ECO 3401</td>
<td>Mathematical Economics I. PR: ECO 2013 and 2023 and calculus. The study of</td>
<td>BA 3(3,0)</td>
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<tr>
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<td>economic processes expressed as equations and economic systems as mathematical</td>
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<td></td>
<td>models.</td>
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<tr>
<td>ECO 3411</td>
<td>Quantitative Methods and Business Decision Analysis: PR: Junior standing, ACG</td>
<td>BA 3(3,0)</td>
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<td>2071, ECO 2013, 2023, and STA 3023. The use of statistical methods as scientific</td>
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<td>tools in the analysis of economics and business problems.</td>
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<tr>
<td>ECO 3622</td>
<td>American Economic History. PR: ECO 2013 and 2023. Survey of the history of</td>
<td>BA 3(3,0)</td>
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<td>American economic development. Involves application of economic analytical</td>
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<td>tools to American history.</td>
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<tr>
<td>ECO 3703</td>
<td>International Economics: PR: ECO 2023 and ECO 2013. Fundamental principles of</td>
<td>BA 3(3,0)</td>
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<td>international trade and foreign exchange, including the balance of payments and</td>
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<td>problems of foreign economic policy.</td>
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<td>ECO 4224</td>
<td>Money: Issues and Analysis: PR: ECO 3233. Study of the supply of and demand</td>
<td>BA 3(3,0)</td>
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<td>for money, emphasizing the role of the Federal Reserve System in contemporary</td>
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<td>stabilization policy.</td>
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<td>ECO 4303</td>
<td>History of Economic Thought: PR: ECO 2023 and ECO 2013. A study of the principal</td>
<td>BA 3(3,0)</td>
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<td>ideas of the major contributors to the development of economic thought.</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Description</td>
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<tr>
<td>ECO 4504</td>
<td>Economics of the Public Sector</td>
<td>PR: ECO 2023. A study of fiscal institutions and decision-making, and how government budgetary policy (spending, taxing, borrowing, and debt management) affects the economy and its citizens.</td>
</tr>
<tr>
<td>ECO 5005</td>
<td>Economic Concepts</td>
<td>PR: Acceptance into the graduate program. Introduction to micro and macro economic analysis.</td>
</tr>
<tr>
<td>ECO 5415</td>
<td>Statistics for Business and Economics</td>
<td>PR: Acceptance into the graduate program and MAC 3233. Statistical theory and problems relating to business and economics, including time series and correlation theory, index number theory and statistical inference.</td>
</tr>
<tr>
<td>ECP 3203</td>
<td>Contemporary Labor Economics</td>
<td>PR: ECO 2023 and ECO 2013. The analysis of labor problems and issues in a dynamic contemporary economy through the interaction of the four major institutions: households, firms, government, and unions.</td>
</tr>
<tr>
<td>ECP 3433</td>
<td>Transportation Economics</td>
<td>PR: ECO 2023 and ECO 2013. Economic characteristics and governmental regulation of public carriers. Consideration of competitive relations between modes of transportation and criteria for public investment in transportation and criteria of public investment in transportation systems.</td>
</tr>
<tr>
<td>ECO 4403</td>
<td>Business, Government, and Industrial Organizations</td>
<td>PR: ECO 2023 and ECO 2013. A study of the performance of industries representative of various types of market structure and practices, as well as the public policies affecting these industries.</td>
</tr>
<tr>
<td>ECP 4603</td>
<td>Urban and Regional Economic Problems</td>
<td>PR: ECO 2023 and ECO 2013. Analysis of the location, organization and problems of urban and regional economic activities.</td>
</tr>
<tr>
<td>ECP 4703</td>
<td>Managerial Economics</td>
<td>PR: Junior standing. ACG 2071 or ACG 2023, ECO 2023, ECO 2013 and ECO 3411. The uses of economic analysis in economic decision-making and business policy formulation.</td>
</tr>
<tr>
<td>EDE 3942</td>
<td>Junior Student Teaching-Elementary</td>
<td>PR: EDG 4321, RED 3012, MAE 3810 and 3811 or MAE 3112. Student teaching assignment in an elementary school under the supervision of a certified classroom teacher.</td>
</tr>
<tr>
<td>EDE 3943</td>
<td>Junior Student Teaching-All K-12 Majors</td>
<td>PR: Except. Ed. Majors; EDG 4321; RED 3012; MAE 3112. Student teaching under the supervision of a certified teacher. Half in elementary, half in secondary.</td>
</tr>
<tr>
<td>EDE 4943</td>
<td>Senior Student Teaching-Elementary</td>
<td>PR: EDE 3942 or EDE 3943. Student teaching in an elementary school under the supervision of a certified classroom teacher. Scheduled concurrent seminars.</td>
</tr>
<tr>
<td>EDE 5541</td>
<td>Individualization in the Elementary School</td>
<td>PR: Regular Certificate or C.I. Study of basic philosophy, organizational patterns, techniques, materials, and activities related to individualizing instruction in the elementary school classroom.</td>
</tr>
<tr>
<td>EDF 3603</td>
<td>Analysis of Educational Foundations</td>
<td>PR: Junior standing or C.I. Analysis of and participation in general and specific dimensions of teaching with socio-economic, historical and philosophical factors emphasized.</td>
</tr>
</tbody>
</table>
EDF 4214  
Classroom Learning Principles: PR: Junior standing or C.I. Principles of learning as applied to classroom teaching situations, with emphasis on student development, behavior, self-concept and motivation.

EDF 4282  
Applications of Technology in Education: Classroom applications of instructional media, including computers. Includes experiences with equipment, commercial and teacher-made media, and their uses.

EDF 4604  
Overview of Education: A brief analysis of the American educational system, focusing on social, political, economic, and intellectual development through an internal atmosphere of interaction and discussion.

EDF 5245  
Preparation and Management of Classroom Instruction: PR: C.I. Study of strategies for instructional planning and classroom management that result in optimum learning.

EDG 4321  
Teaching Strategies: Analysis of the learning environment; emphasis on planning for instruction, skill development, and measurement and evaluation.

EDG 4324  
Teaching in the Schools: PR: Teaching Strategies or C.I. Selected dimensions of teaching: teaching skills; reading and writing in content areas; problem solving, school organization, and professional ethics.

EDG 4941  
Directed Field Experience: PR: Approval of Professional Laboratory. Field experience in an appropriate educational setting under the direction of a supervising teacher and/or university supervisor.

EDG 5745  
Teaching the Non-English Student: PR: FLE 3063 or C.I. Bilingual and non-linguistic instruction in curriculum areas in English as a second language.

EDM 5235  
Teaching in the Middle School: Methods of middle school teaching; team planning and teaching; development and learning patterns of the emerging adolescent; use of alternative teaching strategies.

EDG 5325  
Techniques for the Developing Professional in Education: PR: C.I. Analysis, study, development, and use of techniques for enhanced instruction in the educational setting.

EDG 5337  
Teaching Individuals, Small and Large Groups: PR: C.I. Study of teaching skills for effectively instructing individuals in various educational groups, with consideration of developmental and behavioral characteristics of students.

EDG 5941  
Clinical Practice: PR: Admission to STEP II, III or IV, Clinical Internship in an appropriate educational setting under the direction of a university supervisor or peer teacher.

EDS 5356  
Supervision of Professional Laboratory Experiences: PR: C.I. Study of the undergraduate professional laboratory experiences program, with emphasis on the role and responsibilities of the Teacher Education Associate or Supervising Teacher.

EDS 5357  
Supervision of Clinical Experiences: PR: C.I. Study of the Beginning Teacher and S T E P Programs with emphasis on the Role and Responsibilities of the Peer Teacher or Building Level Administrator.

EEC 5205  
Programs and Trends in Early Childhood Education: PR: Regular Certificate or C.I. Philosophy, content, facilities, instructional materials, and activities appropriate for children ages 3 to 8 years; current research, issues and trends. Concurrent laboratory experiences.

EEC 5206  
Organization of Instruction in Early Childhood Education: PR: Regular Certificate or C.I. Organization in instruction relating to language arts, social sciences, sciences, mathematics, health and physical education, problems relating to reading readiness and cognition (K-3). Concurrent laboratory experiences.

EEC 5208  
Creative Activities in Early Childhood: PR: Regular Certificate or C.I. Organization of instruction and methods for creative activities involving music, art, literature and educational toys, integration of activities, and basic skills curriculum (K-3). Concurrent laboratory experience.

EED 4011  
Introduction to the Emotionally Disturbed: PR: Senior standing. Development and practice of appropriate cognitive, affective, and motor strategies for selected categories, levels, and degrees of severity of exceptional population.

EED 4212  
Curriculum and Program Adaptations, E.H.: PR: Senior standing. Development of highly specialized techniques and materials to be used with exceptional students.

EEL 3122C  
EEL 3140C

Analog Filter Design: PR: EEL 3307C, EEL 3122. Analog filter design, both passive and active, from low pass prototypes using frequency transformations and based on low sensitivity.

EEL 3306

Semiconductor Devices I: PR: EGN 3373. Electronic devices including p-n junctions, bipolar transistors, field effect transistors and device models.

EEL 3307C

Electronic Engineering: PR: EEL 3306, EGN 3375C and MAP 3302. Electronic devices and circuits design, including small signal amplifiers and switching circuits.

EEL 3341C


EEL 3342C

Introduction to Digital Circuits and Systems: PR: PHY 3049 or C.I. Switching theory and devices. Combinational and sequential logic. Logic design using standard components such as ROM, arithmetic units, multiplexers, registers, and counters.

EEL 3470

Electromagnetic Fields: PR: EGN 3375C and MAP 3302. Introduction to electric and magnet fields and electromagnetic waves.

EEL 3552C


EEL 4012C

Senior Electrical Design: PR: EEL 4657, and all required EEL 3xxx courses. Application of the design process in the solution of realistic and meaningful problems. Feasibility, design, and testing of individual or team projects.

EEL 4216

Fundamentals of Electric Power Systems: PR: EEL 3122 or C.I. Three-phase power representation and analysis, transformers, per unit system, symmetrical components, faults, transmission lines.

EEL 4314


EEL 4309C


EEL 4343C


EEL 4436C

Microwaves: PR: EEL 3470. Microwave devices and systems and measurement techniques.

EEL 4440

Optical Engineering: PR: EEL 3470, EEL 3552C or C.I. Lens systems, aberrations, sources, radiometry, detectors, physical optics, interferometric devices, applications to engineering design problems.

EEL 4512C

Communication Systems: PR: STA 3032, EEL 3552C and EEL 3307C: Information transmission, modulation, and noise; design and comparison systems in the presence of noise.

EEL 4571C

Data Acquisition and Control: PR: EEL 3122, EEL 3307C, EEL 3342C: Fundamentals of signal acquisition and conditioning, filtering, signal conversion, microcomputer input and output interface circuits, channels, transducers, feedback.

EEL 4657


EEL 4701C

Digital Systems Organization: PR: EEL 3342C. The study of basic machine organization, operation, and subsystem integration. System investigation and design using a register transfer and control- sequence design language.

EEL 4702C

Digital Systems Design: PR: EEL 4701C or C.I. Continuation of EEL 4701C. Microprocessor and LSI-based approaches to the design of digital systems. Current topics in the design of control communications and display systems.

EEL 4750


EEL 5173

Signal and System Analysis: PR: EEL 3122C or EEL 4657. Continuous and discrete dynamic models:

**EEL 5255**  

**EEL 5355C**  
Fabrication of Solid-State Devices: PR: EEL 3306. Fabrication of microelectronic devices, processing technology, ion implantation and diffusion, device design and layout. Laboratory includes device processing technology.

**EEL 5357**  
CMOS Analog IC Design: PR: EEL 3306 and EEL 4709. The objective of this course is to present the principles and techniques of the design of analog circuits that are to be implemented in CMOS technology.

**EEL 5370**  

**EEL 5434**  
Microwave Solid-State Devices: PR: EEL 4436 or EEL 5555. Device and circuit principles of p-n junctions, BJTs, FETs, gunn, IMPATT, TRAPATT and BARITT diodes.

**EEL 5441**  
Introduction to Wave Optics: PR: EEL 4440 or PHY 4424 or C.I. Electromagnetic foundation of light waves as applied to reflection, refraction, diffraction, interference, polarization, coherence, and guided waves.

**EEL 5446**  
Optical Systems Design: PR: C.I. Design principles of lens and mirror optical systems’ evaluation of designs using computer techniques.

**EEL 5450C**  
Thin Film Optics: PR: PHY 4424 or EEL 4440 and EEL 5441 or EEL 5451. Principles of thin film optics and its applications in optical, electro-optical, and laser systems.

**EEL 5451L**  
Electro-Optics Laboratory: PR: EEL 3470 or C.I. Study of laboratory techniques for optical measurements and performance of measurements on electro-optic devices to determine operational characteristics.

**EEL 5462C**  
Antenna Analysis and Design: PR: EEL 3470 or equivalent. Fundamentals of antennas; dipoles, loops, arrays, apertures, and horns. Analysis and design of various antennas.

**EEL 5464**  

**EEL 5513**  
Surface Acoustic Wave Devices and Systems: PR: EEL 3552C. Course discusses SAW technology which includes the physical phenomenon, transducer design and synthesis, filter design and performance parameters. Actual devices and communication systems are presented.

**EEL 5517**  

**EEL 5555C**  
RF Communications: PR: EEL 3552C. RF communication systems, 10 MHz to 1500 MHz. Scattering parameter noise, receiver design, system implementation, spread spectrum. RF network and spectrum analyzers, PC board layout.

**EEL 5563**  

**EEL 5630**  

**EES 3104C**  

**EES 4111C**  
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<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>EES 4020C</td>
<td>Chemical Process Control: PR: EGN 3704. Engineering design, measurements, and analysis of chemical systems in environmental engineering to control treatment processes such as softening, coagulation, disinfection, scrubbing, neutralization, and others.</td>
</tr>
<tr>
<td>EES 4401C</td>
<td>Environmental Health: PR: EGN 3704. Topics and design examples in industrial hygiene, occupational and radiological health hazards, and pollution effects, such as those due to air noise, solid wastes, etc.</td>
</tr>
<tr>
<td>EES 5415C</td>
<td>Potable Water Treatment: PR: EES 4202C and 4111C. Engineering application of potable water chemistry involving coagulation, softening, filtration, corrosion, disinfection quality and drinking water.</td>
</tr>
<tr>
<td>EET 3035C</td>
<td>Electricity and Electronics: PR: MAC 1104 and MAC 1114. AC and DC circuits. Basic theorems and circuit analysis techniques. Instruments and measurements. Introduction to integrated circuits.</td>
</tr>
<tr>
<td>EET 4349C</td>
<td>Electronic Communications II: PR: EET 4329C. Basic information theory, pulse and digital concepts, multiplexing, radar principles, TV systems. Technology of radiation and propagation. Fiber optics.</td>
</tr>
<tr>
<td>EEX 3010</td>
<td>Orientation to Special Education: Definition, characteristics, theories, current trends, and controversies in the various categories of exceptional education.</td>
</tr>
<tr>
<td>EEX 3102</td>
<td>Language Development and Common Disorders: PR: Junior standing. Interdisciplinary approach to language development, identification and remediation of common disorders.</td>
</tr>
<tr>
<td>EEX 3221</td>
<td>Assessment of Exceptional Learners: Diagnosis of learning problems of exceptional students; assessing performance and determining appropriate placement and programming.</td>
</tr>
<tr>
<td>EEX 3241</td>
<td>Methods for Academic Skills for Exceptional Students: Teaching strategies, plus types of teacher-made materials that apply to all categories, ages, and levels of the exceptional population. Must be taken with or before Junior block.</td>
</tr>
</tbody>
</table>
| EEX 3263  | Arts and Sciences for Exceptional Students: PR: Junior standing. Adapting curriculum, materials, and }
teaching strategies in the area of language arts, science, social studies, music, and art for the exceptional student.

EEX 4243

Techniques for the Exceptional Adolescent-Adult: A study of strategies, skills and alternative procedures when teaching adolescents and adults.

EEX 4601

Behavioral Management: Study of management techniques based on behavioral management (applied behavioral analysis) principles for modifying the effective behavior of exceptional students.

EEX 5051

Exceptional Children in the Schools: PR: Senior standing or C.I. Characteristics, definitions, educational problems, and appropriate educational programs for the exceptional children in schools.

EGC 5005

Introduction to Guidance and Human Services: PR: Completion of Phase II of Educ. Prof. Prep. or Certificate or C.I. A basic course presenting an overview of the philosophy, organization, administration and operation of guidance and human services.

EGC 5036

Guiding Human Relationships: PR: Senior standing or basic teacher certificate. Human relationship skills which will enhance intra- and interpersonal relation skills in classrooms.

EGM 5584

Biomechanics and Biomaterials: PR: EGN 3365C and EGN 3331. Properties of natural biological materials and their relation to microstructure, biocompatibility, artificial biomaterials and their applications, with analysis of biomechanical forces of the body.

EGN 1006

Introduction to Engineering: Role of the engineer as a creative design professional. Emphasis on understanding the creative process and the factors that influence it. Engineering orientation and case studies.

EGN 2210


EGN 3310

Engineering Analysis-Statics: PR: PHY 3048; CR: MAC 3312. Fundamental concepts of mechanics, including resultants of force systems, free-body diagrams, equilibrium of rigid bodies, and analyses of structures.

EGN 3321

Engineering Analysis-Dynamics: PR: EGN 3310; CR: MAC 3313. Kinematics and kinetics of particles and rigid bodies; mass and acceleration, work and energy impulse and momentum.

EGN 3331


EGN 3334


EGN 3353


EGN 3358


EGN 3365C


EGN 3373

Principles of Electrical Engineering: PR: PHY 3049; CR: MAP 3302. Fundamental laws of electrical circuits and circuit analysis; fundamentals of electronics and power systems.

EGN 3375C


EGN 3420

Engineering Analysis: PR: High-level language or equivalent (FORTRAN preferred); MAC 3312. Engineering analysis and computation using FORTRAN; engineering applications of numerical methods including curve fitting, matrix operations, root finding, integration and plotting.

EGN 3613

Engineering Economic Analysis: PR: ECO 2013 and Sophomore standing. Economic evaluation of
engineering alternatives and design. Time value of money and economic impact of taxes, risk, depreciation.

EGN 3704 Engineering and the Environment: PR: CHS 1440 and MAC 3312. Process engineering for air, energy, water, and land environment and the role of engineering in control of these environments.

EN 2(2,0)

EGN 4032 Professionalism, Practice and Ethics: PR: Junior or Senior standing. Study of the professional engineer's role, practice, and responsibility to act in the interests of public health, safety, and welfare.

EN 2(2,0)

EGN 4033 Technology and Social Change: PR: History/Humanities Sequence or C.I. Review of existing theories of social change, analysis of the role of technology as related to social change, and study of contemporary events in technology and their possible impact on society.

EN 3(3,0)

EGN 4524 Engineering Administration: PR: EGN 3613 and Senior standing. Engineering organization and administration; delegation of authority and responsibility; effective use of resources; project management; R and D planning; ethics in professional practice.

EN 2(2,0)


EN 3(3,0)

EGN 4703 Systems Analysis and Control: PR: EGN 3343, 3353, 3373; MAP 3302. Analysis and design of process control systems, including first and second order systems and classical linear control theory.

EN 4813 Science in History: Examination of the reciprocal relations of science and society from ancient to recent times.

EN 4814 Technology in History: PR: History/Humanities sequence or C.I. Important developments in engineering and technology and their effect on society and our socio-economic processes.

EN 4818 Technology in North America: PR: History/Humanities sequence or C.I. Periods of significant technological change in North America, with emphasis on 19th and early 20th-century developments.

EN 4823 Topics in Urban Development: Production, distribution, and consumption of various commodities. Engineering relationships to distribution, internal structure, function of urban developments, interrelationships of engineering, social, economic, and cultural phenomena.

EN 4824 Energy and Society: Investigation of available energy forms; energy resources versus requirements in an increasingly complex technological society; possible solutions and future predictions.

EN 4825 Environment and Society: PR: C.I. Environmental factors of importance to people's interaction with the environment; engineering and non-engineering measures to insure improvement and maintenance of environmental quality. Not for engineering students.

EN 4826 Telecommunications: Telecommunications and its role in contemporary local, national, and international society.

EN 4830 Computers, Cybernetics and Society: The effects of computers and the cybernetic revolution of the individual and society. Effects of positive and negative feedback on biological, technological and social systems. Computers and their interactions with the human system.

EN 4843 Systems Modeling: PR: CGS 1060 or equivalent. Representation of man/machine systems through analytic and computer-based models. Case studies in the analysis and improvement of systems in industry, education, and government.

EN 4844 Man and Machine: The influence and interrelationship of invention and technical progress on the evolution of social forms and institutions.

EN 5034 Engineering and Public Works: PR: C.I. The purposes, function, and role of engineering within public works.

EN 5035 Topics in Technological Development: PR: C.I. Selected topics in the technological development of western civilization including the weight-driven clock, steam engine, electric light, etc.


presentation as a form of computerized engineering communication. Engineering drawing, descriptive geometry and graphical solution techniques using computer software.

EIN 3314C  EN 3(2,2)

EIN 4118C  EN 3(2,3)

EIN 4121C  EN 3(3,0)

EIN 42214  EN 3(3,0)
Safety Engineering and Administration: Analysis of accidents in the industrial operating environment. Application of fault trees, OSHA requirements. Consideration of accident costs and organizational aspects of accident prevention.

EIN 4234C  EN 3(2,2)
Human Engineering: PR: EIN 3315C; Senior standing. Man/machine systems; design and conduct of human engineering studies.

EIN 4305C  EN 3(2,2)
Industrial Engineering Applications in The Service Industries: PR: EIN 3314C, ESI 4312, ESI 4254. Application of industrial engineering principles to improve the quality and productivity of service industries such as restaurants, banks, hotels, health care, etc.

EIN 4333C  EN 3(2,3)

EIN 4364C  EN 3(2,2)
Industrial Facilities Planning and Design: PR: EIN 4391C, EIN 4333C. Comprehensive design of industrial production systems, including interrelationships of plant location, process design, and materials handling. Laboratory assignments.

EIN 4391C  EN 3(2,2)
Manufacturing Engineering: PR: EIN 3314C, EGN 3363. Introduction to manufacturing engineering, with emphasis on current and emerging technologies in metalworking and electronics.

EIN 4411C  EN 3(2,2)
Computer-Aided-Manufacturing: PR: EIN 4391C. Computer-Aided-Manufacturing (CAM) including computer numerical control (CNC), robotics, parts classification (GT) and manufacturing resource planning (MRP).

EIN 4891C  EN 3(2,3)
Industrial Engineering Senior Design Project: PR: Senior standing. Capstone design course; application of IEMS techniques to real-world design applications.

EIN 5117  EN 3(3,0)
Management Information Systems I: PR: C.I. The design and implementation of computer-based Management Information Systems. Consideration is given to the organizational, managerial, and economic aspects of MIS.

EIN 5248C  EN 3(2,2)
Ergonomics: PR: C.I. Applications of anthropometry, functional anatomy, mechanics, and physiology of musculoskeletal system concepts in the engineering design of industrial tools, equipment, and workstations.

EIN 5255  EN 3(3,0)
Training Simulator Engineering: Introduction to significant topics relative to the development and use of simulators for knowledge transfer in the technical environment.

EIN 5317  EN 3(3,0)
Training Systems Engineering: How human performance deficiencies should be addressed from a systems engineering point of view. Manpower, personnel, and training considerations will be examined.

EIN 5381  EN 3(3,0)
Engineering Logistics: Study of the logistics life cycle involving planning, analysis and design, testing, production, distribution, and support.

EIN 5388  EN 3(3,0)
Forecasting: PR: STA 5156, ESI 5170 Industrial applications of forecasting methods with emphasis on microcomputer-based packages.

EIN 5383  EN 3(3,0)

EIN 5415  EN 3(3,0)
Tool Engineering and Manufacturing Analysis: PR: EIN 4391 or C.I. Tool materials and design, tolerance technology, theory of metal cutting, and machineability.
programs and instruction.

Communication for Instructional Systems—Application: PR: EME 5056. Applications of technology, communications theory, platform skills, and instructional design to the effective presentation of training programs and instruction.
<table>
<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>EME 5208</td>
<td>Production Techniques for Instructional Settings: Skills in producing instructional materials. Emphasis on graphic, audio, video, and photographic skills and the application of instructional and communication theories.</td>
</tr>
<tr>
<td>EME 5225</td>
<td>Media for Children and Young Adults: Survey of materials for children's and young adults' informational and recreational needs; analysis, evaluation, and utilization of print and non-print materials.</td>
</tr>
<tr>
<td>EME 5408</td>
<td>Computer Applications in Instructional Technology: Techniques and skills for the use of computers for productivity and instruction by the instructional technologist.</td>
</tr>
<tr>
<td>EML 3101</td>
<td>Thermodynamics of Mechanical Systems: PR: EGN 3343. Applied thermodynamics, availability analysis, thermodynamics of reactive and non-reactive mixtures, thermodynamic relations of properties. Thermodynamic design analysis of complete mechanical systems.</td>
</tr>
<tr>
<td>EML 3236</td>
<td>Structure and Properties of Alloys: PR: EGN 3365C. Relation of properties to microstructure and applications of major ferrous and non-ferrous alloys.</td>
</tr>
<tr>
<td>EML 3262</td>
<td>Kinematics of Mechanisms: PR: EGN 3321. Graphical, mathematical, and computer-aided kinematics, analysis, and synthesis of basic mechanisms.</td>
</tr>
<tr>
<td>EML 4260</td>
<td>Dynamics of Machinery: PR: EML 3262, EML 4222. Critical speeds and response of flexible rotor systems, whirl, gyroscopic effects; balancing of rotating and reciprocating masses; cam dynamics.</td>
</tr>
<tr>
<td>EML 4304C</td>
<td>Measurements Laboratory: PR: EGN 3373, EGN 3353, EGN 3331. Fundamental theory and practice of static and basic electrical dynamic measurements, transducer principles and data acquisition. Laboratory experiments conducted to reinforce thermal, fluid, and mechanical concepts.</td>
</tr>
<tr>
<td>EML 4312</td>
<td>Feedback Control Design: PR: MAP 3302, EGN 3373. Mathematical modeling of control system components; pneumatic, hydraulic, electromechanical control systems; transient and frequency response; stability and root locus; controller design.</td>
</tr>
<tr>
<td>EML 4411</td>
<td>Mechanical Power Systems: PR: EML 3101. Analysis and design of large power generating systems and components, with emphasis on steam plants utilizing both chemical and nuclear fuels.</td>
</tr>
<tr>
<td>EML 4501C</td>
<td>Engineering Design I: CR: EML 4304C. Application of the design process in the team solution of a state-of-the-art problem. Aerospace, mechanical, thermo-fluid, or material problems are considered.</td>
</tr>
<tr>
<td>EML 4502C</td>
<td>Engineering Design II: PR: EML 4501C. Continuation of the design process in the team building and testing of a prototype. A test plan and a test report are completed.</td>
</tr>
<tr>
<td>EML 4535</td>
<td>Computer Aided Design: PR: EML 3101, 3500, and CGS 3422 or equivalent. Introduction to computational methods in mechanical and thermal systems design.</td>
</tr>
<tr>
<td>EML 4600</td>
<td>HVAC Systems Engineering: Heating, ventilation, air-conditioning, and refrigeration principles and systems design. Psychrometrics, heating and cooling loads, equipment and components, and distribution systems.</td>
</tr>
</tbody>
</table>


Acoustics: PR: MAP 3302. Elements of vibration theory and wave motion; radiation, reflection, absorption, and transmission of acoustic waves; architectural acoustics; control and abatement of environmental noise pollution; transducers.

Intermediate Mechanics of Materials: PR: EGN 3331 and MAP 3302. Elements of plane elasticity; failure theories; curved beams; columns; bending and torsion of thin-walled structures; theory of thin plates; applications to design.

Tribology: Principles of fluid film lubrication; bearing design and application; friction and wear of materials.

Intermediate Dynamics: PR: EGN 3321, 3331. Dynamics of particles, distributed mass systems, and rigid bodies from an advanced viewpoint. Virtual work. Lagrange’s and Euler’s equations. Hamilton’s equations.


Energy Conversion: PR: EML 3101 and PHY 3101. Direct methods of energy conversion; particular emphasis on fuel cells, thermoelectrics, thermionics, solar energy, photovoltaics, and magnetohydrodynamics.

Energy Analysis: PR: C.I. Examination of energy demands and potential supply, computer simulation of resource depletion, alternate energy resources, transportation systems, economic and environmental constraints.

Photovoltaics: PR: EGN 3375C, EGN 3331, or C.I. Direct conversion of solar energy into electricity; crystalline and thin-film cell technologies; stand-alone and utility-interactive applications; emphasis on system design, sizing, and analysis.

Energy Conservation: PR: EML 4142. Analysis of energy use in economic sectors and design of conservation methodologies to reduce energy use. Heating and cooling loads, passive building designs will be presented.

Computer-Aided Design and Manufacture: PR: EGN 3331 and EML 3500 or C.I. Theory and application of computer algorithms for the synthesis, simulation, design and manufacture of mechanical and thermal systems.

Engineering Design with Composite Materials: PR: EAS 4200, or EML 3500 or C.I. Mechanics of structural components of composite materials under static, thermal, vibratory loads. Instability. Lamina and laminate theory, energy methods, failure theories, and structural joining methods.

Environmental Thermodynamics: PR: EML 3101 and EML 4142. Thermodynamics of the environment, emphasizing analysis and design of thermal systems. Building heating and cooling load calculations and energy conservation technologies analyzed.


Introduction to Mental Retardation: PR: Senior standing. Development and practice of appropriate cognitive, affective, and motor strategies for selected categories, levels, and degrees of severity of exceptional population.

Curriculum Method and Materials for Retarded Persons: PR: Senior standing. Development of highly specialized techniques and materials to be used with exceptional students.
ENC 1101  Composition I: Expository writing with emphasis on effective communication. Writing topics to be based on selected readings.

ENC 1101H  Honors Freshman Composition I: PR: Score of 60+ on TSWE of SAT or C.I. Same as ENC 1101, with honors-level content.

ENC 1102  Composition II: PR: ENC 1101. Frequent writing based on the analysis of short stories, dramas, poems, and a novel.

ENC 1102H  Honors Freshman Composition II. PR: ENC 1101H or C.I. Same as ENC 1102, with honors-level content.

Note on Freshman English Program:
ENC 1101 and 1102 must be taken before enrolling in any English course numbered above 1102.

ENC 2290  Careers in Writing: An examination of career opportunities in technical writing, emphasizing industrial, commercial, and governmental opportunities.

ENC 3210  Business Report Writing: PR: ENC 1102. Emphasis on clear expository writing of memoranda, reports, and articles in the student’s particular field.

ENC 3211  Introduction to Technical Writing: Provides definition, history, rhetorical bases of technical writing and its relationship to general English studies.

ENC 3241  Technical Report Writing: PR: ENC 1102. Instruction and practice in scientific writing, including preparation of scientific reports in the student’s particular field.

ENC 3263  Science and the Lay Reader: PR: ENC 3310, ENC 3311 or ENC 3341 or C.I. Analysis of lay scientific magazine articles and practice in scientific writing for the lay audience.

ENC 3310  Magazine Writing I: PR: ENC 1102. Intensive practice in description narration, exposition and argumentation; control of tense, mood, viewpoint, and level of diction. Applicable to article, essay, and short story writing.

ENC 3311  Advanced Expository Writing: PR: ENC 1102. Practice of expository writing directed to general reader.

ENC 3341  Magazine Writing II: PR: ENC 3310 or C.I. Structure and organization of articles, essays, profiles, and reviews; market analysis; data gathering. May be repeated for credit.

ENC 3342  Journal—Writing Practicum: An interdisciplinary practicum in journal writing as a literary genre and a means of self-expansion.


ENC 4218  Graphics Capabilities for the Technical Writer: PR: ENC 4293; to be taken concurrently with ENC 4215. Study and preparation of visuals and graphics in technical writing and documentation: use of computer graphics; slides; transparencies; charts; graphs; drawings.


ENC 4293  Technical Documentation I: PR: ENC 3210 or 3341. Practice in translating highly technical information to organized documentation: hardware, software, military specifications. Theory of designing and organizing technical manuals. Preparation of proposals. Interview skills.

ENC 4294  Technical Documentation II: PR: ENC 4293. Practical application of editing theory to large ongoing projects from the student’s particular field. Should be taken concurrently with ENC 4215.

ENC 4295  Technical Documentation III: PR: ENC 4294. Designing, writing, and illustrating manuals, e.g., repairs, maintenance or users. Project supervised by a member of a student’s major department or technical editor of a corporation.

ENG 3010  Practical Criticism: PR: ENC 1102. Student evaluation of selected fiction, poetry, and drama through practical exercises in literary criticism.

ENG 3210  Literary Magazines. PR: ENC 1102. Examination of fiction and poetry trends in current literary magazines, identifying editorial policies in publication of contemporary literature.
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Prerequisites</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 5009</td>
<td>Methods of Bibliography and Research</td>
<td></td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ENG 5018</td>
<td>Literary Criticism: PR: Graduate standing or C.I. Historical survey of major critics from classical antiquity to the modern era.</td>
<td></td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ENG 5026</td>
<td>Rhetoric and Literature: PR: Graduate standing or C.I. Investigates the development of written strategies of persuasion. Traces their relation to practical and imaginative literature. Applications to classroom teaching of literature and composition.</td>
<td></td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ENL 3031</td>
<td>English Literature I: PR: ENC 1102. Beowulf to 1798.</td>
<td></td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ENL 3051</td>
<td>English Literature II: PR: ENC 1102. From 1798 to 1914.</td>
<td></td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ENL 3273</td>
<td>Survey of British Literature Since 1914: PR: ENC 1102</td>
<td></td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ENL 4101</td>
<td>English Novel: PR: Enc 1102. Analysis of major English novelists.</td>
<td></td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ENL 4220</td>
<td>English Renaissance Poetry and Prose: The course will examine selected poetry and prose of Wyatt, Surrey, Sidney, Spenser, Marlowe, Raleigh, Daniel, Shakespeare, Chapman, Lyly &amp; others.</td>
<td></td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ENL 4241</td>
<td>English Romantic Writers: PR: ENC 1101, ENC 1102. Study of English poets and essayists of the romantic period, including Wordsworth, Coleridge, Hazlitt, Lamb, Byron, Shelley &amp; Keats.</td>
<td></td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ENL 4251</td>
<td>The Victorian Age: PR: ENC 1101, ENC 1102. Study of poets and essayists from 1837 to 1900, including Tennyson, the Brownings, Arnold Hopkins, Carlyle, Mill, Newman.</td>
<td></td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ENL 4311</td>
<td>Chaucer: PR: ENC 1102. The Canterbury Tales, Troilus and Criseyde, and other works.</td>
<td></td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ENL 4330</td>
<td>Shakespeare Studies: PR: ENC 1102. Reading, analysis, and discussion of Shakespeare’s plays. May be repeated for credit.</td>
<td></td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ENL 4341</td>
<td>Milton and His Age: PR: ENC 1102. Paradise Lost, Paradise Regained, Samson Agonistes, shorter poems and selected prose.</td>
<td></td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ENL 4353</td>
<td>18th Century Studies: PR: ENC 1102. Reading, analysis, and discussion of literature in English: 1660-1880. May be repeated for credit.</td>
<td></td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ENL 4376</td>
<td>Modern British Literature: PR: ENC 1102. Major writers of modern British literature.</td>
<td></td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ENL 5176</td>
<td>Restoration and 18th Century English Drama. PR: Senior standing or C.I.</td>
<td></td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ENL 5226</td>
<td>English Renaissance Poetry and Prose: PR: Senior standing or C.I. The course will examine selected poetry and prose of Wyatt, Surrey, Sidney, Spenser, Marlowe, Raleigh, Daniel, Shakespeare, Chapman, Lyly, and others.</td>
<td></td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ENL 5236</td>
<td>The Age of Dryden and Pope: PR: Senior standing or C.I. Prose, poetry, drama, and literary traditions of British neoclassicism.</td>
<td></td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ENL 5335</td>
<td>Studies in Shakespeare: PR: Senior standing or C.I. A selection of representative plays, with emphasis on Shakespeare's development as an artist: aesthetics of dramatic literature.</td>
<td></td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ENL 5347</td>
<td>The Age of Milton: PR: Senior standing or C.I. Emphasis on the non-dramatic works of John Milton. Selections from the non-dramatic works of other 17th-century figures.</td>
<td></td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ENL 5355</td>
<td>Eighteenth Century Studies: Reading, analysis, and discussion of literature in English: 1660-1880.</td>
<td></td>
<td>EN 3(3,0)</td>
</tr>
<tr>
<td>ENU 4103</td>
<td>Nuclear Engineering: PR: PHY 3101. Introduction to the principles of nuclear engineering, nuclear chain reactions, reactor systems and control, health physics, radiation shielding, and applications of nuclear energy.</td>
<td></td>
<td>EN 3(2,3)</td>
</tr>
<tr>
<td>ENV 4121C</td>
<td>Air Pollution: PR: EGN 3704, EGN 3353. Sources, causes, and effects of air pollution. Engineering design, analysis, and modeling for the control of air pollution.</td>
<td></td>
<td>EN 3(3,0)</td>
</tr>
<tr>
<td>ENV 4341</td>
<td>Solid and Hazardous Wastes: PR: EGN 3704 or C.I. Engineering design, planning, and analysis problems associated with storage, collection, processing, and disposal of solid and hazardous wastes.</td>
<td></td>
<td>EN 3(3,0)</td>
</tr>
</tbody>
</table>
ENV 4433  
Water Resources Design: PR: CWR 4101C and CWR 4201C. Project course on designs of large and small water transmission systems using local and state regulations.

ENV 4561  
Environmental Engineering -- Process Design: PR: EGN 3704 and EGN 3353. Water treatment and wastewater treatment design considerations with effluent and sludge handling, treatment, and disposal.

ENV 4562  

ENV 4561  
Urban Systems Engineering: PR: C.I. Theories and history of city development with administrative, planning, management, and maintenance of municipal services.

ENV 5013  
Environmental Analysis of Transportation Systems: PR: EGN 3704, ENV 4121C or C.I. The course deals with the environmental process needed for the successful planning of transportation projects. The analysis of noise, air quality, wetlands, and other environmental areas will be covered in addition to abatement measures.

ENV 5045L  
Research Methods in Environmental Engineering: PR: STA 3032, ENV 4561 or C.I. Experimental design and modeling of environmental engineering systems using fundamental concepts of computer programming, probability and statistics.

ENV 5335  
Hazardous Waste Management: PR: EGN 3704 or C.I. Engineering planning and analysis associated with the handling, storage, treatment, transportation, and disposal of hazardous wastes.

ENV 5505  
Sludge Management Operations in Environmental Engineering: PR: ENV 4561. Theory and design of sludge management operations and processes in environmental engineering, including stabilization dewatering and ultimate disposal.

ENV 5615  

ENV 4004C  

EPH 5335  
Physical and Sociological Implications of Handicapping Conditions: Overview of physical and sociological factors which may contribute to delayed learning or physical impairments in the exceptional populations. Physical interventions and first-aid practices are examined.

ESE 3940  
Junior Student Teaching -- Secondary Level: PR: EDG 4321. Student teaching in a secondary school under the supervision of a certified classroom teacher.

ESE 4943  
Senior Student Teaching -- Secondary Level: PR: ESE 3940 or EDE 3942. Student teaching in a secondary school under the direction of a certified classroom teacher. Scheduled concurrent seminars.

ESE 5214  
Secondary School Curriculum Improvement: PR: Regular Certificate or C.I. Secondary School self studies for curriculum projects, accreditation reports, or staff development.

ESI 4234  
Quality Engineering: PR: STA 3032. Basic concepts and techniques of quality control; applications of statistics in industrial research; design of quality assurance systems; reliability engineering.

ESI 4312  
Operations Research PR: STA 3032, EIN 4118C. Introduction to linear, non-linear, and dynamic programming. Decision analysis, random processes, and queueing. Course covers theory through application and implementation of results.

ESI 4314  
Quantitative Techniques in Industrial Engineering: PR: EGN 4634 and STA 3032. Extension of EGN 4634 and STA 3032, with primary emphasis on O.R. and statistical applications to industrial engineering problems.

ESI 4523C  
Systems Simulation: PR: STA 3032, EIN 4118C. Methods and procedures for simulating large-scale systems with digital computers. FORTRAN and simulation languages are used.

ESI 5170  
Microcomputer Practicum: PR: Graduate standing or C.I. Survey of personal computer programming and use in decision support applications in engineering.
ESI 5236
Reliability Engineering: PR: ESI 4234, or equivalent or C.I. Reliability theory and modeling approaches. Topics include: failure data analysis, maintainability, reliability standards (DOD), software reliability, reliability in design, and electronic systems reliability.

ESI 5316
Operations Research: PR: EGN 4634. Methods of operations research, including formulation for models and derivation of solutions; linear programming, network models queueing theory, simulation, and nonlinear optimization techniques.

ESI 5531
Discrete Systems Simulation: PR: STA 3032, CGS 3422. Methods for performing discrete systems simulation, including network modeling will be treated.

ESL 1141
Basic Writing: PR: C.I. A course in basic English writing, designed primarily for the international student, to provide intensive practice in writing effective sentences and paragraphs.

ETC 4241C

ETC 4414C

ETC 4415C

ETE 3050C
Applied CADD: PR: Engineering Drawing and some CADD background. This course in computer-aided drafting/design provides the student with the opportunity to approach detailed and intricate drafting/design problems from a computer perspective.

ETG 3541
Strength of Materials: PR: ETG 3541. Relationship between external forces and action of members of a structure. Topics include stress, strain, shear, moment, deflections, columns, connections, and Mohr’s circle.

ETG 4950
Senior Design Project: PR: ETG 3541. Design or Operations Engineering Technology seniors in their graduation year. Supervised individual or group projects involving project definition, planning, development, testing, and evaluation. Progress reports and a final report are required.

ETI 3421
Materials and Processes: PR: MAC 1104 and MAC 1114 or equivalent; Chemistry. A study of fundamental properties of materials. Current industrial practices in founding, forming, joining and shaping processes.

ETI 3651C
Computer Applications: PR: COP 1200 or equivalent. Application of high-level program packages to solve problems in industrial practices.

ETI 3671

ETI 3690
Technical Sales: Application of technical knowledge to sales and service. Relationship of technical sales organization to production, customers, and competitors.

ETI 4110

ETI 4186
Applied Reliability: PR: ETI 4110. Practical application of reliability concepts and analysis applicable to the design, production and logistics phases of systems and system components.
ETI 4522C

ETI 4640
Process Planning and Work Measurement: PR: COP 1200 or equivalent. Scheduling techniques (CPM), simulation, and MRP are presented. Work measurement techniques, work sampling, and MTM are also covered.

ETI 4661C
Applied Facilities Planning and Design: PR: Engineering drawing and senior standing. The design of manufacturing facilities and material handling systems.

ETI 4700
Occupational Safety: Accident prevention and the operation of an industrial safety program. Basic requirements of the Occupational Safety and Health Act standards.

ETM 4220

ETM 4403C
Applied Kinematics: PR: ETG 3541 and Engineering Drawing. Analysis and design of machine elements and mechanisms involving velocities and accelerations of components, linkages, gears, and cams.

ETM 4512C

ETM 4755
Applied Air Conditioning: PR: ETM 4331. Analysis of body comfort, psychrometrics, heating and cooling load, specification of air conditioning systems, air distribution systems and system piping requirements.

EUH 2000
Western Civilization I: A survey of western civilization from ancient to 1648.

EUH 2001
Western Civilization II: PR: EUH 2000 or C.I. A survey of western civilization from 1648 to present. May be taken before EUH 2000.

EUH 3122
Medieval Society and Civilization: PR: EUH 2000 and 2001 or C.I.

EUH 3142
Renaissance and Reformation: PR: EUH 2000 and 2001 or C.I. The influence of Renaissance humanism on arts, letters, and politics; Luther and Protestantism; the Catholic Counter-Reformation and the Thirty Years' War.

EUH 3225
Romanticism and Realism: PR: EUH 2000 and 2001 or C.I. Napoleon and nationalism; new ideas; conservation; liberalism; romanticism; republicanism and socialism; urbanization, technology and mass culture, religious decline; Realpolitik, racism, imperialism, and militarism.

EUH 3281
Second World War and Rebirth of Europe: PR: EUH 2000 and 2001 or C.I. Origins of World War II; Hitler's "New Order," and resistance movements; Cold War; de-Stalinization of Russia; Sovietization of East Central Europe; Western reconstruction, and prosperity.

EUH 3411

EUH 3651
War and Society: Evolution of weapons, tactics, strategy; role, social status, recruitment of soldiers; influence of military on governments; and international efforts to preserve peace.

EUH 4284
Fascism and the Totalitarian Dictatorships: PR: EUH 2000 and 2001 or C.I. Totalitarian ideologies, institutions, and practices in Lenin's and Stalin's Russia. Mussolini's Italy, and Hitler's Third Reich; fascist movements in the non-totalitarian states.

EUH 4465
Hitler's Third Reich: PR: EUH 2000 and 2001 or C.I. German nationalism and militarism; World War I and the Versailles Treaty; the Weimar Republic and the rise of the Nazis; Second World War, division and recovery.

EUH 4500
English History to 1485: PR: EUH 2000 and 2001 or C.I.
EUH 4501  AS 3(3,0)  English History: 1485-1815: PR: EUH 2000 and 2001 or C.I.
EUH 4502  AS 3(3,0)  British History: 1815-Present: PR: EUH 2000 and 2001 or C.I.
EUH 4571  AS 3(3,0)  History of Russia to 1801: PR: EUH 2000 and 2001 or C.I. Kievian State; Mongol Yoke; Development of Muscovite Expansionism and Absolutism; Time of Troubles; Westernization of Russia under Peter I and Catherine; Role of Orthodox Church.
EUH 4574  AS 3(3,0)  History of Russia: 1801-1917: PR: EUH 2000 and 2001 or C.I. Alexander I; Napoleonic Invasion; Revolutionary Movement; Russian Policy toward Central Asia and China; Great Reforms; Russo-Japanese War; Revolution of 1905; Constitutional Period; Triple Entente.
EUH 4576  AS 3(3,0)  History of the Soviet Union: 1917-Present: PR: EUH 2000 and 2001 or C.I. First War; 1917 Revolutions; Civil War; New Economic Policy; Stalin-Trotsky Struggle; Collectivization; Stalinist Purges; Second War; Post-Stalin Russia; Khrushchev; Sino-Soviet Relations.
EUH 4620  AS 3(3,0)  European Great Powers: 1815-1914: PR: EUH 2000 and 2001 or C.I. Congress of Vienna, Metternich’s system Crimean War, unifications of Italy & Germany, the Bismarckian era, the alliance systems, and the outbreak of World War I.
EUH 5247  AS 3(3,0)  Colloquium in Europe, 1919-1939: PR: Senior standing or C.I. Selected topics in the historical literature of Europe from the Paris Peace Conference to the outbreak of the Second World War.
EUH 5517  AS 3(3,0)  Colloquium in Tudor-Stuart England: PR: Senior standing or C.I. Intensive reading and class discussion on selected topics during the Tudor-Stuart era.
EUH 5579  AS 3(3,0)  Colloquium in Soviet Russia: PR: Senior standing or C.I. Reading and class discussion of the literature on selected topics in Russian history, 1911-present.
EUH 5595  AS 3(3,0)  Colloquium in Czarist Russia: PR: Senior standing or graduate status. Selected topics on the literature of Russia under the Czars prior to 1917.
EUH 5608  AS 3(3,0)  Colloquium European Intellectual History: PR: Senior standing or C.I. Reading and class discussion of the literature on selected topics of European intellectual history.
EVS 4795  EN 3(2,2)  Air Pollution Control: Fundamental techniques applicable to analyzing composition and sources of pollutants, measuring concentrations, and controlling emissions. Air pollution control programs, laws, rules, and regulations.
EVT 3082  ED 3(3,0)  Professional Role of the Vocational Teacher: PR: EVT 3371 or C.I.
EVT 3312  ED 4(4,0)  Course Construction in Health Occupations Education: PR: EVT 3365 or C.I. Planning and preparation of materials, managing the laboratory and involvement in appropriate Vocational Student Organizations. Clinical instruction related to vocational education and industry training.
EVT 3365  ED 4(4,0)  General Methods/Testing Evaluation in Vocational Education: General teaching methods, testing and evaluation. Techniques specific to Vocational Education and Industry Training.
EVT 3367  ED 3(3,0)  Evaluation of Vocational Instruction: PR: EVT 3371 or C.I. Study, practice, and achievement of competency in assessing student cognitive, affective, and psychomotor performance in vocational education.
EVT 3371  ED 4(4,0)  Course Construction in Industrial Education: PR: EVT 3365 or C.I. Planning and preparing instructional materials, organizing and managing the Industrial Education laboratory, and involvement in VICA.
EVT 3502  ED 4(4,0)  Special Needs of Vocational Students: PR: EVT 3365 or C.I. Achievement of teacher competency in meeting the special needs of the handicapped, culturally different, slower learner, those with basic skill deficiencies, and those in non-traditional programs.
EVT 3815  ED 3(3,0)  Management of the Vocational Classroom and Laboratory: PR: EVT 3371 or C.I. Organization and management of school facilities for instructional purposes and skill in providing for student health and safety.

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EVT 4169 Curriculum Development Techniques for Industry Training: The practical application of fundamental knowledge, important skills, alternative analysis methods, and the critical elements of the trainer’s analysis tasks.

EVT 4368 Advanced Teaching Techniques for Vocational Education: PR: EVT 3365 or C.I. Study, practice, and achievement of techniques including cooperative learning, simulation, instructional modeling and evaluation of instructional effectiveness.

EVT 5260 Cooperative Programs in Vocational Education: PR: Regular Certificate or C.I. Study of cooperative vocational programs and achievement of competencies needed to establish, manage, and coordinate co-op program activities in all vocational areas.

EVT 5315 Applied Clinical Teaching Techniques in Vocational Education: PR: Regular Certificate or C.I. Study and practice of clinical teaching methods, development of student performance assessment instruments, planning clinical teaching experiences and record keeping.

EVT 5316 Clinical Coordination for the Health Occupations Teacher: PR: Regular Certificate or C.I. Development of clinical guidelines, resources, student schedules, and risk-management programs. Includes negotiating clinical contractual agreements and planning field supervision.

EVT 5561 Student Guidance in the Vocational Program: PR: Regular Certificate or C.I. Achievement of skills used by teachers as they gather student data, confer with students, and help students plan for employment or further education.

EVT 5564 Student Vocational Organizations: PR: Regular Certificate or C.I. Competencies needed by vocational teachers as they establish and supervise student vocational organizations in secondary and post-secondary schools.

EVT 5817 Management of Vocational Programs: PR: Rank III Certificate or C.I. Study and achievement of selected competencies needed by vocational teachers, supervisors, and local administrators in the management of vocational education programs in the schools.


EXP 3404 Basic Learning Processes: PR: PSY 2013 and PSY 3214. Theories and research findings from basic laboratory investigation of learning phenomena. Lecture/Lab.

EXP 3513C Cognitive Psychology: Theory and research on attention, memory, complex human learning, and problem solving.

EXP 5208 Sensation & Perception: PR: C.I. A study involving the human information processing with regard to physical and psychological variables in sensory and perceptual phenomena.

EXP 5255 Human Performance: PR: C.I. Human performance dimensions and concepts of assessment of human capabilities; performance acquisition, information processing and decision-making; applications of principles to understanding of stress and performance effectiveness.

EXP 5256 Human Factors I: Survey of human factors literature. Introduction to topics including human capabilities and human interfaces with human-machine systems.

EXP 5445 Psychology of Learning and Motivation: PR: DEP 5057 or C.I. Examination of theories and research concerning the acquisition and retention of behavior, as well as motivational factors which influence learning and behavior.


FIL 3100  AS 3(3,0)

FIL 3200  AS 3(1,2)
Beginning Film Production: Introduction to production utilizing video equipment. Basic technical and aesthetic aspects of production.

FIL 3242  AS 3(2,3)
Film Design: PR: ART 2201, ART 2300 and ART 2301. A series of exercises in craft, technique, and production design for film animation. Several types of animation techniques are explored.

FIL 3300  AS 3(3,0)
Film Documentary: The uses and analysis of the non-fiction film.

FIL 3400  AS 3(2,2)
History of Motion Pictures: The history of motion pictures as art and industry: from 1895 to the present.

FIL 3410  AS 3(3,0)
History of Animated Films: Survey from early animators to the development of the “cartoon” industry. Television animation included.

FIL 3503  AS 3(2,2)
Film Theory: Reading and writing in film theory; major historical and social emergences in the theoretical approach to film.

FIL 4102  AS 3(3,0)
Screen Adaptation: PR: FIL 3100 or CRW 3410; Grammar Proficiency Examination. Study of mediated narrative other than film/video and the adaptation of those forms into the screenplay.

FIL 4103  AS 3(3,0)
Advanced Screen Writing: PR: FIL 3100, or CRW 3410; FIL 4102, Grammar Proficiency Examination. Accelerated program of screenwriting.

FIL 4104  AS 3(3,0)

FIL 4202  AS 3(1,2)
Film Studio Techniques: PR: FIL 3200, FIL 4201. Culmination of the production sequence. Emphasizes 16/35 millimeter production within the context of a studio environment.

FIL 4201  AS 3(1,2)
Advanced Film Production: PR: FIL 3200. Advanced exploration of the aesthetic and technical facets of filmmaking.

FIL 4208  AS 3(3,0)
Film Directing: PR: FIL 4201. Principles and practice in directing narrative and documentary motion pictures.

FIL 4220  AS 3(3,0)

FIL 4230  AS 3(2,3)
Film Graphics Animation: PR: FIL 3410, FIL 3242. Problems involving conceptual design and scenic space are explored using various media, materials, and techniques.

FIL 4231  AS 3(2,3)
Computer Animation: PR: FIL 3410, FIL 3242. Mechanics of the moment are analyzed as students prepare animation boards using computer technology.

FIL 4504  AS 3(2,2)
Motion Picture Genre/Aesthetics: PR: FIL 3503 Analysis and evaluation of films; major genres, directors, styles, or periods considered in depth.

FIL 4600  AS 3(3,0)
The Film Producer: PR: FIL 4208. The role of the producer is examined in the context of theatrical film.

FIL 4601  AS 3(3,0)
Production Management: PR: FIL 3200. Preproduction, budgeting, script breakdown, construction of production boards, scheduling, location scouting, and crew procurement.

FIL 4942  AS 3(2,3)
Animation Workshop: PR: FIL 4230, FIL 4231. An intensive study of various film animation techniques under the tutelage of professional animators.

FIN 3100  BA 3(3,0)
Personal Finance and Investments: PR: Junior standing. Fundamentals of managing and investing one’s money and acquiring, safeguarding, and disposing of one’s assets. Not usable for credit by Finance majors.

FIN 3303  BA 3(3,0)
FIN 3324 **Management of Financial Institutions:** Analysis of management policies of financial institutions, including asset, liability, and capital management. The economic and regulatory influence on competition is considered.

FIN 3403 **Business Finance:** PR: ACG 2071 or ACG 3023 and STA 3023 or equivalent. With the balance sheet as a reference point, this course provides an introduction and overview of the acquisition, financing, and management of business assets.

FIN 3404 **Intermediate Corporate Finance:** In-depth study of the principles of corporate finance. Investment, financing, and capital decisions are examined.

FIN 3453 **Financial Models:** PR: FIN 3403, ECO 3411. Mathematical models applied specifically to financial problems, including those models suitable for representation and solution on computers.

FIN 3504 **Investment Analysis:** PR: FIN 3403. A survey of investments, including security markets, investment vehicles, and environment. Principles of asset valuation in efficient markets.

FIN 4127 **Employee Benefits and Retirement Planning:** PR: FIN 3403 and RMI 3011. This course considers the process of establishing specific financial objectives at various stages of life and how those objectives can be reached.

FIN 4514 **Portfolio Analysis and Management:** Portfolio and capital market theory in the determination of rational investment policies. Risk analysis, portfolio analysis, and evaluation techniques.

FIN 4424 **Advanced Topics in Financial Management:** Advanced study in financial management. Topics include capital budgeting, financial structure, and capital decisions. Case studies used extensively.

FIN 4503 **Speculative Financial Markets:** PR: FIN 4520. Study of options, futures, forward, and other speculative markets. Investments traded in these markets are examined analytically. Pricing and hedging models are considered.

FIN 4520 **Security Analysis and Portfolio Management:** PR: FIN 3504. A detailed investigation into the techniques of fundamental and technical security analysis, as well as industry and economic analysis. Further, examines portfolio construction and evaluation.

FIN 4624 **International Financial Management:** PR: FIN 3403, GEB 4351. Analysis of the foreign financial methods and investment, currency futures market, capital budgeting, cash management, examination of Eurocurrency market and international bond markets.

FIN 5405 **Financial Concepts:** PR: Acceptance into the graduate program, ACG 5005 and ECO 5005 and ECO 5415 or equivalents. Effects of financial decisions upon the firm, interrelationships of these effects and alternatives available to financial managers in making these financial decisions.

FLE 3333 **Foreign Language as Human Behavior:** PR: Or CR: UIN 3010 or C.I. Nature of language, language learning, and teaching basic skills. Weekly laboratory.

FLE 3333 **Foreign Language Instructional Analysis:** EDG 4321. Objectives for a school curriculum and of methods and materials for teaching foreign language.

FRE 1005 **French Diction:** This course is especially designed for music and voice students, with an emphasis on musical terms, French songs, and opera libretti.

FRE 1115 **Basic Review of French:** A review of French grammar, vocabulary and civilization. For students with previous instruction in French. Graded S or U.

FRE 1120 **Elementary French Language and Civilization I:** Designed to initiate the student to the major language skills. Open only to students with no previous experience with this language.

FRE 1121 **Elementary French Language and Civilization II:** PR: FRE 1115, FRE 1120 or experience with this language. Continuation of FRE 1120.

FRE 1170 **Elementary French Study Abroad:** Elementary French language and civilization taught in the native environment.

FRE 2200 **Intermediate French Language and Civilization I:** PR: FRE 1121 or equivalent. Development of language skills and cultural knowledge at the intermediate level.

FIN 4514
FIN 4424
FIN 4503
FIN 4520
FIN 4624
FIN 5405
FLE 3333
FRE 1005
FRE 1115
FRE 1120
FRE 1121
FRE 1170
FRE 2200

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FRE 2201 Intermediate French Language and Civilization II: PR: FRE 2200 or equivalent. Continuation of FRE 2200 with emphasis on French civilization.

FRE 2240 AS 3(3,0)

Intermediate French Conversation: PR: One year of French or equivalent. Practical use of the language, leading toward fluency and correctness in speaking.

FRE 2270 AS 8(16,10)


FRE 3244 AS 3(3,1)

French Conversation: PR: FRE 2201 or equivalent. Development of skills in conversation and comprehension. This course may be repeated for credit. When repeated, credit will apply to general electives only.

FRE 3420 AS 3(3,0)

French Composition: PR: FRE 2201 or equivalent. Development of skills in composition. This course may be repeated for credit. When repeated, credit will apply to general electives only.

FRE 4421 AS 3(3,0)

Advanced French Conversation: PR: FRE 3244. Advanced conversation on directed topics from various disciplines. Literature, art, psychology, philosophy, music, business, and the sciences.

FRE 4422 AS 3(3,0)

Advanced French Composition: PR: FRE 3420. Readings and written limitations of modern literary styles in the form of themes, sketches, poems, and original stories.

FRE 4500 AS 3(3,0)

French Civilization and Culture: PR: FRE 3244 or FRE 3420. A survey analyzing development of key elements of French life: its historical, artistic, intellectual, scientific, spiritual contributions to the world via readings, lectures, films, and other media. Conducted in French.

FRE 4780 AS 3(3,0)

French Phonetics and Diction: PR: FRE 3244 or equivalent. French phonology, with emphasis on phonetic groupings.

FRW 3100 AS 3(3,0)

Survey of French Literature I: PR: FRE 2201 or equivalent. Main literary currents and works from the Middle Ages through the 18th century.

FRW 3101 AS 3(3,0)

Survey of French Literature II: PR: FRE 2201 or equivalent. Main literary currents and works of the 19th and 20th centuries.

FRW 3370 AS 3(3,0)

Short Stories of 18th, 19th and 20th Centuries: PR: FRE 2201 or equivalent. Selected readings designed to increase reading speed and develop analytical abilities. Authors include: Voltaire, Maupassant, Flaubert, Camus, and others.

FRW 3740 AS 3(3,0)

The French Literature of Canada: PR: FRE 2201 or equivalent. A survey of the French literature of Canada from the late 19th century to the present, with particular emphasis on the novel and short story.

FRW 4281 AS 3(3,0)


FRW 4310 AS 3(3,0)

Seventeenth Century French Literature: PR: FRW 3100. Cornelle, Racine, and Moliere. A study of the lives and principal works of the authors.

FRW 4324 AS 3(3,0)


FRW 4440 AS 3(3,0)


FRW 4532 AS 3(3,0)


FRW 4552 AS 3(3,0)


FRW 4820 AS 3(3,0)

Stylistics: PR: FRE 3420 or equivalent. An intense study of textual criticism. An examination of the relationship between language and literature; explications and linguistic analysis of literary texts.

FSS 2202C HPA 3(1,3)

Food Production Techniques: PR: HFT 1000. Basic principles of menu planning, food and beverage preparation and service. Laboratory work.

FSS 3120 HPA 3(3,0)

Quantity Food Purchasing: PR: HFT 1000; FSS 2202C. The purchasing procedures, specifications, and controls of food products in the hospitality industry.
FSS 3223  
**Quantity Food Management:** PR: HFT 1000; FSS 2202C. Management of food production in institutions, quality control, recipe standardization, portion and cost control, menu planning.  

FSS 3232C  
**Intermediate Techniques of Food Production:** PR: HFT 1000, FSS 2202C. An advanced food production course which provides the student the opportunity to develop skills in pantry, garde manager, garnishing, and convenience foods and services. Laboratory class.  

FSS 3241C  
**Classical Cuisine/Volume Feeding:** PR: HFT 1000, FSS 2202C, FSS 3223. Provides the student with production and managerial experience in the area of world renowned traditional dishes, lecture, demonstration, and actual preparation of menu items.  

FSS 3301  
**Nutrition Concepts and Issues in the Foodservice Industry:** PR: HFT 1000, FSS 3223. Introduces basic nutrition concepts. Discusses nutrition concepts and concerns in relation to food preparation and service in the hospitality industry.  

FSS 4226  
**Sanitation in the Food Service Industry:** PR: HFT 1000, FSS 3223. The causes and prevention of food spoilage and food-borne illnesses. Certification through NiFI and ETS are both USDA approved.  

FSS 4284C  
**Catering and Banquet Organization:** PR: HFT 1000, FSS 2202C. Methods and procedures for successful on and off premise catering functions. Emphasis on food and beverage preparation, menu planning, service and sales techniques. Laboratory class.  

GEB 4206  
**Physical Geography of North America:** Analysis of the North American landscape as affected by climate, vegetation, and geomorphology.  

GEB 3004  
**Management:** PR: Junior standing. The interdisciplinary application of the managerial functions of organizing, planning, leading, and controlling. For Non-Business Majors ONLY.  

GEO 1200  
**Physical Geography:** Basic physical elements of geography, including climate, landforms, soils, natural vegetation, minerals, and their integrated patterns of world distribution.  

GEO 1200L  
**Physical Geography Laboratory:** CR: GEO 1200. Analysis of climatic and meteorology methods topographic and geological maps, landforms, and landscape interpretation.  

GEO 3370  
**Resources Geography:** Analysis of basic principles and problems associated with development, use, conservation, and management of natural resources, with special emphasis on the United States.  

GEO 3370H  
**Resources Geography (Honors):** Analysis of human management of global resources and the resulting impact on the world’s environment.  

GEO 4140  
**Remote Sensing of the Environment:** PR: GEO 1200 or C.I. Interpretation and application of remote sensor imagery to physical, economic, and urban analysis.  

GEO 4141  
**Geographic Information Systems:** PR: GEO 1200 or GEO 3370 and programming experience. Analysis of land use, development, and natural resource planning through the employment of graphic and database management techniques.  

GER 1005  
**German Diction:** This course is especially designed for music and voice students, with an emphasis on musical terms, German songs, and opera libretti.  

GER 1115  
**Basic Review of German:** A review of German grammar, vocabulary and civilization. For students with previous instruction in German. Graded S or U.  

GER 1120  
**Elementary German Language and Civilization I:** Designed to initiate the student to the major language skills. Open only to students with no previous experience with this language.  

GER 1121  
**Elementary German Language and Civilization II:** PR: GER 1115, GER 1120 or experience with this language. Continuation of GER 1120.
GER 2200
Intermediate German Language and Civilization I: PR: GER 1121 or equivalent. Development of language skills and cultural knowledge at the intermediate level.

GER 2201
Intermediate German Language and Civilization II: PR: GER 2200 or equivalent. Continuation of GER 2200 with emphasis on German civilization.

GER 2210
Intensive German Conversation: PR: One year of German or equivalent. Practical use of the language, leading toward fluency and correctness in speaking.

GER 3240
German Conversation: PR: GER 2201 or equivalent. Development of skills in conversation and comprehension through practice.

GER 3420
German Composition: PR: GER 2201 or equivalent. Development of skills in composition.

GER 4500
German Culture and Civilization: PR: GER 2201. A historical approach to German civilization, with emphasis on German movements that took on international dimensions.

GEW 3100
Survey of German Literature I: PR: GER 2201 or equivalent. Main literary currents and works from the Middle Ages through the 19th Century Romanticism.

GEW 3101
Survey of German Literature II: PR: GER 2201 or equivalent. Main literary currents and works from 19th Century Realism to the present.

GEW 3370
Short Story: PR: GER 2201 or equivalent. German short prose works of the 19th and 20th centuries.

GEW 4480
German Post-War Literature: PR: GER 2201. This course examines post-war literature in West-Germany from 1950 to the present.

GEW 4531
The Age of Goethe and Schiller: PR: GER 2201. Selected texts of Goethe and Schiller are examined, with particular attention to their relationship to both German classicism and German romanticism.

GEW 4542
German Romanticism: PR: GER 2201. Main aspects of the German Romantic movement from Kleist and Novalis to Heine.

GEW 4554
German Realism and Naturalism: PR: GER 2201. The main literary works of German realism and naturalism from Gustav Freytag to Gerhart Hauptmann.

GEW 4550
German Symbolist and Impressionist Literature: PR: GER 2201. A study of the German symbolist and impressionist writers from Stefan George to Robert Musil.

GLY 1030
Geology and its Applications: Geologic principles, applications, and hazards including: gemstones, rock cycle, moving continents, mountain building, metal ores, fossil fuels, groundwater, sinkholes, beach erosion, landslides, earthquakes, "tidal" waves, volcanism.

GLY 4006
Geology of Our National Parks and Monuments: Unique geologic features preserved in our national park system and the processes that gave rise to these features.

HBR 1120
Elementary Modern Hebrew Language and Culture I: Designed to initiate the student to the major language skills: listening, speaking, reading and writing, as well as to constitute an introduction to Israeli culture.

HBR 1121
Elementary Modern Hebrew Language and Culture II: PR: HBR 1120 or equivalent. Continuation of HBR 1120.

HBR 2200
Intermediate Modern Hebrew I: PR: HBR 1121 or equivalent. Designed to continue the study of Modern Hebrew: increase proficiency in conversation, reading and writing skills, and further expose students to Israeli culture.

HBR 2201

HBT 3220
The Israeli Short Story in Translation: Israeli experience as reflected in contemporary stories read in translation. Selected stories by Agnon, Hazaz, Yizhar, Appelfeld, and others will be read and analyzed.

HFT 1000
Introduction to the Hospitality and Tourism Industry: An orientation to the hotel, restaurant, and travel industry, and its history, structure, and operating procedures.
HFT 2252 Rooms Division Management: PR: HFT 1000. Practices and systems utilized in the operational management of the front office, reservation, and housekeeping in hotels/motels.

HFT 2750 Fundamentals of Conventions and Conferences: PR: HFT 1000. An orientation to convention management field. Designed to illustrate the importance of conventions, meeting, and trade shows to the hospitality industry.

HFT 3313 Hospitality Physical Plant Management: PR: HFT 1000, HFT 2252. Analysis of operational problems related to the physical plant and structure of enterprises in the hospitality industry.

HFT 3444 Management Information Systems: PR: HFT 1000, HFT 2252, CGS 3000. Analysis, design and implementation of specialized information systems for lodging, food service and travel operations. Special emphasis is placed on implications for management organization, planning, and control of such systems in the hospitality environment.


HFT 3700 Travel and Tourism Administration: PR: HFT 1000. Foreign and domestic tourism supply and demand, economic impacts, organization of tourism, social and cultural aspects.

HFT 3754 Convention and Conference Operations: PR: HFT 1000. HFT 2750 (Fundamentals of Conventions and Conferences) provides an in-depth understanding of the multiple facets of on-site operations associated with effective convention and conference planning and management.

HFT 3931 Hospitality Guest Lectures: PR: HFT 1000. A series of 14 lectures by prominent hospitality practitioners intended to expose students to various aspects of the Hospitality/Tourism Industry.

HFT 3949 Cooperative Education: Provides paid, pre-professional work experience related to the students' major while they continue to attend school. Requires achievement of major-related learning objectives.

HFT 4210 Hospitality Human Resources Development: PR: HFT 1000, HFT 2252. Proven training systems and personnel development methods for hospitality industry employees are presented. Specific applications of alternative methodologies are identified.

HFT 4250 Hotel-Motel Management and Operations: PR: HFT 1000, HFT 2252, MAR 3023, HFT 4503. A study of the organization and operations of hotel/motels and their various departments with emphasis on techniques and tools of management in the industry.

HFT 4343 Hospitality Facilities Planning and Design: PR: HFT 1000, HFT 2252, HFT 3313. Principles of facility planning layout and design that maximize efficiency in hospitality operations.


HFT 4473 Hotel Development Analysis: PR: HFT 1000, HFT 4503, HFT 4420. Review of methodological operational, financial, and marketing aspects of analyses for hotel development projects.

HFT 4503 Hospitality and Tourism Marketing: PR: MAR 3023, HFT 1000. The application of marketing concepts to the Hospitality and Tourism Industry. Special emphasis on marketing planning and strategic marketing.

HFT 4717 Tourism Planning and Development: PR: HFT 1000, HFT 3700. Analysis and review of physical, economic, social, and environmental planning techniques used in tourism destination development.


HFT 4752 Convention Promotion and Public Relations: PR: HFT 1000. HFT 2750 (Fundamentals of Conventions and Conferences) Introduces specific concepts related to marketing conventions and meetings. Also considers destination marketing and telemarketing concepts in relation to convention management.

HFT 4753 Convention and Conference Services: PR: HFT 1000, HFT 2750. Provides an in-depth understanding
of the acquisition and management of services (food and beverage, audio visual, transportation, etc.) integral to effective convention and conference operations.

HFT 4754

Exhibit and Trade Show Operations: PR: HFT 1000. HFT 2750 (Fundamentals of Conventions and Conferences). Provides an in-depth study of exhibit and trade show operations. Focuses on both supply and demand pertaining to exhibits and trade shows.

HFT 4860

Beverage Management: PR: HFT 1000, FSS 2202C, FSS 3223. The origin production, storing, marketing, and control of beverages in the hospitality industry.

HFT 4949

Cooperative Education: Provides paid, pre-professional work experience related to the students' major while they continue to attend school. Requires achievement of major-related learning objectives.

HIS 3462

Healthcare Finance: PR: MRE 3000. Budgeting, resources for funding current and long-term assets; cost and cost behavior; prospective payment; DRGs as reimbursement base.

HIS 4150

Community and Public Health Services: History and philosophy of public health, interphase of governmental, voluntary, and private health agencies; current community health problems, issues, and needs; social and economic factors.

HIS 4180

Organization and Management for Health Agencies: PR: STA 2014 and Major or Minor in College of Health or C.I. Organizational and management of health agency organizations and management procedures.

HSA 3170

Health Care Finance: PR: MRE 3000. Budgeting; resources for funding current and long-term assets; cost and cost behavior; prospective payment; DRGs as reimbursement base.

HSA 4120

Community and Public Health Services: History and philosophy of public health, interphase of governmental, voluntary, and private health agencies; current community health problems, issues, and needs; social and economic factors.

HSA 4121

History and Future of Health Care: Health care institutions; purposes of health agencies, organizations and allied health professionals; new trends in health care delivery. Designed for non-majors.

HSA 4180

Organization and Management for Health Agencies: PR: STA 2014 and Major or Minor in College of Health or C.I. Organization and management of health agency organizations and management procedures.

HSA 4193


HSA 4193

Public Health Practice: PR: STA 2014 and Major or Minor in College of Health or C.I. Organizational and management of health agency organizations and management procedures.

HSA 4500


HSA 4852

Risk Management Practicum: PR: HSA 4424. Assignment to a selected health care facility serving in an administrative capacity under the director of Certified Risk Manager.

HSA 5198

Information Systems and Computer Applications in Medicine: PR: Graduate standing or C.I. Overview of health information systems, with an emphasis on computer applications. Discussion of software and hardware requirements.

HSC 2000

Introduction to the Allied Health Professions: A survey of allied health professions with regard to duties, responsibilities, education and training, ethics, and relationships with other health professionals. Satisfactory/Unsatisfactory grade.
HSC 3110C
Medical Self Assessment: Development of clinical skills and understanding of one's health to encourage active participation of individuals in their own health care.

HSC 3402C
CPR & First Aid: To train individuals to accepted and recognized medical standards in emergency first aid and CPR to include medical, environmental and trauma related emergencies.

HSC 3531
Medical Terminology: A study of the language of medicine and allied health specialties, including work construction, definitions, and application of terms.

HSC 3640
Health Law: Principles of law as applied to the health field, with special reference to health practices.

HSC 3930
AIDS: A Human Concern: Analysis of the AIDS epidemic. Topics include: epidemiology & immunology; basic facts, prevention; legal, economic, and ethical issues; psychosocial aspects; substance abuse; sexuality and decision-making.

HSC 4211

HSC 4243
Analysis of Instruction in Health Professions: Development of teaching aids, audiovisuals, learning packets. Course development, questioning strategies, evaluation of didactic and clinical performance.

HSC 4244
Curriculum Planning in the Health Professions: Curriculum design and approval process for Health Science program. Curriculum design for professional, patient, and consumer education.

HSC 4500
Epidemiology: A study of the distribution and determination of diseases and injuries in human population.

HSC 4550

HSC 4564
Health Care Needs of the Elderly: Overview of the physical and emotional needs of the elderly, including the institutional health care available.

HSC 4651
Health Care Ethics: A study of ethical issues in health care, including life-saving measures, rights to die, transplants, surrogate parenthood, privacy and confidentiality, and decision-making.

HSC 5595
AIDS: A Human Concern: Focus on epidemiology, transmission, prevention, legal and health care issues, economic impact, psychosocial aspects, sexuality, substance abuse, ethics, hotlines, referral services and the decision making process.

HUM 2211
Western Humanities I: Examples of the philosophy, religion, literature, music, and visual arts, from Ancient Greece through the Middle Ages; ideas that shaped our world.

HUM 2211H
Honors Western Humanities I: Same as HUM 2211 with honors-level content.

HUM 2230
Western Humanities II: PR: HUM 2211 or C.I. Continuation of HUM 2211, from the Renaissance through the Modern World.

HUM 2230H
Honors Western Humanities II: PR: HUM 2211 or C.I. An interdisciplinary course in the history of Western culture from Classical Greece through the Middle Ages.

HUM 3025
Critical Evaluation of the Arts: An inter-disciplinary study of contemporary theory and practice in the criticism and interpretation of the arts.

HUM 3203

HUM 3250
Contemporary Humanities: Current trends in the arts and related developments in philosophy, science, and technology, focusing on the transition from modern to postmodern culture.

HUM 3401
Asian Humanities: An interdisciplinary survey of the cultures of India, China, and Japan, concentrating on their traditional art, literature, religion, philosophy, and music.

HUM 3417
Hindu Thought and Culture: A survey of the development of Hindu thought and culture from vedic times to the modern age, with emphasis on religion, literature, philosophy, art and music.

HUM 3418
Islamic Thought and Culture: A survey of the development of Islamic thought and culture, concentrating on religion, jurisprudence, philosophy, science and art.
HUM 3431
Ancient World: Greece: History and culture of Greece from the Minoan-Mycenaean to the Hellenistic age, with emphasis on contributions in art, literature, and philosophy.

HUM 3432
Ancient World: Rome: History and culture of Rome from the Etruscan Period to the dissolution of the empire, with emphasis on contributions in architecture, law, and literature.

HUM 3552
World Religions: Basic features and historical background on Confucianism, Taoism, Hinduism, Buddhism, Judaism, Christianity, and Islam.

HUM 4301
The Classical Ideal: PR: HUM 2211 and HUM 2230 or C.I. The search for order and form in the arts of various times and cultures. Concerns reason, structure, objectivity, harmony. Open to all Juniors and Seniors.

HUM 4302
The Romantic Ideal: PR: HUM 2211 and HUM 2230 or C.I. The Romantic quest for identity with nature and the sublime in the arts of various times. Concerns feeling, imagination, subjectivity, creativity. Open to all Juniors and Seniors.

HUM 4303
The Spiritual Ideal: PR: HUM 2211 and HUM 2230 or C.I. Concerns works of art reflecting spiritual insight or the spiritual quest; mystical impulses contrasted to ethos and pathos.

HUM 2002
Modern Concepts in Nutrition: An examination of the eating patterns of today’s American people. Topics include: nutrients in our diets, consumer demand in the food industry, fast food outlets, food trends, and hunger.

HUN 3011
Human Nutrition: Essentials of nutrition related to the life cycle, including the physiological, psychosocial, and cultural aspects of nutrition and the inter-relationship with disease are emphasized.

IDH 1921
Honors Symposium I: Readings, lectures and discussions covering aspects of scholarship, artistic, and other creative efforts.

IDH 1922
Honors Symposium II: Continuation of Honors Symposium I. Emphasis on understanding scholarly and creative efforts.

INP 3004
Industrial Psychology: PR: PSY 2013 and STA 2014. Analysis of the psychological principles underlying human behavior and performance in an industrial setting. Topics include selection, training, performance appraisal, job design, and employee motivation.

INP 3102

INP 3803

INP 3951
Industrial/Organizational Field Work PR: C.I. This course is offered as an opportunity for advanced undergraduate psychology majors to become involved in the application of I/O psychology to local organizations.

INP 4313
Organizational Psychology: PR: INP 3004. Analysis of the psychological principles underlying individual and group behavior in an organizational setting. Topics include group dynamics, leadership and participation, intergroup behavior, and organization development.

INR 3002
International Relations-Theory and Practice: Analysis of the fundamental principles and factors affecting interstate relations and their application to contemporary global developments.

INR 4035
International Political Economy: The international politics of regional and global economic interdependence, with emphasis upon North-South relations, the New International Economic Order, OPEC, and multinational corporations.

INR 4102
American Foreign Policy: Development of American foreign policy, with emphasis on the role and policies of the United States in the contemporary world.

INR 4114
American Defense Policy: Study of the evolution of American defense policy since World War II, including consideration of the social and political costs involved and means of control.

INR 4115
Strategic Weapons and Arms Control: Control of strategic weapons and their impact. Technological and policy aspects, including nuclear proliferation.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>INR 4224</td>
<td>Contemporary International Politics of Asia</td>
<td>Examinations of the foreign policies of major and secondary powers in Asia, with particular attention to China and Japan.</td>
</tr>
<tr>
<td>INR 4225</td>
<td>The Vietnam War</td>
<td>Background of events leading to America’s involvement in Indochina, the course of the Vietnam War, and the lessons which that war imparts.</td>
</tr>
<tr>
<td>INR 4402</td>
<td>International Law I</td>
<td>Introduction to the nature, solution, and sources of international law and such subareas as recognition of states and governments, expropriation, nationality, and aliens.</td>
</tr>
<tr>
<td>INR 4404</td>
<td>Space Law</td>
<td>Examination of the legal regime of outer space from both international and national perspectives, and the legal problems arising from human activity in space.</td>
</tr>
<tr>
<td>ISM 4090</td>
<td>Seminar in Management Information Systems</td>
<td>PR: ISM 4212: Course designed to address new developments in management information systems in a business environment, e.g. artificial intelligence, decision support systems, expert systems, and telecommunications.</td>
</tr>
<tr>
<td>ISM 4113</td>
<td>Information Systems Analysis and Design</td>
<td>PR: ISM 4212: Introduction to the fundamentals of management information systems development, needs analysis and systems requirements.</td>
</tr>
<tr>
<td>ISM 4130</td>
<td>Implementing Information Systems</td>
<td>PR: ISM 4113: Study of organizational information needs and systems for planning and control.</td>
</tr>
<tr>
<td>ISM 4212</td>
<td>Data Base Management Systems</td>
<td>PR: completion of or concurrent enrollment in ISM 3011 and COP 3120. Course designed to help student understand how to build, manipulate, and manage files and data bases in a business environment.</td>
</tr>
<tr>
<td>ISM 5021</td>
<td>Introduction to Management Information Systems</td>
<td>PR: Acceptance into the graduate program. Designed to provide the student with the fundamentals of business data processing and management information systems used by organizations in a modern society.</td>
</tr>
<tr>
<td>ISS 4155</td>
<td>Science Fiction and the Social Sciences</td>
<td>A multi-media examination of note-worthy science fiction from the Social Science perspective.</td>
</tr>
<tr>
<td>ITA 1005</td>
<td>Italian Diction</td>
<td>This course is especially designed for music and voice students, with an emphasis on musical terms, Italian songs, and opera libretti.</td>
</tr>
<tr>
<td>ITA 1120</td>
<td>Elementary Italian Language and Civilization I</td>
<td>Designed to initiate the student to the major language skills: listening, speaking, reading, and writing, in addition to an introduction to Italian culture.</td>
</tr>
<tr>
<td>ITA 1170</td>
<td>Elementary Italian Language and Civilization II</td>
<td>PR: ITA 1120 or equivalent. Continuation of ITA 1120.</td>
</tr>
<tr>
<td>ITA 1200</td>
<td>Intermediate Italian Language and Civilization I</td>
<td>PR: ITA 1121 or equivalent. Designed to continue development of language skills at intermediate level, plus a review of grammar, study of syntax, idiomatic expression, extensive readings, and further study of Italian culture.</td>
</tr>
<tr>
<td>ITA 2200</td>
<td>Intermediate Italian Language and Civilization II</td>
<td>PR: ITA 2200 or equivalent. Designed to continue development of language skills at intermediate level, plus a review of grammar and study of syntax, with emphasis on Italian civilization.</td>
</tr>
</tbody>
</table>
cies of administering
Administration and Supervision of Recreational Programs: LEI 3601
Recreational Planning for Facilities and Equipment: Strategies for supervising LEI 3601
Recreation and Intramurals: LEI 3335
Philosophy and Trends in Recreation: LEI 3601

English Instructional Analysis: PR: EDG 4321. Course objectives for a school curriculum and methods and materials which have special application for teaching English.

LAE 3335 ED 4(3,2)

Literature for Children: PR: Phase I or C.I. General survey of books and materials; criteria for analysis and evaluation; types of books available considered in terms of interests, needs, and abilities of children.

LAE 4314 ED 3(3,0)

Language Arts in the Elementary School: PR: Phase I or C.I. Content, principles, materials, and techniques involved in teaching, speaking, listening, organizing for instruction.

LAE 4342 ED 3(3,0)

Teaching Language and Composition: PR: EDG 4321. Techniques and methods in teaching of dialects, semantics, the various grammars. A survey of composition and rhetorical methods of selected authors.

LAE 5367 AS 3(3,0)

English Composition and Literature for Teachers of Advanced Placement: AS 3(3,0)

Theory and Practice in Composition: PR: Senior standing or C.I. Intensive study of theories of composition, with practical experience in the writing laboratory and in composition classes.

LAH 3130 AS 3(3,0)


LAH 3200 AS 3(3,0)


LAH 3400 AS 3(3,0)

History of Mexico and Central America: PR: EUH 2000 and 2001 or C.I. A survey of Mexican and Central American history from Pre-Columbian times to the present.

LAH 3470 AS 3(3,0)

History of the Caribbean: PR: EUH 2000 and 2001 or C.I. History of Cuba, Puerto Rico, Dominican Republic, and Haiti from Pre-Colombian times to the present.

LAH 5713 AS 3(3,0)

Colloquium in U.S.-Latin American Relations: PR: Senior Standing and C.I. The course will analyze U.S.-Latin American relations from an historical perspective. It will be presented through readings and discussion of selected materials.

LAT 1120 AS 4(4,1)

Elementary Latin Languages and Civilization I: Designed to develop Latin language skills at the elementary level: listening, speaking, reading, and writing, in addition to an introduction to Roman culture.

LAT 1120H AS 4(4,1)

Honors Elementary Latin & Civilization I: Same as LAT 1120 with honors-level content.

LAT 1121 AS 4(4,1)

Elementary Latin Language and Civilization II: PR: LAT 1120 or equivalent. Continuation of LAT 1120.

LAT 1121H AS 4(4,1)

Honors Elementary Latin & Civilization II: PR: LAT 1120H or equivalent. Same as LAT 1121 with honors-level content.

LEI 3130 ED 3(3,0)

Philosophy and Trends in Recreation: Provides a philosophical background to the public and private recreation movement in the U.S. Includes an analysis of the current trends in recreation.

LEI 3310 ED 3(3,0)

Recreation Leadership: A study of the various styles of leadership as they relate to directing people and programs in public and private recreation.

LEI 3434 ED 2(1,1)

Recreation and Intramurals: Principles and techniques of general and school recreation programs.

LEI 3437 ED 3(3,0)

Administration and Supervision of Recreational Programs: Includes methods, principles, and policies of administering recreational programs under varying conditions and to varying populations. Strategies for supervising personnel are included.

LEI 3801 ED 3(3,0)

Recreational Planning for Facilities and Equipment: Planning for facilities and equipment will be
analyzed, including site selection, construction, purchasing, and maintenance. Multi-cultural considerations will be examined, and the needs of special populations will be taken into account.

**LEI 3700**

**Recreational Programming for Special Populations:** Includes a study of recreational programming for special populations, including the extreme age groups and the handicapped. Multi-cultural implications will also be considered.

**LIN 3010**


**LIN 3640**

**Psychology of Oral Communication:** Psychological principles involved in the communicative process, with application to individuals and groups.

**LIN 3710**

**Foundations of Language:** This course is designed to explore contributions to language from disciplines of Biology, Neurology, Psychology, and Sociology.

**LIN 3710L**

**Foundations of Language:** Students will have practical experience in analyzing children’s language samples.

**LIN 4101**

**History of the English Language:** PR: ENC 1102 and Sophomore standing. Study of the English language and its development from Anglo-Saxon to Modern.

**LIN 4202**

**Phonetics:** PR: ENC 1102. Study of the sounds of language from an articulatory perspective.

**LIN 4341**

**Modern English Grammar:** PR: ENC 1102 and Sophomore standing. Emphasis upon the analysis and comparison of traditional, structural, and transformational grammar.

**LIN 4440**

**Sounds and Forms of Language:** This course examines the sound systems (phonology) and word structure (morphology) of natural languages as two basic areas of linguistics.

**LIN 4612**

**Black English:** PR: ENC 1102 and Sophomore standing. A study of the phonology, morphology, and syntax of Black English. Provides an understanding of the implications of Black English in contemporary society.

**LIN 4660**

**Linguistics and Literature:** PR: LIN 3010. Investigation of language study as an aid to understanding literature. Topics include analysis of figurative language, language as characterization, cohesion, sentence and discourse structure.

**LIN 4601**

**Language and Meaning:** PR: ENC 1102 and Sophomore standing. A linguistic study of the nature of language, meaning, and the ways in which man uses language in various social, cultural, institutional, and professional settings.

**LIN 5137**

**Linguistics:** PR: Senior or graduate standing or C.I. Modern linguistic theories and studies focusing on language acquisition and development, contemporary American English, semantics, and para-linguistics.

**LIN 5605**

**Language and Meaning:** An examination of how language conveys meaning and the implications about the nature and structure of the mind.

**LIS 3016**

**Introduction to Media Services:** Role and scope of media center. Major concepts, standards, trends, and media specialist functions emphasized.

**LIS 3412**

**Media for Children and Young Adults:** Survey of media center materials for children and young adults; analysis and evaluation of print and non-print materials K-12.

**LIS 4310**

**Production of Materials for Media Center:** PR: LIS 4428. Skill in producing teacher and student-made materials. Emphasizes graphic, photographic, and audio techniques for schools. Lab TBA.

**LIS 4422**

**Administration and Operation of the Media Center:** Administrative principles applied to developing resources and services, including planning, decision making, personnel and financial management, evaluation, acquisition, processing, maintenance, and inventory.

**LIS 4453**

**School Media Services:** PR: C.I. Planning activities and programs to assist teachers and students in utilizing the Media Center. Includes skills development, R/L/V guidance, promotion and in service techniques. Lab TBA.

**LIS 4510**

**Development of Media Collections:** PR: C.I. Selection of policy and collection building of book and non-book media. Use of reviewing aids and media sources.

**LIS 4540**

**Interaction Techniques in Media Services:** PR: C.I. Interpretation skills and communication processes.
applied to working with administrators, teachers, parents, and students in the media program.

LIS 4601  ED 3(3,0)
Reference Sources and Services: PR: C.I. Development of skills in locating information and providing reference services.

LIS 4731  ED 3(3,0)
Organization of Media and Information: PR: C.I. Principles of informational science and bibliography. Methods of organizing and non-print media, with instruction in cataloging and classification using standard bibliographic tools.

LIS 5262  ED 3(3,0)
Computer Applications in Instructional Technology: Emphasis on the applications of the computer for the media specialist and instructional technologist.

LIT 2110  AS 3(3,0)
World Literature I: PR: ENC 1102. Poetry, prose, and drama selected from ancient Hebrew, Greek, and Oriental literature and from that of Renaissance Europe.

LIT 2120  AS 3(3,0)
World Literature II: PR: ENC 1102. Readings from Moliere, Voltaire, Goethe, Pushkin, Balzac, Tolstoy, Ibsen, Mann, Kafka, Camus, and others.

LIT 2120H AS 3(3,0)
World Literature II—Honors: Same as LIT 2120, with honors-level content.

LIT 3000  AS 3(3,0)
Introduction to Literary Interpretation: PR: ENC 1102. Interpretation of fiction, drama, verse: conflict, characterization, point of view, rhetorical and poetic devices, figurative language, verse forms; application of critical approaches to selected works.

LIT 3082  AS 3(3,0)
Continental European Fiction Since 1900: PR: ENC 1102. A selection of significant works of fiction written in various languages during the present century, read in translation.

LIT 3188  AS 3(3,0)
Canadian and Commonwealth Literature: Fiction, poetry, and drama written in English in Canada and other Commonwealth nations including Australia and Carribean and African nations with an English-speaking tradition.

LIT 3313  AS 3(3,0)
Science Fiction: PR: ENC 1102. An investigation of science fiction as a literary form, together with selected readings.

LIT 3363  AS 3(3,0)

LIT 3911H AS 1(1,0)
Research Methods — Honors: PR: Honors Student Status or consent of Honors coordinator. Introduction to scholarly and practical research in literature and writing.

LIT 4303  AS 3(3,0)
Post-World War II Fiction: PR: ENC 1102. An investigation of various modes of reality in the works of significant modernist world authors, crossing cultural boundaries.

LIT 4937H AS 3(3,0)
English Honors Seminar: PR: Honors Student Status or consent of Honors coordinator. In-depth study of language and/or literature with an emphasis on creative and critical abilities.

LIT 4954  AS 3(3,0)
Modern Drama As Literature: A study of important plays, playwrights, themes, movements, and styles in modern American, British, and European drama.

LIT 4312  AS 3(3,0)
Fantasy: PR: ENC 1102. A survey of the literature of fantasy, with emphasis on such figures as C.S. Lewis.

LIT 4354  AS 3(3,0)
Ethnic Literature in America: Contributions of linguistic and ethnic groups of non-English origin to the literature of the United States.

LIT 4373  AS 3(3,0)
Literature of the Bible: PR: ENC 1102 or LIT 3000 or C.I. Literary forms in the Bible — narrative, poetic, and dramatic — and their reflection in modern literature.

LIT 4433  AS 3(3,0)
Survey of Technical and Scientific Literature: PR: ENC 4293 or C.I. An analysis of the historical development of technical and scientific writing from the Renaissance to the present.

LIT 5039  AS 3(3,0)
Studies in Contemporary Poetry: English language poetry from 1945 to the present. Emphasis will be on American poets, but others such as English or Australian will be included.

LIT 5097  AS 3(3,0)
Studies in Contemporary Fiction: PR: Senior standing or C.I. Fiction in the last 20 years in the United States and Britain.

LIT 5309  AS 3(3,0)
Media and Popular Literature: PR: Senior standing or C.I. Study of the literary content of contemporary
media and of popular fiction. Application to classroom teaching.

LIT 5366 AS 3(3,0)
The Romantic Revolt (19th Century Literature): PR: Senior standing or C.I. The romantic revolt in poetry and prose; English, American and Continental literature from 1798 to 1832.

LIT 5367 AS 3(3,0)
The Victorian Age: PR: Senior standing or C.I. Study of poets and essayists from 1837 to 1900, including Tennson, the Brownings, Arnold, Hopkins, Carlyle, Mill; emphasizing Dickens, George Elliot, the Brontes, and Hardy.

MAA 4226 AS 4(4,0)

MAA 4227 AS 3(3,0)
Advanced Calculus II: PR: MAA 4226 or C.I. Continuation of MAA 4226.

MAA 5210 AS 4(4,0)
Topics in Advanced Calculus: PR: MAC 3313 or C.I. Selected topics in multivariable calculus, including limits, continuity, Euler's theorem, the Jacobian, and double series; extension of single variable concepts, including uniform convergence and improper integrals.

MAA 5405 AS 3(3,0)

MAC 1104 AS 3(3,0)
College Algebra: PR: Intermediate algebra or 2 years of high school algebra or C.I. Inequalities. High degree polynomials. Graphs, rational, logarithmic, and exponential functions. Systems of equations, matrices, determinants, induction. This course prepares students for higher-level mathematics courses.

MAC 1114 AS 3(3,0)
College Trigonometry: PR: MAC 1102 or 2 years of high school algebra or C.I. The circle arc length, circular functions, identities, inverse functions, applications to simple harmonic motion, function of angles, complete development of triangle solving.

MAC 3233 AS 3(3,0)
Concepts of Calculus: PR: MAC 1104 or C.I. The differential and integral calculus of rational, exponential and logarithmic functions, with applications to business analysis. Not open to students with credit in MAC 3253 or MAC 3311.

MAC 3253 AS 3(3,0)
Applied Calculus I: PR: MAC 1104 and MAC 1114 or C.I. Differential and integral calculus. An introduction to differential equations and Laplace Transforms. Applications to engineering technology. Not open to students with credit in MAC 3233 or MAC 3311.

MAC 3254 AS 3(3,0)
Applied Calculus II: PR: MAC 3253 or C.I. Continuation of MAC 3253.

MAC 3311 AS 4(4,0)
Calculus with Analytic Geometry I: PR: MAC 1104 and MAC 1114 (College Algebra and Trigonometry) or equivalent or C.I. The differential and integral calculus of algebraic and elementary transcendental functions with geometric and physical applications. Topics from analytic geometry include coordinate systems, vectors, lines, conic sections, transformations of coordinates, and polar coordinates. During the 2nd and 3rd semesters the topics also include sequences and series, Taylor series, and the differential and integral calculus for functions of several variables.

MAC 3311H AS 4(4,0)
Calculus with Analytic Geometry I (Honors): Differential and integral calculus, emphasizing under standing basic concepts and their applications. Students will complete projects on their own. For honors students from all disciplines.

MAC 3312 AS 4(4,0)
Calculus with Analytic Geometry II: PR: MAC 3311 or C.I. Continuation of MAC 3311.

MAC 3312H AS 4(4,0)
Calculus with Analytic Geometry II (Honors): Continuation of MAC 3311H.

MAC 3313 AS 4(4,0)
Calculus with Analytic Geometry III: PR: MAC 3312 or C.I. Continuation of MAC 3312.

MAC 3313H AS 4(4,0)
Calculus with Analytic Geometry III (Honors): Continuation of MAC 3312H.

MAD 4203 AS 4(4,0)
Combinatorics and Graph Theory: PR: MAC 3312 and STA 3023. Counting principles, inclusion/exclusion principle, recurrence relations, generating functions, properties of graphs and digraphs, trees, path problems, coloring planarity, connectiveness matchings and coverings, applications.
MAD 5205  AS 3(3,0)
Combinatorics and Graph Theory II: PR: MAD 4203. Polya's theory of counting, Latin squares and rectangles, block designs, coding theory, networks, invariants and extremal graph theory, Ramsey theory, probabilistic methods, hypergraphs, applications.

MAE 3112  ED 4(3,1)
Instruction of Mathematics in the Elementary School: PR: Associate of Arts degree or C.I. Concepts, learning sequences, algorithms, error pattern analysis, and problem solving techniques appropriate for the elementary school teacher.

MAE 3330  ED 4(3,2)
Mathematics Instructional Analysis: PR: EDG 4321. Study of course objectives for the high school curriculum and survey of methods and materials which have special application for teaching mathematics.

MAE 3810  AS 3(3,1)
Mathematics for Elementary School Teachers I: PR: Two years of high school mathematics and C.I. Algorithms for arithmetic operations. Number systems. Geometry. Open only to majors in elementary education.

MAE 4326  ED 4(3,1)
How Children Learn Mathematics: PR: MAE 1810 and 2811, or MAE 3112; or C.I.; and admission to Phase II. Instructional strategies, learning activities, the use of manipulatives, lesson planning, evaluation of mathematical learning, and diagnostic techniques.

MAE 4634  ED 3(2,1)

MAE 5315  ED 3(3,0)
Current Methods in Elementary School Mathematics: PR: Regular Certificate or C.I. Strategies of instruction of computation and concepts of number, geometry, and measurement; instructional materials. (Meets Elementary Education certification requirements.)

MAE 5325  ED 3(3,0)
Teaching Mathematics in the Middle/Junior High School: PR: 12 s.h. of mathematics, including at least College Algebra. Consideration of the curriculum and instructional techniques appropriate for students in Middle/Junior High School.

MAE 5356  ED 3(3,0)
Teaching General Mathematics in the Secondary School: PR: MAE 3330 or C.I. This course addresses specific techniques for developing general mathematics skills and concepts beginning in grade 6. Problem solving, motivation, and innovative methods are explored.

MAE 5537  ED 3(2,1)
Laboratory Programs in Mathematics: PR: Regular Certificate or C.I. Design and development of special materials and projects for mathematics independent study. Emphasis on teaching and applying the metric system. (Meets certification requirements for secondary mathematics.)

MAN 3025  BA 3(3,0)
Management of Organizations: PR: Junior standing, ACG 2071 or 3023, ECO 2023, ECO 2033. Introduction to the theory and practice of managing formal organizations, including planning, organization theory, human behavior and control.

MAN 3301  BA 3(3,0)
Personnel Management: PR: Junior standing, MAN 3025 or C.I. Systematic analysis of personnel functions in organizations.

MAN 3504  BA 3(3,0)
Production/Operations Management: PR: Junior standing, STA 3023. Introduction to the management of systems for the creation, distribution, and maintenance of goods and services required for modern society.

MAN 4120  BA 3(3,0)
Business and Society: PR: MAR 3023, FIN 3403, MAN 3025. A study of the interrelationship between the institution of business and other institutions of our society.

MAN 4150  BA 3(3,0)
Human Relations in Management: PR: MAN 3025. The study of individual, interpersonal, group, and intergroup problems in business organizations through the use of cases and experimental exercises.

MAN 4240  BA 3(3,0)

MAN 4310  BA 3(3,0)
Personnel Management Issues: PR: Junior standing, MAN 3301. An application-oriented course to give students in the area experiences generally reserved for practitioners in the field of personnel and labor relations.

MAN 4350  BA 3(3,0)
Training and Development: PR: MAN 3301. This course focuses on training and development activities as performed by organizational specialists. Theory, issues, practices and problems are discussed.

MAN 4401  BA 3(3,0)
Labor Relations Management: PR: Junior standing, MAN 3301. The impact of employee organizations on labor relations, current problems, conflicts and trends; the development of managerial approaches to achieve labor-management cooperation.
MAN 4420  
MAN 4521  
Production Planning and Control: PR: MAN 3504. In depth study on long-range, intermediate-range and short-range planning and control methods as applied to a manufacturing organization.  
MAN 4590  
Procurement Management: PR: MAN 3025 and MAN 3504. An elective course in procurement management. Designed to provide the student with fundamental concepts and processes involved in the procurement of goods and services required by modern society.  
MAN 4595  
Automated Materials Planning: PR: MAN 3504. Application of production planning and control theories and Management Informations Systems concepts to an integrated, computerized, real-world production environment.  
MAN 4600  
International Management: PR: GEB 4351 The course examines issues involved in multinational management of business firms, with special emphasis on comparative management.  
MAN 4720  
Business Policies: PR: Senior standing, completion of core. The student is expected to utilize the subject matter in the business core and his major in analyzing business problems.  
MAN 4854  
Management Science: PR: MAN 3025 and MAN 3504 and ECO 3411 and CGS 3000. Study of the application of quantitative models and use of simulation in organizational systems.  
MAN 5051  
Management Concepts: PR: Acceptance in MBA program. Theory and practice of managing organizations to include planning, organizational theory, human behavior, and control.  
MAN 5501  
Introduction to Production/Operations Management: PR: Acceptance into the graduate program and ECO 5415 or equivalent. Introduction to the fundamental concepts, processes, and institutions involved in the production of goods and services required by modern society.  
MAP 3302  
MAP 3401  
Problem Analysis: PR: MAC 3253 and COP 1200 or equivalent. Application of numerical methods techniques to selected problems in Engineering Technology.  
MAP 4103  
MAP 4153  
Vector and Tensor Analysis: PR: MAC 3313 or C.I. Vector calculus. The theorems of Green, Gauss and Stokes. Introduction to tensors. Application in engineering and physical sciences.  
MAP 4363  
MAP 4364  
Applied Boundary Value Problems II: PR: MAP 4363 or C.I. Legendre polynomials and Bessel functions. The theory of Sturm-Liouville. Separation of variables. Applications involving the wave equation, heat equation and equation of Laplace.  
MAP 4411  
Laplace Transforms: PR: MAP 3302 or C.I. Laplace and Z transforms; solutions of ordinary and partial differential equations; application to circuit analysis and difference equations.  
MAP 5396  
Splines and Data Fitting: PR: MAS 3103, MAS 3113, MAP 3302, or C.I. Univariate splines and their application to data fitting. Applications to regression analysis, differential and integral equations. Algorithms to use different types of splines in computation.  
MAP 5407  
MAP 5426  
Special Functions: PR: MAP 3302 or C.I. Series and integral representations, generating functions, recurrence relations and orthogonality properties of the special functions. Emphasis on Bessel, Legendre and hypergeometric functions.  
MAR 3023  
Marketing: PR: Junior standing. Study of functions, institutions, and basic problems in marketing of goods and services in our domestic economy and abroad.
MAR 3323  BA 3(3,0)
**Advertising and Sales Promotion Management:** PR: MAR 3023. Analysis of the selection, use, and evaluation of advertising and sales promotion strategies and techniques directed at consumers, businesses, and channels of distribution.

MAR 3403  BA 3(3,0)
**Sales Management:** PR: MAR 3023. An overview of the sales management process. Emphasis on sales program formulation and implementation.

MAR 3503  BA 3(3,0)
**Consumer Behavior:** PR: MAR 3023. Analysis of the buying process, the psychological, social, and economic influences affecting consumer choice.

MAR 3613  BA 3(3,0)
**Marketing Research:** PR: MAR 3023, ECO 3411. Study of research procedures and techniques for problem solving in marketing. Concepts are explored, and the incorporation of information resources into the management function is demonstrated.

MAR 3823  BA 3(3,0)
**Marketing Management:** PR: MAR 3023 and any one additional MAR course or C.I. Operational framework exploring the analysis, planning, and control activities of marketing.

MAR 4071  BA 3(3,0)
**Contemporary Marketing Issues:** PR: Senior standing, marketing major, C.I. Cultural, social, political, economic, and competitive developments and their effects upon marketing activities.

MAR 4156  BA 3(3,0)
**International Marketing:** PR: MAR 3023, GEB 4351, or C.I. Investigates strategy, policy and the variables in international marketing decisions.

MAR 4203  BA 3(3,0)
**Marketing Channel Systems:** PR: MAR 3023. Marketing functions and relationships within marketing channel systems, with primary focus on the needs for interorganizational cooperation and coordination between channel organizations.

MAR 4231  BA 3(3,0)
**Retailing Management:** PR: MAR 3023. Analysis of the field of retailing. Emphasis on planning for profit through management, inventory control, etc.

MAR 4453  BA 3(3,0)
**Industrial Marketing:** PR: MAR 3023. Marketing of goods and services between organizations, including commercial, governmental, institutional, and not-for-profit. Emphasis on the development, pricing, promotion, and distribution of industrial products.

MAR 4803  BA 3(3,0)
**Marketing Strategy:** PR: Senior standing and marketing courses completed or C.I. Marketing problems are explored, with emphasis on strategy formulation and integrative marketing decision-making.

MAR 4831  BA 3(3,0)
**Product Management:** PR: MAR 3023. Components of product management, including analysis, strategy formulation and implementation are examined.

MAR 4841  BA 3(3,0)
**Services Marketing:** PR: MAR 3023. Examination of marketing in services industries, with particular emphasis on unique aspects of services marketing, the service marketing mix, and the implementation of service strategies.

MAR 4941  BA 3(3,0)
**Internship:** PR: Permission of Dept. Chair. Provides qualified undergraduate marketing majors with educational experience not gained in class setting.

MAR 5055  BA 3(3,0)
**Marketing Concepts:** PR: Acceptance into the graduate program. Study of functions, institutions, and basic marketing of goods in the U.S. economy.

MAR 5941  BA 3(3,0)
**Small Business Consulting:** PR: ACG 2001, 2011, ECO 2023, 2013, MAN 3025, MAR 3023, or graduate status. Provides students opportunity to apply knowledge learned in classroom to real business situations. Open to undergraduate majors in the College of Business Administration with approval of the department chair.

MAS 3105  AS 4(4,0)
**Elementary Linear and Matrix Algebra:** PR: MAC 3312 or C.I. Matrices, determinants, vector spaces in R^n, linear independence, basis, solutions of systems, range of linear transformations, eigenvectors, Jordan Form, matrix functions, quadratic forms.

MAS 3106  AS 4(4,0)
**Linear Algebra:** PR: MHF 2300 and MAS 3105 or C.I. Abstract vector spaces, linear transformations, isomorphisms, projections, innerproducts, the spectral theorem, Jordan Canonical Form. (Only offered spring semester).

MAS 3203  AS 3(3,0)
**Introduction to Number Theory:** PR: MHF 2300 or C.I. The course will include the following topics: inductive reasoning, factorization, the division algorithm and congruences.

MAS 4301  AS 3(3,0)
**Algebraic Structures:** PR: MHF 2300 or C.I. An introduction to groups, rings and fields.
MAS 5115
Matrix Theory and Applications: PR: MAS 3113, STA 4163 or 4322, or C.I. Basic theory of determinants, inverses, generalized inverses, eigenvalues and eigenvectors; partitioned matrices; diagonalization and decomposition theorems; least squares; and applications.

MCB 3013C
General Microbiology: PR: A college course in chemistry and in basic biological sciences. Fundamentals of microbiology, including microbial structure and function, metabolism, growth, genetics, virology, environmental control, ecology, pathogenicity; and laboratory techniques.

MCB 3203
Pathogenic Microbiology: PR: MCB 3013C or C.I. Microorganisms producing disease in man and other animals; means of transmission; protection against disease.

MCB 3203L
Pathogenic Microbiology Lab: CR: MCB 3203. Laboratory investigation of pathogenic microorganisms, with emphasis on isolation and identification of pathogenic microorganisms.

MCB 4114C

MCB 4404
Microbial Metabolism: PR: MCB 3013C and BCH 4054. Interrelationships between cellular structure and genetic traits in microorganisms. The interaction between microorganisms and their nutritional environment.

MCB 4603C
Environmental Microbiology: PR: PCB 3043 and MCB 3013C. Interrelationships between the biological activities of microorganisms and their terrestrial and aquatic environments.

MCB 5205
Infectious Process: PR: MCB 3013C or C.I. Discussion of current theories of the infectious process and the response of host cells and tissue to infection.

MCB 5505C

MET 3101
Fundamentals of Meteorology and Climatology: PR: MAC 1104 or C.I. Studies of the physical processes that determine the climate of a region. The methods of measurement and use of meteorological parameters.

MGF 1203
Finite Mathematics: PR: Intermediate algebra or 2 years of high school algebra or C.I. Introduction to logical structure, sets, probability, arrays, games. This course is intended for students who are not planning to take further courses in mathematics.

MHF 2300
Logic and Proof in Mathematics: PR: Two years of high school algebra and one year of geometry or C.I. Basic mathematical logic. Methods of proof in mathematics. Application of proofs to elementary mathematical structures.

MHF 3104
Boolean Algebra: PR: MAC 3312 or C.I. Axiomatic development of Boolean algebra. The algebras of sets, logic and circuits as Boolean algebras.

MHF 4404

MIS 1031
Basic Military Science: Organization of the Army and ROTC. Career opportunities, significance of military courtesy, discipline, customs, and traditions. Analysis of weapons and equipment of the U.S. Army.

MIS 1400
Fundamentals of Leadership Development: Development of leadership abilities, including squad movement techniques. Fundamentals of Land Nav will be discussed.

MIS 2120
Leadership Development - I: Development of leadership abilities through practical exercises. Includes platoon leadership assessment program, role of the NCO, land navigation, and conduct of briefings.

MIS 2300
Leadership Development - II: Development of leadership abilities. Includes first aid training, communications, the threat, offensive/defensive operations, patrolling, and troop leading procedures.

MIS 3301
The Small Unit Leader: Analysis of the leader's role in directing and coordinating efforts of small units in tactical operations. Includes land navigation, weapon systems, communications, defensive/offensive operations and patrolling.

MIS 3410
Leadership Responsibilities: A description of the role and responsibility of the small unit leader. Includes principles of war, military instruction, land navigation, patrolling and offensive/defensive operations.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>MIS 4421</td>
<td>Military Law: A study of military law, the Army’s maintenance management system, and a study of the obligations and responsibilities of a newly-commissioned officer.</td>
</tr>
<tr>
<td>MIS 4430</td>
<td>Advanced Military Science: Study of the decision-making process; staff organization, estimating process, training, scheduling, and staff studies. Analysis of administration, personnel and Army supply system.</td>
</tr>
<tr>
<td>MLS 3220</td>
<td>Techniques in Clinical Microscopy: PR: Admission to the professional phase of the MLS program or C.I. Analysis of human urine and other body specimens, chemically and microscopically; interpretation of abnormal results and their correlation to disease included.</td>
</tr>
<tr>
<td>MLS 3220L</td>
<td>Clinical Microscopy Lab: Analysis of body fluids both chemically and microscopically with special emphasis on correlation to disease states.</td>
</tr>
<tr>
<td>MLS 3305</td>
<td>Hematology: PR: Admission to the professional phase of the MLS program or C.I. Diagnostic procedures and morphologic interpretation; correlation of this data to disease.</td>
</tr>
<tr>
<td>MLS 4334C</td>
<td>Hemostasis: PR: Admission to the professional phase of the MLS program or C.I. Study of the hemostasis mechanisms; diagnostic procedures and correlation of data to pathological conditions.</td>
</tr>
<tr>
<td>MLS 4405</td>
<td>Clinical Pathogenic Microbiology: PR or CR: MCB 3203 and admission to the professional phase of the MLS program. Isolation and pathogenic bacteria and serological methods; interpretation of abnormal results, with correlation to disease.</td>
</tr>
<tr>
<td>MLS 4420C</td>
<td>Clinical Mycology: PR: Admission to the professional phase of the MLS program with C.I. Instruction and laboratory practice in the isolation and identification of fungi associated with mycotic infections of man.</td>
</tr>
<tr>
<td>MLS 4431C</td>
<td>Clinical Parasitology: PR: Admission to the professional phase of the MLS program or C.I. Instruction and laboratory practice in the examination and study of clinical material for the detection and identification of animal parasites.</td>
</tr>
<tr>
<td>MLS 4511</td>
<td>Immunodiagnostics: PR: PCB 3233. Theory and application of clinical serologic and immunologic diagnostic testing, stressing the utilization of monoclonal technology.</td>
</tr>
<tr>
<td>MLS 4550</td>
<td>Clinical Immunohematology: PR: Admission to the professional phase of the MLS program or C.I. Investigation of incompatible crossmatches; antibody identification, leukocyte antigens and identification procedures, problem solving.</td>
</tr>
<tr>
<td>MLS 4625</td>
<td>Advanced Clinical Chemistry I: PR: Admission to the professional phase of the MLS program or C.I. Theory and practice in clinical chemistry techniques; carbohydrates, protein, electrophoresis, enzymes.</td>
</tr>
<tr>
<td>MLS 4625L</td>
<td>Advanced Clinical Chemistry I Lab: Practice in laboratory techniques involving spectrophotometry, ISE, and flame enzyme methodology.</td>
</tr>
<tr>
<td>MLS 4630C</td>
<td>Advanced Clinical Chemistry II: PR: MLS 4625C. Autoanalyzer, flame photometry, blood gases, RIA.</td>
</tr>
<tr>
<td>MLS 4830C</td>
<td>Clinical Practice I: PR: Admission to the professional phase of MLS program or rotation in one or more of the following areas: Hematology, Chemistry, Microbiology, Blood Bank, Serology-Coagulation, Clinical Microscopy, Nuclear Medicine.</td>
</tr>
<tr>
<td>MLS 4831C</td>
<td>Clinical Practice II: PR: Admission to the professional phase of the MLS program or C.I. Continuation of MLS 4830C.</td>
</tr>
<tr>
<td>MLS 4832C</td>
<td>Clinical Practice III: PR: Admission to the professional phase of the MLS program or C.I. Continuation of MLS 4831C.</td>
</tr>
<tr>
<td>MLS 4833C</td>
<td>Clinical Practice IV: PR: Admission to the professional phase of the MLS program or C.I. Continuation of MLS 4832C.</td>
</tr>
<tr>
<td>MLS 4834C</td>
<td>Clinical Practice V: PR: Admission to the professional phase of the MLS program or C.I. Continuation of MLS 4833C.</td>
</tr>
<tr>
<td>MLS 4910</td>
<td>Fundamentals of Research for Health Science Professionals: Concepts of developing a research protocol based on current theories and practices within the clinical area, including literature search, cost analysis, and grant preparation.</td>
</tr>
<tr>
<td>MLS 5509</td>
<td>Clinical Immunology: PR: PCB 3233, MLS 4511 or C.I. Advanced theory and application of immunologic diagnostic testing, stressing the utilization of monoclonal technology.</td>
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<tr>
<td>MRE 3800</td>
<td>Mass Communication Law: The legal rights and responsibilities of the mass media.</td>
</tr>
<tr>
<td>MRE 4602</td>
<td>Contemporary Media Issues: Relationships between the mass media and society; examination of social and ethical issues and responsibilities of the media, including the media's relationship with government.</td>
</tr>
<tr>
<td>MME 4700</td>
<td>Mass Media and Popular Culture: An impact of mass media upon American culture past to present.</td>
</tr>
<tr>
<td>MRE 3000</td>
<td>Communication Internship: PR: C.I. Internship in radio, television, film, journalism, public relations, advertising and speech involving practicum at selected communication organizations for one term.</td>
</tr>
<tr>
<td>MRE 3110</td>
<td>Introduction to Medical Records: PR: Acceptance into upper-division limited access MRA program. Introduction to profession; POMR; release of information; record analysis.</td>
</tr>
<tr>
<td>MRE 3433</td>
<td>Medical Record Organization and Management: PR: MRE 3000. Nomenclature/classification systems; health/vital statistics; computer abstracting; MRAs role in hospital/medical staff organization; accrediting/approving agencies; policy/procedure manuals; job descriptions; indexing.</td>
</tr>
<tr>
<td>MRE 3800</td>
<td>Directed Practice I: PR: Acceptance into upper-division limited access MRA program. Interdepartmental experience and introduction to medical record departments in selected health care facilities.</td>
</tr>
<tr>
<td>MRE 3810</td>
<td>Directed Practice II: PR: MRE 3800, HSC 3640, HSC 3531. Quantitative and qualitative analysis; MPI; release of information; filing; admission/discharge processing performed in a health care facility.</td>
</tr>
<tr>
<td>MRE 4202</td>
<td>Coding Procedures: PR: MRE 3432, HSC 3531, or C.I. Principles and mechanics of coding systems for health information retrieval, DRGs.</td>
</tr>
<tr>
<td>MRE 4203</td>
<td>Coding Procedures II: PR: MRE 4202 or C.I. Continuation of MRE 4202; HCPCS-CPT.</td>
</tr>
<tr>
<td>MRE 4304</td>
<td>Medical Record Department Management: PR: MRE 4500; MRE 4312. Analysis of management functions in health care setting; in-service education; equipment demonstrations; problem-solving techniques.</td>
</tr>
<tr>
<td>MRE 3800</td>
<td>Analysis of Medical Record Department Operations: PR: MRE 3110; MAN 3025; MAN 3301. Personnel administration; budgeting; forms analysis, design and control; work distribution and simplification; other evaluation techniques. Principles of word processing and medical transcription.</td>
</tr>
<tr>
<td>MRE 4400</td>
<td>Health Records and Standards: PR: MRE 3110. Medical record standards and procedures for long-term care; ambulatory care; home health care; HMOs and psychiatric facilities. Principles of consulting. Labs and field trips.</td>
</tr>
<tr>
<td>MRE 4500</td>
<td>Quality Assessment: PR: MRE 3110. Utilization review; principles and mechanics of medical audit and quality assurance; risk management.</td>
</tr>
<tr>
<td>MRE 4830</td>
<td>Directed Practice III: PR: MRE 3110; MRE 4202; MRE 3810. Incomplete record control; coding; health/vital statistics; microfilm.</td>
</tr>
<tr>
<td>MRE 4832</td>
<td>Directed Practice IV: PR: MRE 3110; MRE 4312; MRE 4500; MRE 4830. Indexing abstracting; audit; quality assurance; U.R.; transcription; budget; management of activities in DP I, II, III; computer applications. Assignment to hospital and other health care facilities.</td>
</tr>
<tr>
<td>MRE 4835</td>
<td>Management Affiliation: PR: All other required courses. Assignment to a selected health care facility serving in an administrative capacity under the direction of a Registered Record Administrator; lab exercises; comprehensive exam.</td>
</tr>
<tr>
<td>MRE 4850</td>
<td>Medical Record Research: PR: MRE 4500, ENC 3210, COM 3110. Basic research topic design; completion of research project; oral presentations, grantsmanship.</td>
</tr>
<tr>
<td>MRE 5217</td>
<td>System Analysis and Design: Concepts of system analysis, planning, and design; criteria for assisting health information needs; computer system selection; project management allocation and control.</td>
</tr>
<tr>
<td>MRE 5218</td>
<td>Management of Health Information Systems: PR: ISM 5021. Administration of computer-based information systems; security; policy formulation; health data in decision-making, interpretation of health data.</td>
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<tr>
<td>MRE 5219</td>
<td>Application of Computer Packages for Data Analysis: PR: MRE 5217. Application of packaged statistical programs in analysis of data from health sciences. Emphasis on use and interpretation of computer output.</td>
</tr>
<tr>
<td>MRE 5858</td>
<td>Research Methods: PR: HSC 6911; graduate status or C.I. Research topic design using health information; research methodologies using statistical techniques; research designs as they relate to health care organizations.</td>
</tr>
<tr>
<td>MTG 4212</td>
<td>Modern Geometries: PR: MAC 3311 or C.I. Sets of axioms and finite geometries, groups of transformations, Euclidean motions of 2-space and 3-space, convexity in 2-space and 3-space. Euclidean geometry of polygon and circle, constructible numbers, constructions and non-Euclidean geometry.</td>
</tr>
<tr>
<td>MTG 4302</td>
<td>Introduction to Topology: PR: MHF 2300 or C.I. Metric spaces, topological spaces, limit points, continuity, compactness, and connectedness.</td>
</tr>
<tr>
<td>MUC 1101</td>
<td>Composition I: Creative work in small forms. Open to qualified non-music majors with C.I. May be repeated for credit.</td>
</tr>
<tr>
<td>MUC 3104</td>
<td>Composition II: PR: C.I. or by audition. Creative work in large and small forms in the area of choral, instrumental, and keyboard media. May be repeated for credit.</td>
</tr>
<tr>
<td>MUC 3311</td>
<td>Digital Synthesis: An introduction to the world of digital technology and its musical applications.</td>
</tr>
<tr>
<td>MUE 1440</td>
<td>String Techniques: Class instruction in beginning string playing techniques.</td>
</tr>
<tr>
<td>MUE 3210</td>
<td>Music in the Elementary School: Fundamental procedures for teaching elementary school music, stressing appropriate music materials and activities for different age groups; selected experience in music.</td>
</tr>
<tr>
<td>MUE 3450</td>
<td>Woodwind Techniques: Class instruction in beginning woodwind playing techniques. May be repeated for credit.</td>
</tr>
<tr>
<td>MUE 3460</td>
<td>Brass Techniques: Class instruction in beginning brass playing techniques. May be repeated for credit.</td>
</tr>
<tr>
<td>MUE 3470</td>
<td>Percussion Techniques: Class instruction in beginning percussion playing techniques.</td>
</tr>
<tr>
<td>MUE 4311</td>
<td>Elementary School Music Instructional Analysis: PR: Junior standing. Organization and administration of instruction for comprehensive music education, K-6; instructional planning, techniques, and materials for elementary music education.</td>
</tr>
<tr>
<td>MUE 4360</td>
<td>Secondary School Music Instructional Analysis: PR: MUE 4311 or C.I. Instructional planning, techniques and materials in middle school, junior high and senior high classrooms; consideration of general music education program; evaluation materials and procedures.</td>
</tr>
<tr>
<td>MUG 3101</td>
<td>Basic Conducting: Fundamental techniques and practice in conducting.</td>
</tr>
<tr>
<td>MUG 3202</td>
<td>Choral Conducting: PR: MUG 3101. Fundamental principles of choral conducting and rehearsal techniques. May be repeated for credit.</td>
</tr>
<tr>
<td>MUG 3302</td>
<td>Instrumental Conducting: PR: MUG 3101. Fundamental principles of instrumental conducting and rehearsal techniques. May be repeated for credit.</td>
</tr>
<tr>
<td>MUG 4103</td>
<td>Advanced Conducting: PR: C.I. Study of advanced vocal or instrumental conducting techniques. Rehearsal procedures, selection of materials and program-building, interpretation of scores, study and performance of selected works.</td>
</tr>
<tr>
<td>MUH 4211</td>
<td>History and Literature I: PR: MUT 2112. In-depth study of the development of Western musical styles from antiquity to present.</td>
</tr>
<tr>
<td>MUH 4212</td>
<td>History and Literature II: PR: MUT 3116. Continuation of MUH 4211.</td>
</tr>
<tr>
<td>MUH 4218</td>
<td>Review of Music History: PR: C.I. A review of music history from Ancient Greece to the present.</td>
</tr>
</tbody>
</table>
MUH 4341  
MUL 2010  
Enjoyment of Music: Only non-music majors. Designed to develop an understanding of musical principles and techniques for listening to music.  
MUL 3400  
Instrumental Studies of Prepared Literature: AS 3(3,0)  
Mulan 3401  
Instrumental Literature: AS 2(1,1)  
MUL 3500  
Song Literature: AS 1(1,0)  
MUL 3600  
Song Literature: AS 1(1,0)  
MUL 3601  
Song Literature: AS 1(1,0)  
MUL 3713  
Marching Band: PR: Admission by audition. Preparation for appearance at football games and special occasions. May be repeated for credit.  
MUN 3123  
Concert Band: Open to all students with audition. Study and performance of music for large ensembles. May be repeated for credit.  
MUN 3143  
Wind Ensemble: Open to all students by audition. Study and performance of music for small ensembles. May be repeated for credit.  
MUN 3283  
Community Orchestra: PR: C.I. Open to all students. Audition for wind and percussion players required. Repertoire from symphonic literature. May be repeated for credit.  
MUN 3313  
University Choir: Open to all students by audition. Study and performance of large ensemble music. Possible tours. May be repeated for credit.  
MUN 3343  
Madrigal Singers: Open to all students by audition. Extra rehearsals and Madrigal Dinners required. Tours. May be repeated for credit.  
MUN 3344  
Chamber Chorus: Open to all students by audition. Study and performance of music for small ensembles. May be repeated for credit.  
MUN 3383  
Oratorio Choir: Open to all students, faculty, and members of the community for performance of large works. May be repeated for credit.  
MUN 3423  
Woodwind Ensemble: PR: C.I. Open to all students. Study and performance of music for small ensembles. May be repeated for credit.  
MUN 3433  
Brass Ensemble: PR: C.I. Open to all students. Study and performance of music for small ensembles. May be repeated for credit.  
MUN 3443  
Percussion Ensemble: PR: C.I. Open to all students. Study and performance of music for small ensembles. May be repeated for credit.  
MUN 3453  
Choral Ensemble: Open to all students. Study and performance of music for small ensembles. May be repeated for credit.  
MUN 3483  
String Ensemble: PR: C.I. Open to all students. Study and performance of music for small ensembles. May be repeated for credit.  
MUN 3713  
Jazz Lab: PR: C.I. Open to all students by audition. Study and performance of music for small ensembles. May be repeated for credit.  
MUN 3714  
Jazz/Pop Ensemble: PR: C.I. Open to all students. Study and performance of music for small ensembles. May be repeated for credit.  
MUN 4473  
Early Music Ensemble: PR: C.I. Study and performance of pre-classical music. May be repeated for credit.  
MUO 3503  
Opera Workshop: PR: C.I. Study of expressive emotion in relation to musical theatre; staging and performance of prepared studies of popular music for vocal ensembles. May be repeated for credit.  
MUS 1010  
Music Forum: A series of special musical events required of music majors. Includes lectures and recitals by faculty, students, and guest artists.
Sophomore Practicum in Recording Arts: Introduction to recording arts; recording engineering, and MIDI music.

Junior Practicum in Recording Arts: PR: MUS 2320. Sound reinforcement and concert lighting, tapeless studio and music video.

Senior Practicum in Recording Arts: PR: MUS 3330. Music business, advanced recording and production, studio maintenance and troubleshooting.

Recording Techniques for Classical Music: PR: MUS 2320 or C.I. Concert hall recording techniques for classical music.

Studio Teaching: PR: C.I. Management of the music studio; responsibilities and techniques of private instruction for the studio teacher; principles of psychology of music. May be repeated for credit.

Directed Experience: PR: C.I. and Junior Standing. Special topics of study and/or research as determined by student/faculty consultation. May be repeated for credit.

Music Theory I: Open to all students. Writing, performance, analysis of and music of various stylistic periods.


Ear Training and Sight Singing I: Aural and visual/oral comprehension of elements of music—rhythm, melody, harmony, form. Intended to be taken with MUT 1111.

Ear Training and Sight Singing II: PR: MUT 1241. Continuation of MUT 1241. Intended to be taken with MUT 1112.


Ear Training and Sight Singing IV: PR: MUT 1242. Continuation of MUT 1242. Intended to be taken with MUT 2116.

Ear Training and Sight Singing V: PR: MUT 2246. Continuation of MUT 2246. Intended to be taken with MUT 2117.

Ear Training and Sight Singing VI: PR: MUT 2247. Continuation of MUT 2247. Intended to be taken with MUT 2118.

Jazz Skills I: PR: C.I. Elements of jazz improvisation. Emphasis on listening, harmony, basic arranging and jazz forms.

Jazz Skills II: PR: MUT 3353 or C.I. Continuation of Jazz Skills I.

Music Theory V: PR: MUT 2117. Continuation of MUT 2116-2117; writing, performance, and analysis of music of various stylistic periods.

Review of Music Theory: PR: C.I. A comprehensive review of harmonic and analytic skills. May be repeated for credit.


Secondary French Horn: PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in French Horn. Intended for non-music majors. May be repeated for credit.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Prerequisite</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVB 1213</td>
<td>Secondary Trombone</td>
<td>Consent of Music Chair, Performing ensemble</td>
<td>Advanced instruction in trombone. Intended for non-music majors. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 1214</td>
<td>Secondary Baritone</td>
<td>Consent of Music Chair, Performing ensemble</td>
<td>Advanced instruction in baritone. Intended for non-music majors. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 1215</td>
<td>Secondary Tuba</td>
<td>Consent of Music Chair, Performing ensemble</td>
<td>Advanced instruction in tuba. Intended for non-music majors. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 1411</td>
<td>Trumpet I</td>
<td>Major in music or consent of chair</td>
<td>Audition. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 1412</td>
<td>French Horn I</td>
<td>Major in music or consent of chair</td>
<td>Audition. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 1413</td>
<td>Trombone I</td>
<td>Major in music or consent of chair</td>
<td>Audition. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 1414</td>
<td>Baritone I</td>
<td>Major in music or consent of chair</td>
<td>Audition. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 1415</td>
<td>Tuba I</td>
<td>Major in music or consent of chair</td>
<td>Audition. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 2421</td>
<td>Trumpet II</td>
<td>MVB 1411 and competence determined by faculty jury</td>
<td>Continuation of MVB 1411. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 2422</td>
<td>French Horn II</td>
<td>MVB 1412 and competence determined by faculty jury</td>
<td>Continuation of MVB 1412. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 2423</td>
<td>Trombone II</td>
<td>MVB 1413 and competence determined by faculty jury</td>
<td>Continuation of MVB 1413. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 2424</td>
<td>Baritone II</td>
<td>MVB 1414 and competence determined by faculty jury</td>
<td>Continuation of MVB 1414. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 2425</td>
<td>Tuba II</td>
<td>MVB 1415 and competence determined by faculty jury</td>
<td>Continuation of MVB 1415. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 3431</td>
<td>Trumpet III</td>
<td>MVB 2421 and competence determined by faculty jury</td>
<td>Continuation of MVB 2421. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 3432</td>
<td>French Horn III</td>
<td>MVB 2422 and competence determined by faculty jury</td>
<td>Continuation of MVB 2422. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 3433</td>
<td>Trombone III</td>
<td>MVB 2423 and competence determined by faculty jury</td>
<td>Continuation of MVB 2423. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 3434</td>
<td>Baritone III</td>
<td>MVB 2424 and competence determined by faculty jury</td>
<td>Continuation of MVB 2424. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 3435</td>
<td>Tuba III</td>
<td>MVB 2425 and competence determined by faculty jury</td>
<td>Continuation of MVB 2425. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 4441</td>
<td>Trumpet IV</td>
<td>MVB 3431 and competence determined by faculty jury</td>
<td>Continuation of MVB 3431. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 4442</td>
<td>French Horn IV</td>
<td>MVB 3432 and competence determined by faculty jury</td>
<td>Continuation of MVB 3432. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 4443</td>
<td>Trombone IV</td>
<td>MVB 3433 and competence determined by faculty jury</td>
<td>Continuation of MVB 3433. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 4444</td>
<td>Baritone IV</td>
<td>MVB 3434 and competence determined by faculty jury</td>
<td>Continuation of MVB 3434. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 4445</td>
<td>Tuba IV</td>
<td>MVB 3435 and competence determined by faculty jury</td>
<td>Continuation of MVB 3435. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 5451</td>
<td>Trumpet V</td>
<td>C.I.</td>
<td></td>
</tr>
<tr>
<td>MVB 5452</td>
<td>French Horn V</td>
<td>C.I.</td>
<td></td>
</tr>
</tbody>
</table>
MVB 5453
Trombone V: PR: C.I.
MVB 5454
Baritone V: PR: C.I.
MVB 5455
Tuba V: PR: C.I.

MVK 1111
Class Piano I: Class instruction for beginning piano students. Not open to music majors whose major performing medium is piano.

MVK 1121
Class Piano II: PR: MVK 1111 or C.I. Continuation of MVK 1111. Not open to music majors whose major performing medium is piano.

MVK 1131
Class Piano III: PR: MVK 1121 or C.I. Continuation of MVK 1131.

MVK 1141
Class Piano IV: PR: MVK 1131 or C.I. Continuation of MVK 1131.

MVK 1211

MVK 1213

MVK 1411
Piano I: PR: Major in music or consent of chairperson; audition. May be repeated for credit.

MVK 1413
Organ I: PR: Major in music or consent of chairperson; audition. May be repeated for credit.

MVK 2421
Piano II: PR: MVK 1411 and competence determined by faculty jury. Continuation of MVK 1411. May be repeated for credit.

MVK 2423
Organ II: PR: MVK 1413 and competence determined by faculty jury. Continuation of MVK 1413. May be repeated for credit.

MVK 3431
Piano III: PR: MVK 2421 and competence determined by faculty jury. Continuation of MVK 2421. May be repeated for credit.

MVK 3433
Organ III: PR: MVK 2423 and competence determined by faculty jury. Continuation of MVK 2423. May be repeated for credit.

MVK 4441
Piano IV: PR: MVK 3431 and competence determined by faculty jury. Continuation of MVK 3431. May be repeated for credit.

MVK 4443
Organ IV: PR: MVK 3433 and competence determined by faculty jury. Continuation of MVK 3433. May be repeated for credit.

MVK 4640
Piano Pedagogy I: PR: C.I. Methods, materials for teaching individuals and classes of children and adults beginning to intermediate levels; demonstration and observation of procedures. May be repeated for credit.

MVK 4641
Piano Pedagogy II: PR: C.I. Continuation of MVK 4640. Emphasis on intermediate through advanced levels. May be repeated for credit.

MVO 1214

MVO 3114
Recorder I: Open to non-music majors. Class instruction in beginning recorder playing.

MVO 3124
Recorder II: PR: C.I. Class instruction in advanced recorder solo and ensemble playing. Open to music students and non-music students who have taken MVO 3114.

MVO 3250
Advanced Secondary Instruction: PR: Graduate Standing and C.I. Advanced instructional techniques on a secondary instrument or in voice. May be repeated for credit.
MVP 1211

MVP 1411
Percussion I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVP 2421
Percussion II: PR: MVP 1411 and competence determined by faculty jury. Continuation of MVP 1411. May be repeated for credit.

MVP 3431
Percussion III: PR: MVP 2421 and competence determined by faculty jury. Continuation of MVP 2421. May be repeated for credit.

MVP 4441
Percussion IV: PR: MVP 3431 and competence determined by faculty jury. Continuation of MVP 3431. May be repeated for credit.

MVP 5451
Percussion V: PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in percussion. Intended for non-music majors. May be repeated for credit.

MVS 1211

MVS 1212

MVS 1213

MVS 1214

MVS 1411
Violin I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVS 1412
Violin II: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVS 1413
Cello I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVS 1414
Bass I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVS 1415
Harp I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVS 1416
Guitar I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVS 1876
Class Guitar I: Open only to non-music majors. Class instruction in beginning guitar playing.

MVS 2421
Violin II: PR: MVP 1411 and competence determined by faculty jury. Continuation of MVP 1411. May be repeated for credit.

MVS 2422
Violin II: PR: MVP 1412 and competence determined by faculty jury. Continuation of MVP 1412. May be repeated for credit.

MVS 2423
Cello II: PR: MVP 1413 and competence determined by faculty jury. Continuation of MVP 1413. May be repeated for credit.

MVS 2424
Bass II: PR: MVP 1414 and competence determined by faculty jury. Continuation of MVP 1414. May be repeated for credit.

MVS 2425
Harp II: PR: MVP 1415 and competence determined by faculty jury. Continuation of MVP 1415. May be repeated for credit.

MVS 2426
Class Guitar II: Open to music students or non-music students who have taken Guitar I or C.I. Class instruction in advanced guitar solo and ensemble playing.
MVS 3431
Violin III: PR: MVS 2421 and competence determined by faculty jury. Continuation of MVS 2421. May be repeated for credit.
MVS 3432
Violin II: PR: MVS 2422 and competence determined by faculty jury. Continuation of MVS 2422. May be repeated for credit.
MVS 3433
Cello III: PR: MVS 2423 and competence determined by faculty jury. Continuation of MVS 2423. May be repeated for credit.
MVS 3434
Bass III: PR: MVS 2424 and competence determined by faculty jury. Continuation of MVS 2424. May be repeated for credit.
MVS 3435
Harp III: PR: MVS 2425 and competence determined by faculty jury. Continuation of MVS 2425. May be repeated for credit.
MVS 3436
Guitar III: PR: MVS 2426 and competence determined by faculty jury. Continuation of MVS 2426. May be repeated for credit.
MVS 4441
Violin IV: PR: MVS 3431 and competence determined by faculty jury. Continuation of MVS 3431. May be repeated for credit.
MVS 4442
Viola IV: PR: MVS 3432 and competence determined by faculty jury. Continuation of MVS 3432. May be repeated for credit.
MVS 4443
Cello IV: PR: MVS 3433 and competence determined by faculty jury. Continuation of MVS 3433. May be repeated for credit.
MVS 4444
Bass IV: PR: MVS 3434 and competence determined by faculty jury. Continuation of MVS 3434. May be repeated for credit.
MVS 4445
Harp IV: PR: MVS 3435 and competence determined by faculty jury. Continuation of MVS 3435. May be repeated for credit.
MVS 4446
Guitar IV: PR: MVS 3436 and competence determined by faculty jury. Continuation of MVS 3436. May be repeated for credit.
MVS 5451
Violin V: PR: C.I.
MVS 5452
Viola V: PR: C.I.
MVS 5453
Cello V: PR: C.I.
MVS 5454
Bass V: PR: C.I.
MVS 5455
Harp V: PR: C.I.
MVS 5456
Guitar V: PR: C.I.
MVV 1111
Class Voice: Class instruction in beginning voice. May be repeated for credit.
MVV 1211
MVV 1411
Voice I: PR: Major in music or consent of chair; audition. May be repeated for credit.
MVV 2421
Voice II: PR: MVV 1411 and competence determined by faculty jury. Continuation of MVV 1411. Major in music or consent of chair; audition. Private and class lessons. May be repeated for credit.
MVV 3431
Voice III: PR: MVV 2421 and competence determined by faculty jury. Continuation of MVV 2421. May be repeated for credit.
MVV 4441
Voice IV: PR: MVV 3431 and competence determined by faculty jury. Continuation of MVV 3431. May be repeated for credit.
MVV 4640
Voice Pedagogy I: PR: C.I. Methods, materials for vocalists; teachers, conductors; voice production; diagnosis of problems and correction; demonstration and observation of teaching; beginning to intermediate levels. May be repeated for credit.
<table>
<thead>
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<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Description</th>
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<tr>
<td>MVV 4641</td>
<td>Voice Pedagogy II</td>
<td>PR: C.I.</td>
<td>Continuation of MVV 4640. Intermediate to advanced levels. May be repeated for credit.</td>
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<tr>
<td>MVV 5451</td>
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</tr>
<tr>
<td>MVW 1211</td>
<td>Secondary Flute</td>
<td>PR: Consent</td>
<td>Advanced instruction in flute. Intended for non-music majors. May be repeated for credit.</td>
</tr>
<tr>
<td>MVW 1212</td>
<td>Secondary Oboe</td>
<td>PR: Consent</td>
<td>Advanced instruction in oboe. Intended for non-music majors. May be repeated for credit.</td>
</tr>
<tr>
<td>MVW 1213</td>
<td>Secondary Clarinet</td>
<td>PR: Consent</td>
<td>Advanced instruction in clarinet. Intended for non-music majors. May be repeated for credit.</td>
</tr>
<tr>
<td>MVW 1214</td>
<td>Secondary Bassoon</td>
<td>PR: Consent</td>
<td>Advanced instruction in bassoon. Intended for non-music majors. May be repeated for credit.</td>
</tr>
<tr>
<td>MVW 1215</td>
<td>Secondary Saxophone</td>
<td>PR: Consent</td>
<td>Advanced instruction in saxophone. Intended for non-music majors. May be repeated for credit.</td>
</tr>
<tr>
<td>MVW 1411</td>
<td>Flute I</td>
<td>Major in</td>
<td>Continuation of MVW 1411. May be repeated for credit.</td>
</tr>
<tr>
<td>MVW 1412</td>
<td>Oboe I</td>
<td>Major in</td>
<td>Continuation of MVW 1412. May be repeated for credit.</td>
</tr>
<tr>
<td>MVW 1413</td>
<td>Clarinet I</td>
<td>Major in</td>
<td>Continuation of MVW 1413. May be repeated for credit.</td>
</tr>
<tr>
<td>MVW 1414</td>
<td>Bassoon I</td>
<td>Major in</td>
<td>Continuation of MVW 1414. May be repeated for credit.</td>
</tr>
<tr>
<td>MVW 1415</td>
<td>Saxophone I</td>
<td>Major in</td>
<td>Continuation of MVW 1415. May be repeated for credit.</td>
</tr>
<tr>
<td>MVW 2421</td>
<td>Flute II</td>
<td>MVW 1411</td>
<td>Continuation of MVW 2421. May be repeated for credit.</td>
</tr>
<tr>
<td>MVW 2422</td>
<td>Oboe II</td>
<td>MVW 1412</td>
<td>Continuation of MVW 2422. May be repeated for credit.</td>
</tr>
<tr>
<td>MVW 2423</td>
<td>Clarinet II</td>
<td>MVW 1413</td>
<td>Continuation of MVW 2423. May be repeated for credit.</td>
</tr>
<tr>
<td>MVW 2424</td>
<td>Bassoon II</td>
<td>MVW 1414</td>
<td>Continuation of MVW 2424. May be repeated for credit.</td>
</tr>
<tr>
<td>MVW 2425</td>
<td>Saxophone II</td>
<td>MVW 1415</td>
<td>Continuation of MVW 2425. May be repeated for credit.</td>
</tr>
<tr>
<td>MVW 3431</td>
<td>Flute III</td>
<td>MVW 2421</td>
<td>Continuation of MVW 3431. May be repeated for credit.</td>
</tr>
<tr>
<td>MVW 3432</td>
<td>Oboe III</td>
<td>MVW 2422</td>
<td>Continuation of MVW 3432. May be repeated for credit.</td>
</tr>
<tr>
<td>MVW 3433</td>
<td>Clarinet III</td>
<td>MVW 2423</td>
<td>Continuation of MVW 3433. May be repeated for credit.</td>
</tr>
<tr>
<td>MVW 3434</td>
<td>Bassoon III</td>
<td>MVW 2424</td>
<td>Continuation of MVW 3434. May be repeated for credit.</td>
</tr>
<tr>
<td>MVW 3435</td>
<td>Saxophone III</td>
<td>MVW 2425</td>
<td>Continuation of MVW 3435. May be repeated for credit.</td>
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<tr>
<td>MVW 4441</td>
<td>Flute IV</td>
<td>MVW 3431</td>
<td>Continuation of MVW 4441. May be repeated for credit.</td>
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<tr>
<td>MVW 4442</td>
<td>Oboe IV</td>
<td>MVW 3432</td>
<td>Continuation of MVW 4442. May be repeated for credit.</td>
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</table>
MVW 4443
Clarinet IV: PR: MVW 3433 and competence determined by faculty jury. Continuation of MVW 3433. May be repeated for credit.

MVW 4444
Bassoon IV: PR: MVW 3434 and competence determined by faculty jury. Continuation of MVW 3434. May be repeated for credit.

MVW 4445
Saxophone IV: PR: MVW 3435 and competence determined by faculty jury. Continuation of MVW 3435. May be repeated for credit.

MVW 5451
Flute V: PR: C.I.

MVW 5452
Oboe V: PR: C.I.

MVW 5453
Clarinet V: PR: C.I.

MVW 5454
Bassoon V: PR: C.I.

MVW 5455
Saxophone V: PR: C.I.

NUR 3066
Health Assessment: PR: PCB 3703C, ZOO 3733C or Florida RN License. Concepts of health assessment of clients.

NUR 3119
Introduction to Baccalaureate Nursing: Overview of baccalaureate nursing philosophy, objectives, conceptual framework, scope of practice, history, legal and ethical issues.

NUR 3166
Critical Inquiry: PR: NUR 3066, 3119, 3748C or Florida RN license. A study of approaches to problematic situations in nursing. Selected experiences in investigating, analyzing, and interpreting nursing research.

NUR 3748C

NUR 3795C
Scientific Theories of Nursing II: PR: NUR 3749C, 3795C, 3166. CR: NUR 3749C, 3166. Theories and practice applicable to the nurse's role in care of the family from conception through delivery. Focus is on family system.

NUR 3796C

NUR 3798C

NUR 3809
Transitional Concepts in Nursing: PR: Florida RN Status; All nursing prerequisites, NUR 3066, 3119, 3166, and C.I. Theoretical bases of professional nursing practice.

NUR 3905
Independent Study: Directed Study.

NUR 4196
Crisis Intervention: Crisis theory and techniques; recognition and intervention in crisis events. Applicable to all areas of nursing and all helping professions.

NUR 4297
Introduction to Cardiovascular Nursing: Nursing management of cardiac disorders as they affect adaptation of individuals and family.

NUR 4756C
Scientific Theories of Nursing V: PR: NUR 3755C, 3796C or 3709. Theories and principles of psychiatric/mental health nursing. Clinical application in selected settings.

NUR 4757C

NUR 4758C
Scientific Theories of Nursing VI: PR: NUR 3755C, 3796C or 3709. Theories and principles of public health nursing. Clinical applications in selected settings.
Dispute Resolution in the Public Sector: An examination of the skills needed to resolve disputes in the public sector through facilitation, mediation, and other alternative methods.

Local Government Operations: Operational Functions of municipal and county governments and the role of the chief executive officer.

Administrative Practice in the Public Sector: The application of various theoretical concepts to the "real world" of public administration. Policy formulation and execution are examined through the case study mode.


Principles of Ecology: 8 hours in biological sciences. Elements of ecosystems, biogeochemical cycling, environmental factor interactions, population dynamics, and community development.

Immunology: PR: BSC 2010C. Basic principles of immune reactions, antigen antibody interactions, cell mediated immunity, tumor immunology, and immune therapy.

Population Biology and Evolution: PR: PCB 3043 and PCB 3063 or equivalents. The demographic and genetic structure of populations and their relationships to basic aspects of evolution and adaptation.

Animal Physiology: PR: PCB 3023 or C.I. Functions of body processes occurring in animals, with emphasis on vertebrate physiology.

Ecology: PR: PCB 3043 or PCB 3043L or equivalent. Ecosystems of Florida will be discussed to include geography, geology, climate, energetics, nutrient cycling, community structure and conservation.

Conservation Biology: PR: PCB 3043 and PCB 3063. Scientific basis of conservation; conservation of ecosystems, populations, exploited species, and endangered species. Weekend field trips are required.


Immunopathology: PR: PCB 3233. In-depth overview of diseases due to deficiencies or over-reactivity of the immune system.
Emphasis on evolution at and below the species level: consideration of genetic and ecological factors in divergence and speciation.

PCB 5721  AS 3(3,0)
Comparative Animal Physiology: PR: An undergraduate course in animal physiology or equivalent. Comparison of structural and functional adaptations of animal organ systems. Emphasis upon maximization of fitness under given environmental conditions.

PCB 5806  HPA 3(3,0)
Endocrinology: PR: PCB 4723 and BCH 4053 or C.I. Mechanisms of action of hormones; interrelationship between the nervous and endocrine systems.

PCO 4203  AS 4(3,2)
Interviewing and Counseling: PR: PSY 2013, PPE 3003. A review of various interviewing and counseling theories and techniques as well as practical experience in interviewing and counseling procedures.

PEL 2021  ED 2(2,1)
Racket Sports: Study of performance and application of advanced skills, rules, and etiquette of the sports of racketball and badminton. Physiological and social values accruing from this lifetime sport.

PEL 2121  ED 2(2,1)
Beginning Golf: Performance and application of basic skills, rules, and etiquette. Physiological and social values accruing from this lifetime sport.

PEL 2122  ED 2(2,1)
Intermediate Golf: PR: PEL 2121 or equivalent competency. A study of performance and application of intermediate skills, rules, and etiquette. Physiological and social values accruing from this lifetime sport.

PEL 2320  ED 2(2,1)
Basic Volleyball and Softball: The analysis of offensive and defensive alignment, techniques, and strategies.

PEL 2341  ED 2(2,1)
Beginning Tennis: Performance and application of basic skills, rules, and etiquette. Physiological and social values accruing from this lifetime sport.

PEL 2342  ED 2(2,1)
Advanced Tennis: PR: PEL 2341 or equivalent competency. A study of performance and application of advanced skills, rules, and etiquette. Physiological and social values accruing from this lifetime sport.

PEL 2101  ED 2(2,1)
Basic Football and Basketball: The analysis of offensive and defensive alignment, techniques, and strategies.

PEM 2104  ED 2(2,1)
Personal Fitness: Study of personal fitness concepts, with opportunities to develop individual optimal level of fitness and an improved lifestyle through high-level wellness.

PEM 2131  ED 2(2,1)
Strength Resistance Training: Study of fitness and strength development through resistance exercise.

PEM 2171  ED 2(2,1)
Aerobic Dancing: Appropriate rhythmical muscle toning movements that develop aerobic fitness; concepts taught include warm-up, flexibility, stretching, cool down, and heart rate.

PEM 2351  ED 2(2,1)
Cycling: Study of the techniques and physiological benefits of the lifetime sport of cycling. This course is activity oriented and requires access to any model bicycle.

PEN 2121  ED 2(2,1)
Elementary Swimming: For non-swimmers and beginning swimmers. Development and study of technique in the basic skills of water safety and swimming.

PEN 2101  ED 2(2,1)
Aquatics: PR: PEN 2122 or equivalent competency. Development and study of techniques and principles of aquatic swimming activities -- safety, strokes, fitness, water polo, synchronized swimming, skin diving, springboard diving, canoeing, and family instruction methods.

PEO 3005  ED 3(2,1)
Advanced Sports Analysis: Advanced analysis of sports for the purpose of teaching and coaching.

PEO 3011  ED 3(2,1)
Team Sports: PR: This course is designed to develop skill proficiency and knowledge to plan, implement and evaluate team sports as part of the Physical Education program.

PEO 3031  ED 3(2,1)
Individual Sports and Leisure Activities: This course is designed to develop skill proficiency and knowledge to plan, implement and evaluate individual sports and leisure activities in physical education programs.

PEO 3041  ED 2(1,1)
Games for the Elementary School Physical Education Program: The understanding, designing, and teaching of low-organizational game-activities for the elementary school child.

PEP 2201  ED 2(1,1)
Gymnastics: Analysis of gymnastics, including techniques, conditioning and strategy.
PEP 3204  
Gymnastics: This course is designed to develop skill proficiency and instructional strategies in gymnastics.

PEQ 3101  
Instructional Analysis in Aquatics: PR: Sophomore standing or C.I. Analysis of aquatic activities for purposes of teaching and coaching. Includes techniques, conditioning, and strategy.

PET 3012  
Physical Education Professional Development: (Unsatisfactory/Satisfactory grading). The development in the profession of physical education, and action participation in current activities.

PET 3210  
Sports Psychology: A review of principles of psychology related to the enhancement of satisfaction and performance in sports.

PET 3041  
Games for the Elementary School Physical Education Program: The understanding, designing and teaching of the low-organizational game-activities for the elementary school child.

PET 3720C  
Teaching Physical Education in the Elementary and Middle School (K-8): PR: Admission to Junior Block, or C.I. Curricular and instructional considerations for teaching elementary and middle school physical education.

PET 3740C  
Teaching Physical Education in the Secondary and Middle School (6-12): PR: Admission to Junior Block, or C.I. Curricular and instructional considerations for teaching secondary and middle school physical education.

PET 3760  

PET 4002  
Outdoor and Leisure Activities: Study of contemporary outdoor and leisure activities. Course will include but not be limited to the "adventure activity curriculum," camping, water activities, fishing, orienteering, hiking.

PET 4035C  
Motor Development and Learning: PR: PE Junior standing. An analysis of the theories and factors influencing the motor development of children and the learning of gross and fine motor skills.

PET 4310C  
Anatomic and Mechanical Kinesiology: Anatomic and mechanical principles involved in producing skilled human movement; applications.

PET 4312  
Biomechanics: PR: Anatomy. The comprehension and application of anatomical and mechanical principles involved in human movement.

PET 4351  
Applied Exercise and Human Physiology: An in-depth study of metabolic, neuromuscular, respiratory and cardiovascular physiological concepts and principles with practical application to physical education and sport.

PET 4382  
Fitness Assessment and Exercise Physiology: A study and acquisition of health related fitness, exercise strategies and related assessment techniques.

PET 4401  
Administration and Measurement in Physical Education: This course is designed to address administrative, measurement and evaluation considerations of physical education programs.

PET 4601  

PET 4603  
Introduction to Sports Medicine: A comprehensive study of care of sports injuries, including instruction in attitudes, health and conditioning in sports participants.

PET 4622  
Human Injuries: PR: Biomechanics or C.I. The prevention, identification, care, and rehabilitation of human injuries.

PET 4623  
Sports Medicine Field Application: Demonstration and Application of the treatment for various sports injuries.

PET 4640  
Adapted Physical Education: Principles and methods of adapting physical education activities and programs for exceptional children and adults; mainstreaming rationale and methods analyzed.
PET 5355

Exercise Physiology and Health: In-depth study of adaptations of cardiovascular and respiratory systems during varying degrees of exercise.

PGY 3401C

Photography: PR: ART 2201C. Consideration of basic technical and aesthetic factors in using still photography as a vehicle for visual expression.

PGY 3610

Photojournalism I: Introduction to visual communication. History, picture appreciation, layout and design, picture story development, basic camera operation, and ethics. Camera required.

PGY 3620


PGY 3630


PGY 3640


PGY 3680

Photojournalism V: PR: PGY 3401C. May be repeated for credit.

PGY 4420C

Advanced Photography: PR: PGY 3401C. May be repeated for credit.

PGY 4440C

Special Problems in Photography: PR: PGY 3401C or C.I. A series of directed photographic problems of a research nature. May be repeated for credit.

PGY 4580C

Special Problems in Film Design: A series of exercises in craft, techniques, and design for film production, including animation.

PHH 3100

Ancient Philosophy: PR: PHI 2010 or C.I. Foundations of Western philosophy in ancient Greek thinking about human beings and nature, including the pre-Socratics, Socrates, Plato, Aristotle.

PHH 3400

Modern Continental Philosophy: Continental European philosophy from the 17th through the 19th century (Descartes to Nietzsche). Rationalism, Kant, and post-Kantian idealism, materialism, and the critique of reason.

PHH 3402


PHH 3601

Contemporary Continental Philosophy: Current trends in philosophy as represented by the phenomenologists, Frankfurt School, structuralists, ecophilosophers, and postmodern deconstructionists. Examples range from Husserl, Habermas to Foucault, Derrida.

PHH 3620

Contemporary Analytic Philosophy: Anglo-American philosophy oriented toward recent developments by Russell, Wittgenstein, and Kripke, including a study of positivism, ideal and ordinary language, and possible-worlds analysis.

PHI 1100

Critical Thinking: An examination of fallacies and other logical abuses in conjunction with an analysis of traditional modes in an attempt to encourage meaningful thought and usage.

PHI 2010

Introduction to Philosophy: Inquiry into the meaning and justification of fundamental ideas and beliefs concerning reality, knowledge, and values; application to relevant topics in ethics, religion, and politics.

PHI 2010H

Honors Introduction to Philosophy: Same as PHI 2010 with honors-level content.

PHI 3011

Philosophical Reasoning: A study of reasoning in philosophy: the role of inconsistency, infinite regress arguments, modeling, and system building, discovery procedures, diagonalization, and contrast and paradigm case arguments.

PHI 3130

Formal Logic I: A study of sentence and predicate logics, with introduction to modal, epistemic, deontic, multi-valued, and indeterminate logics.

PHI 3131

Formal Logic II: PR: PHI 3130. Systematic study of propositional and first-order predicate logic, logistic systems and axiomatic methods; problems of metatheory, including consistency, completeness, and decidability.

PHI 3320

Philosophy of Mind: Recent and contemporary attempts to understand the relation of mind to body, the relation of consciousness to personhood, and the relation of psychology to neurobiology.
PHI 3600 AS 3(3,0)
Ethics: An examination of the nature of moral problems, judgments and principles, with an emphasis on recent formulations in ethical theory.

PHI 3601 AS 1(1,0)
Practical Wisdom: A radio course in applied ethics which focuses on the human good, dealing with the relationship between means and ends and how they define one another.

PHI 3630 AS 3(3,0)
Practical Ethical Dilemmas: Probes practical ethical problems arising out of advancement and complexities in modern professional life. Considers one or more of the following: medicine, business, technology, law.

PHI 3700 AS 3(3,0)
Philosophy of Religion: An examination of basic ideas, beliefs, attitudes, and functions of religion, with emphasis upon questions of conceptual meaning and cognitive justification.

PHI 3800 AS 3(3,0)
Aesthetics: An investigation into the nature of human artistic experience, with special reference to questions of form, perception, and style.

PHI 3803 AS 3(3,0)
Philosophy and Creativity: A companion course to PHI 3800, Aesthetics. Examines the empirical and metaphysical claims made for creativity; attempts to account for intuition, genius, and intelligence.

PHI 4123 AS 3(3,0)
Feminist Theory: Study of the evolution of feminist thought and an examination of contemporary issues and perspectives in feminist theory and their relation to divergent feminist practices.

PHI 4220 AS 3(3,0)
Philosophy of Language: PR: PHI 2010 and 2130. Develops philosophically illuminating descriptions of certain general features of language, such as reference, truth meaning, and necessity.

PHI 4360 AS 3(3,0)
Epistemology: PR: Philosophy Major or C.I. Contemporary epistemology, especially theories of justification, radical skepticism, analysis of knowledge, holism, naturalized epistemology, cognitive science, and the possible death of epistemology.

PHI 4400 AS 3(3,0)
Philosophy of Science: An examination of the conceptual foundations and methodology of modern science.

PHI 4500 AS 3(3,0)
Metaphysics: PR: Philosophy major or C.I. Topics include appearance and reality, actions and events, necessity and possibility, identity, nature of persons, mind-body dualism, causality, and free will and determinism.

PHM 3100 AS 3(3,0)
Freedom, Justice and Human Rights: Philosophical analysis and evaluation of selected issues arising from the interaction of the individual, society, and the state; particular attention to topics such as freedom, equality, justice, and rights.

PHM 3350 AS 3(3,0)
Introduction to Marxism: A study of the basic principles of Marxism, formulated and developed by Marx and Engels.

PHP 3785 AS 3(3,0)
Existentialism: Study of existentialist analysis and criticisms of the human situations as found in the writings of such philosophers as Kierkegaard, Nietzsche, Heidegger, Sartre, and Camus.

PHP 4788 AS 3(3,0)
Contemporary Marxism: An examination of some major issues and perspectives in current Marxist philosophy and social theory.

PHY 3014C AS 3(2,2)
Physics for Teachers I: PR: C.I. "Hands-on" lecture-laboratory course. Statics, simple machines, density, solar energy, heat, weather, waves, optical reflections, naked eye astronomy.

PHY 3048 AS 3(3,0)
Physics for Engineers and Scientists I: PR: MAC 3311, PHY 2053C or high school physics. Mechanics, properties of matter, fluids, thermodynamics.

PHY 3048L AS 1(0,3)
Physics Laboratory for Engineers and Scientists I: CR: PHY 3048. Laboratory experiments covering selected topics in physics related to PHY 3048.

PHY 3048H AS 3(3,0)
Honors Physics for Engineers and Scientists I: PR: MAC 3311, PHY 3053C or High School Physics, and selection in the Univ. Honors program. Same as PHY 3048 with honors-level content.

PHY 3049 AS 3(3,0)
Physics for Engineers and Scientists II: PR: PHY 3048, MAC 3312. Optics, light, sound, electricity, magnetism, alternating current.

PHY 3049L AS 1(0,3)
Physics Laboratory for Engineers and Scientists II: CR: PHY 3049. Laboratory experiments covering selected topics in physics related to PHY 3049.
PHY 3049H AS 3(3,0)
Honors Physics for Engineers and Scientists II: PR: PHY 3048H, MAC 3312. Same as PHY 3049 with honors-level content.
PHY 3053C AS 4(3,3)
College Physics I: PR: MAC 1104 or MGF 1203. Kinematics, Newton’s Law, circular motion, torque, center of gravity, work, energy, power, machines, waves, sound, heat, thermodynamics, latent heat, conduction, convection, radiation.
PHY 3054C AS 4(3,3)
College Physics II: PR: PHY 2053C or one year of high school physics. Fluids, Bernoulli, viscosity, kinetic theory, electricity, magnetism, induction, generators, motors, DC-AC circuits, instrumentation, semiconductors, geometrical and physical optics, X-rays, radioactivity, dosimetry.
PHY 3101 AS 3(3,0)
Modern Physics: PR: PHY 3049 or C.I. Thermal radiation, quanta, photoelectric effect, Compton effect, Bohr theory, de Broglie, Schrodinger equation, barrier and square well potentials, applications to atomic, molecular, solid state and nuclear physics.
PHY 3221 AS 3(3,0)
PHY 3233 AS 3(3,0)
PHY 3464 AS 3(3,0)
Physical Basis of Music: PR: MUT 1112 or C.I. Lectures, demonstrations, and student practicum; covers topics in wave motion, acoustics of musical instruments, musical scales, timbre, architectural acoustics, human ear, sound reproduction.
PHY 3503 AS 3(3,0)
Thermodynamics: PR: PHY 3049 and MAP 3302 or C.I. Introduction to equilibrium thermodynamics. Equations of state, entropy, temperature, internal energy, free energy, phase transitions.
PHY 3722C AS 3(1,5)
PHY 3752C AS 4(3,3)
PHY 3802L AS 3(1,5)
Intermediate Physics Laboratory: PR: PHY 3101 or C.I. Laboratory work in basic measurements of physical constants; experiments in electronics, modern physics, nuclear physics, optics, and solid state physics. May be repeated for credit.
PHY 4222 AS 3(3,0)
PHY 4324 AS 3(3,0)
Electricity & Magnetism II: PR: PHY 3323. Dielectrics, magnetic materials, electromagnetic waves, reflection, complex impedance, static solutions to Laplace’s Equation, radiation from an accelerated charge & antennae, special relativity.
PHY 4424 AS 3(3,0)
Optics: PR: PHY 3101 and PHY 3323. Wave optics, absorption, stimulated emission, lasers, transforms, coherence, holography.
PHY 4424L AS 3(0,3)
Optical Physics Laboratory: A laboratory course on geometric optics, inference, diffraction, materials and modern optics.
PHY 4604 AS 3(3,0)
Wave Mechanics: PR: MAP 3302 and PHY 3101. Basic concepts of Schrodinger wave mechanics, the quantum theory. Forms of wave function under boundary conditions. Application to the one electron atom and many particle systems.
PHY 4803L AS 3(1,5)
PHY 4942C AS 3(2,3)
Practicum in Physics: PR: C.I. Physics laboratories and demonstrations, and the study of recent research on the learning of physics.
PHY 5015C AS 3(2,2)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 5100</td>
<td>Topics in Contemporary Physics for Teachers: PR: C.I.</td>
<td>The study of recent findings in a selected area such as particle physics, surface physics, planetary atmospheres, lasers, geophysics, etc.</td>
</tr>
<tr>
<td>PHY 5200C</td>
<td>Newtonian Mechanics for Teachers: PR: C.I.</td>
<td>A lab, lecture, demonstration course studying selected topics in classical mechanics.</td>
</tr>
<tr>
<td>PHY 5302C</td>
<td>Electricity for Teachers: PR: C.I. Circuits, multimeters, oscilloscopes, circuit elements.</td>
<td></td>
</tr>
<tr>
<td>PHY 5401C</td>
<td>Optics for Teachers: PR: C.I. Geometrical and physical optics, spectrometers and lasers.</td>
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<tr>
<td>PHY 5431</td>
<td>Optical Properties of Materials: PR: PHY 4324, MAP 3302, PHY 4424. Normal modes (dipole and Raman active); microscopic theory of absorption, dispersion, and refraction: wave propagation, crystal optics; scattering mechanisms; optical activity.</td>
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<tr>
<td>PHY 5446</td>
<td>Laser Principles: PR: PHY 3101, MAP 3302, PHY 4424.</td>
<td>Classical introduction to the basic principles of laser gain media, properties of resonators and modes, description of specific laser systems.</td>
</tr>
<tr>
<td>PHY 5500C</td>
<td>Thermal Physics for Teachers: PR: C.I.</td>
<td>Engines, heat pumps, kinetic theory, phase changes, radiation, weather.</td>
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<tr>
<td>PHY 5506</td>
<td>Quantum Mechanics I: PR: PHY 4604 or C.I. Basic postulates of quantum mechanics, operators, eigenvalues, parity, potential wells, harmonic oscillator, time dependent and time independent Schrodinger equation, matrix formulation, time independent perturbation theory.</td>
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</tr>
<tr>
<td>PHY 3151</td>
<td>Computer Methods in Physics: PR: PHY 3048 and COP 1200 or C.I. Nonanalytical problems in physics and astronomy solved by approximation with computer assistance.</td>
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<tr>
<td>PHY 3271</td>
<td>Geophysics: PR: PHY 3049 and MAP 3302. Introduction to the methods and techniques used in applied geophysics. Seismic wave propagation, flow through porous media, electromagnetic remote sensing gravitation.</td>
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</tr>
<tr>
<td>PHY 5150C</td>
<td>Computer Methods in Physics for Teachers: PR: C.I. Trajectories with air resistance, trajectories in rotating space colonies, refraction of waves in continuous media, luminosity patterns, temperature profiles.</td>
<td></td>
</tr>
<tr>
<td>PHY 5301C</td>
<td>Nuclear Physics for Teachers: PR: C.I. The interaction of ionizing radiation with matter, alpha, beta, gamma decay, fission, fusion, neutron activation, half lives, and equilibrium.</td>
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<tr>
<td>PHY 5304</td>
<td>Nuclear Physics: PR: PHY 4604. Nuclear forces, structure, models, reactions, radioactivity, fission, fusion, strange particles.</td>
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<tr>
<td>PHY 5505</td>
<td>Plasma Physics: PR: PHY 4220, PHY 3320, or C.I. Introduction to theory and experimental basis of</td>
<td></td>
</tr>
</tbody>
</table>
both weakly and highly ionized plasmas. Instabilities, plasma waves, nonlinear effects, controlled thermonuclear fusion.

PHZ 5600 AS 1(1,0)

Special Relativity for Teachers: PR: C.I. Length contraction, time dilation, simultaneity, conservation of mass-energy, conservation of momentum, Compton scattering.

PHZ 5800C AS 1(0.5,1.5)

Wave Motion for Teachers: PR: C.I. Water waves, waves on strings, sound and vibrations.

PLA 3013 HPA 3(3,0)

Law and the Legal System: A survey course designed to familiarize the student with the American legal system, ethical considerations, terminology, legal reasoning, and the role of the legal assistant.

PLA 3105 HPA 3(3,0)

Legal Research: PR: PLA 3013 or C.I. A study of the various research tools used in legal investigation and the methods used to conduct legal research.

PLA 3155 HPA 3(3,0)

Legal Writing: PR: PLA 3105. A study of legal writing format and technique and the preparation of memoranda and other legal documents, using research skills learned in PLA 3105.

PLA 3203 HPA 3(3,0)

Civil Practice and Procedure: PR: PLA 3013 or C.I. The student becomes familiar with the Florida civil procedure before trial and acquires the ability to prepare basic pleadings.

PLA 3273 HPA 3(3,0)

The Law of Torts: PR: PLA 3013 or C.I. Theories governing liability for civil injuries not arising from contractual obligations; systems and procedures used in preparation, trial and appeal of Torts cases.

PLA 3308 HPA 3(3,0)

Criminal Procedure: PR: PLA 3013 or CCJ 3202 or C.I. Rules of criminal procedure, with emphasis on Florida rules, including right to counsel, bail, search and seizure, arrest, identification, trial, and post-trial proceedings.

PLA 3504 HPA 3(3,0)

Property and Real Estate Law: PR: PLA 3013. Study of the law of real and personal property; real estate transactions and conveyances; closing procedures and title problems.

PLA 4003 HPA 1(1,0)

Careers in Legal Studies: PR: Major in Legal Studies or C.I. Applications of Legal Studies. Students will explore options in legal studies, professional development, and ethics.

PLA 4020 HPA 3(3,0)

Law and Society: Examination of the relationship between law and American society including the impact on the legal system and legal profession of major social movements.

PLA 4263 HPA 3(3,0)

Evidence: PR: PLA 3013 and 3203 or C.I. An examination of statutes and cases that define rules of evidence for trial courts. Primary emphasis is on the Florida Evidence Code.

PLA 4408 HPA 3(3,0)

The Law of Contracts: Study of the basic law of contracts as developed in Anglo-American law and as changed by modern statutes, including the Uniform Commercial Code. Florida contract law will be emphasized.

PLA 4433 HPA 3(3,0)

Florida Partnerships and Corporations: Statutory requirements of Florida partnerships and corporations; creation and dissolution of business organizations, responsibilities of officers and basic rights of stockholders.

PLA 4483 HPA 3(3,0)

Administrative Law: PR: PLA 3013 or PAD 3003. The law regarding governmental agencies with emphasis on the administrative process, Administrative Procedure Acts and special problems of state administrative law.

PLA 4584 HPA 3(3,0)

Land Use and Environmental Law: PR: PLA 3013, 3504. Study of the law relating to private and public restraints on land use, including planning, zoning, subdivision and building regulations, with emphasis on recent interpretations by judiciary for environmental protection.

PLA 4585 HPA 3(3,0)

Landlord and Tenant Law: PR: PLA 3013, LEA 3504. Study of the basic law regarding landlord and tenant relationship, both commercial and residential, as it applies to the practitioner.

PLA 4603 HPA 3(3,0)

Estates and Trusts: PR: PLA 3013, 3504. A study of wills and trusts, and applicable legal principles of administration of estates through the processes of the Probate Court.

PLA 4623 HPA 3(3,0)

Estate Administration: PR: PLA 4603. Study of the laws and procedures applicable to administration of estates.

PLA 4700 HPA 3(3,0)


PLA 4763 HPA 3(3,0)

Law Office Practices: PR: PLA 3013. Organization, operation and management of law office. Interviewing techniques and practical application of work that is done in a law office.

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PLA 4803 Domestic Relations Law: PR: PLA 3013, 3504. Role of the legal assistant in all phases of family and juvenile law. Fundamental procedures and principles applied by the courts to family problems.
PLA 4813 Juvenile Law and Procedure: PR: PLA 3013 or C.I. Examines both the substantive and procedural law for juvenile delinquency and dependency. Emphasis on Florida law and comparison with other jurisdictions.
POS 2041 American National Government: A study of the dynamics of American national government, including its structure, organization, powers, and procedures.
POS 2041H Honors American National Government. Same as POS 2041 with honors-level content.
POS 3122 State Government and Public Policy: A comparative study of American state governments, political processes, and public policies, with emphasis on Florida.
POS 3173 Southern Politics: PR: POS 2041 or C.I. Study of southern politics past and present. Emphasis on factors affecting changes in the region and the states. Southern and national relationship examined.
POS 3233 Public Opinion: A substantive and theoretical study of public opinion, with emphasis on opinion formation, opinion measurement, policy linkages. May include field experiences in polling.
POS 3235 Mass Media and Politics: PR: POS 2041 or C.I. Influence of media on campaigns, public officials, public opinion, the definition of political news, and selected public policies.
POS 3253 Contemporary Revolution and Political Violence: Theories and cases of revolutionary change and political violence in the contemporary world.
POS 3273 Voting and Elections: Theoretical and substantive inquiry into U.S. electoral system; includes focus on voter behavior as well as national and state electoral systems.
POS 3413 The American Presidency: PR: POS 2041 or C.I. Examination of historical and contemporary role of the presidency, including the presidential selection process and the office's evolution in status, powers, administrative responsibilities, leadership, and decision-making.
POS 3424 Congress & the Legislative Process: PR: POS 2041 or C.I. Examination of the Congress as an institution undergoing dynamic change; emphasis upon recruitment of legislators, institutional and informal rules, the committee system, legislative procedures.
POS 3443 Political Parties & Processes: PR: POS 2041 or C.I. In-depth study of the American political party system in the context of changing American politics; topics include development, organization, reforms, legislative and executive processes.
POS 3703 Scope and Methods of Political Science: Introduction to the scope and methodology of political analysis. Extensive examination of the discipline, research design and methodology.
POS 4142 Metropolitan Politics: Analysis of political patterns, processes, and issues in American communities. Intergovernmental relations and structural and political arrangements in the existing and emerging metropolitan areas.
POS 4206 Political Psychology: The psychological analysis of political behavior; with emphasis on the individual rather than the political system; includes political attitudes and communication, leadership, and personality influences on politics.
POS 4246 Political Socialization: PR: POS 2041 or C.I. Analysis of recruitment and socialization processes. Identification of the agents and processes of political socialization in national and cross-cultural contexts.
POS 4265 Power and Policy in the U.S.: PR: POS 2041 or C.I. Examination of the bases of political power in the U.S. In-depth study of socio-economic political linkages in the policy-making process.
POS 4284 Judicial Process & Politics: Study of the formal and informal judicial process. Legal culture, bureaucratic model, judicial recruitment and outputs, comparative judicial behavior.
behavior, emphasizing the relationship between the nervous system and behavior.

American Constitutional Law II: PR: PSB 2041 or C.I. Development of civil liberties and civil rights in the American federal system.

PSB 4804

American Constitutional Law II: PR: PSB 2041 or C.I. Development of civil liberties and civil rights in the American federal system.

PSB 4804

Politics and Civil Rights: Examination of development and issues of civil rights in the second reconstruction. Course emphasis process and analysis of policy.

PS 4941

Political Science Internship: PR: C.I. Internship working with the national, state, county or municipal government. Assignments with selected civic organization, elected or appointed official.

PS 5746

Quantitative Methods in Political Research: PR: C.I. Methods of model building and research design, including conceptualization and measurement of political variables; techniques of data collection and quantitative analysis and computer usage.

POT 3204

American Political Thought: From its sources to the 20th century, including liberalism, puritanism, the Federalist, the rise of industrialism, resulting social movements, modern variations.

POT 3302

Modern Political Ideologies: A study of modern ideologies since the French Revolution including liberalism, conservatism, capitalism, nationalism, fascism and anarchism.

POT 4003

Political Theory: PR: PSB 2041 or C.I. Examination of various normative approaches to the study of political science, stressing contemporary developments in the field.

POT 4045

Ancient, Medieval and Early Modern Political Philosophy: Study of the development of political and social ideas in western thought from early Greece through the 17th century.

POT 4054

Modern Political Philosophy: Study of the development of political and social ideas from the 18th century to the present. May be taken independently of POT 4045 (Ancient, Medieval and Early Modern Political Philosophy).

POT 4314

Contemporary Democratic Theory: PR: POS 2041 or C.I. Study of democratic theories, emphasizing liberal democracy and its critics, elitist theories, participatory democracy, citizen participation, and relevance of empirical research to democratic theory.

PPE 3003


PPE 5055

Personality Theories: PR: G.A. or C.I. Critical theoretical models of personality development with applications to counseling, psychotherapy and psychological assessment.

PSB 3002


PSB 3442


PSB 3842


PSB 4013C


PSB 4103C


PSB 5005

Physiological Psychology: PR: PSB 3002 or C.I. An advanced survey of the physiological basis of behavior, emphasizing the relationship between the nervous system and behavior.
<table>
<thead>
<tr>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>PSC 1512</td>
<td>Physical Science: PR: MAC 1104 or MGF 1203. Fundamental laws of mechanics, heat, waves, electricity, magnetism; chemical processes and equations, properties of gases, liquids, solids, solutions. Mathematical analysis and logic applied to conclusions, inferences.</td>
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<td>AS 3(3,0)</td>
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<tr>
<td>PSC 1512L</td>
<td>Physical Science Lab: CR: PSC 1512. Experiments to apply the scientific method to observation and analysis in mechanics, heat, light, electricity and magnetism, chemical and physical transformations.</td>
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<tr>
<td>PSY 2013</td>
<td>General Psychology: An introductory survey of the basic principles, theories, and methods of contemporary psychology.</td>
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<td>AS 3(3,0)</td>
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<tr>
<td>PSY 2013H</td>
<td>Honors General Psychology: Same as PSY 2013 with honors-level content.</td>
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<td>AS 3(3,0)</td>
</tr>
<tr>
<td>PSY 2023</td>
<td>Careers in Psychology: PR: PSY 2013. An examination of various career opportunities in Psychology, including educational entry requirements, and related professional issues. Graded “S” or “U.”</td>
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<tr>
<td></td>
<td>AS 1(1,0)</td>
</tr>
<tr>
<td>PSY 3204</td>
<td>Statistical Methods in Psychology: PR: STA 2014 and PSY 3214. Standard scores, confidence intervals, sampling distributions, hypothesis testing, correlation and regression as applied to research in psychology.</td>
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<td>AS 4(3,2)</td>
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<td>AS 4(3,2)</td>
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<tr>
<td>PSY 3302</td>
<td>Psychological Measurement: PR: PSY 2013 and STA 2014 or 3023. A study of the theory underlying psychological tests and measurements procedures, including reliability, validity, and item analysis.</td>
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<td>AS 3(3,0)</td>
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<td>AS 3(3,0)</td>
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<tr>
<td>PSY 3624</td>
<td>Parapsychology: PR: PSY 2013. An examination of the history and development of research on paranormal phenomena, with special emphasis on recent developments in extrasensory perception and psychokinesis.</td>
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<td>AS 3(3,0)</td>
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<tr>
<td>PSY 3951</td>
<td>Undergraduate Field Work: PR: C.I. Placement in a community agency for supervised experience in applications of psychology to community problems.</td>
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<td>AS 3(1,5)</td>
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<td>AS 4(2,3)</td>
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<tr>
<td>PSY 4604</td>
<td>History and Systems of Psychology: PR: EXP 3404 and PPE 3003. Historical development of psychology, with emphasis on classical theoretical positions.</td>
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<td>AS 3(3,0)</td>
</tr>
<tr>
<td>PUP 3204</td>
<td>Environmental Politics: An examination of politics and policy-making concerning issues of conservation, pollution and development of land, air, and water resources.</td>
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<td>AS 3(3,0)</td>
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<tr>
<td>PUP 3314</td>
<td>Minorities in American Politics: Historical and contemporary role of minority groups in the American political process, including an examination of their electoral significance and relevant legislative, executive, and judicial policies.</td>
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<td>AS 3(3,0)</td>
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<tr>
<td>PUP 4003</td>
<td>American Public Policy: PR: POS 2041 or C.I. Policy formation, implementation and evaluation, with a focus upon contemporary American problems, including the malapportionment of societal power and social conflict.</td>
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<td>AS 3(3,0)</td>
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<tr>
<td>PUP 4323</td>
<td>Topics in Public Policy: Intensive analysis of a current policy problem. Sample topics include education, growth management, housing, affirmative action, welfare, and transportation. May be repeated once.</td>
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<td>AS 3(3,0)</td>
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<tr>
<td>PUP 4503</td>
<td>Women and Politics: An examination of demands for change in the social, political, and economic status of women and the policy response of the system.</td>
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<tr>
<td>PUP 4510</td>
<td>Government &amp; Science: PR: C.I. Examination of interface between science and government. Focus is upon governmental support for science, social accountability, and role of the scientist-policy maker in comparative context.</td>
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<td>AS 3(3,0)</td>
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<tr>
<td>PUP 4602</td>
<td>Space Policy: An examination of the politics and policy-making involved with the US space program in the context of domestic demands and other international space programs.</td>
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<td>AS 3(3,0)</td>
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<tr>
<td>PUP 4602</td>
<td>Politics of Health: PR: C.I. Analysis of public health policies. Primary focus upon political processes, policymakers, and interest group interventions, including consumers and policy outcomes. Comparative health policies.</td>
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<td>AS 3(3,0)</td>
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Studies in Judaism: An inquiry into the foundations and development of Jewish thought in various parts of the world.
**Introduction to Respiratory Therapy**: PR: Admission to the professional upper-division Respiratory Therapy Program. Fundamental respiratory principles and practices will be studied. Introduction to the profession and basic methods are covered. Lecture and lab.

**Mechanical Ventilation**: PR: RET 3026C. Function and use of mechanical ventilators, patient evaluation methods. All forms of ventilatory support will be studied. Lecture and laboratory.

**Respiratory Disease Assessment**: PR: RET 3026C. Physical examination of the chest, demonstrating equipment use, methods and theory. Chest radiography will be extensively covered. Lecture and demonstration.

**Cardiopulmonary Physiology**: PR: PCB 3703C. Normal ventilation, lung mechanics, pulmonary circulation, diffusion, and blood gases, with an emphasis toward diagnostic cardiology.

**Pediatric Respiratory care**: PR: C.I. The study of childhood respiratory diseases, congenital problems, infections, metabolic disorders, and AIDS.

**Clinical Practice I**: PR: C.I. Basic equipment and patient care. IPPB therapy. Cleaning sterilization and maintenance procedures. Suction techniques.

**Clinical Practice II**: PR: C.I. Patient care with advanced respiratory equipment. Tracheostomy care. Introduction to cardiopulmonary resuscitation. Introduction to critical care units. Advanced life support techniques and equipment.


**Respiratory Therapy Education Systems**: PR: EVT 3371. Survey of the formal education of the respiratory therapist.


**Cardiopulmonary Diagnostics I**: PR: RET 4244C. Non-invasive cardiac diagnostics, including echocardiography, nuclear cardiology, and stress testing.

**Cardiopulmonary Diagnostics II**: PR: RET 4244C and RET 4284C. Invasive cardiac diagnostic and therapeutic measures, including cardiac catheterization, PTCA, streptokinase use, and heart surgery.

**Pulmonary Function Studies**: PR: RET 3026C. Detailed procedures and tests to provide information for diagnosis of pulmonary disease. Lecture-laboratory.

**Chest Medicine**: PR: APB 3263C. Disease states treated medically in conjunction with one or more modalities of respiratory therapy.

**Neonatal Medicine**: PR: RET 3714C or C.I. Fetal development, prenatal physiology, gas transport in the fetus and newborn. Congenital anomalies, infections, diseases of the newborn. Resuscitation of the neonate.

**Clinical Practice III**: PR: RET 3875. Care of patients with more complex diseases. Pulmonary function studies. Pediatric and neonatal critical care. Echo and cardiac catheterization. Emergency and trauma.

**Medical Research Seminar**: PR: STA 3023. Introduction to research and research methods used in medicine. Use of statistical and computer tools in problem solving.

**Selected Topics in Respiratory Therapy**: PR: C.I. Current topics of adult critical care, as they apply to the advanced study of respiratory therapy.

**Research Methods in Cardiopulmonary Physiology**: Introduction to methods used in scientific and medical research in cardiopulmonary physiology. Literature review, experimentation, and data analysis.

**Principles of Risk and Insurance**: PR: STA 2014 or STA 3023. Junior standing or C.I. Emphasis is on insurance as a risk-handling device, with attention given to risk assumption, risk avoidance, and loss prevention.

**Introduction to Radiologic Sciences**: Study of medical imaging and radiation therapy principles and procedures. For prospective and beginning majors in Radiologic Sciences.
RTE 3050 HPA 6(6,0)

RTE 3123C HPA 2(1.5,1.5)
Introduction to Patient Care: PR: Acceptance to the program. Provides the student with fundamentals of patient care methods related to radiography.

RTE 3367C HPA 3(3,0)
Medical Physics: PR: RTE 3684C or C.I. Study of radiation production, characteristics, detection and measurement, and protection, including barrier thickness calculation and shielding.

RTE 3412C HPA 3(2,5,1.5)
Principles of Radiographic Exposure I: An introduction to the technical variables influencing radiographic and fluoroscopic image quality, including equipment considerations, prime exposure factors, image receptors, and accessory exposure devices.

RTE 3457C HPA 3(2,5,1.5)
Principles of Radiographic Exposure II: PR: RTE 3412C or C.I. Study of exposure and photographic processing variables influencing radiographic image quality.

RTE 3528C HPA 3(2,3)
Radiographic Procedures I: PR: Admission to the program. Provides fundamental knowledge of radiographic positioning, equipment manipulation, and quality evaluation of radiographic studies of the chest, abdomen, routine contrast studies, and the upper extremity.

RTE 3549C HPA 3(2,2)
Radiographic Procedures II: PR: RTE 3528C or C.I. Continuation of radiographic positioning, equipment manipulation, and quality evaluation of radiographic studies of the shoulder, bony thorax, lower extremity, vertebral column, cranium, and facial bones.

RTE 3564 HPA 2(2,0)
Special Radiographic Procedures: PR: RTE 3549C or C.I. An introduction to special imaging, techniques in radiology, including vascular and nonvascular procedures.

RTE 3684C HPA 2(2,0)
Physics of Image Production: PR: College Physics II. Physics of diagnostic radiology, including radiation production, physical principles of generator operation, and characteristics of electromagnetic radiation.

RTE 3806 HPA 4(0,16)
Clinical Education I: PR: RTE 3123C or C.I. Supervised clinical practice in radiographic procedures, radiation protection, patient care, equipment.

RTE 3816 HPA 4(0,16)
Clinical Education II: PR: RTE 3806 or C.I. Supervised clinical practice in performing radiographic or radiation therapy procedures, with emphasis on competency evaluation of clinical practices.

RTE 3826 HPA 5(0,24)
Clinical Education III: PR: RTE 3816 or C.I. Supervised clinical practice in radiographic or radiation therapy procedures, with emphasis on competency evaluation of clinical practices.

RTE 4156 HPA 2(2,0)
Pathophysiology: PR: C.I. The study of radiologic science in the diagnosis and treatment of disease.

RTE 4207 HPA 3(3,0)
Methods in Radiology Management: Concepts of radiology department management, including principles, personnel management, evaluation and improvement techniques, budgeting, financial considerations and legal aspects, and JCAH quality assurance specifications.

RTE 4209 HPA 2(0,8)
Radiological Administrative Practice: A directed practice in the management of a radiology department, with application of theory and methodology.

RTE 4256L HPA 2(0,8)
Directed Study in Clinical Education: PR: EVT 3371 or EDG 4321 or C.I. Directed activity in classroom instruction in radiologic technology.

RTE 4382 HPA 1(1,0)
Radiobiology: PR: RTE 3387C. A study of the effects of ionizing radiation on biologic systems. The responses of the cellular and total organism level are investigated.

RTE 4566 HPA 3(3,0)
Advanced Imaging Modalities: PR: RTE 3564 and CGS 1060 or C.I. A study of the physical principles and applications of computer tomography, digital imaging, ultrasound, magnetic resonance imaging, and other specialized modalities.

RTE 4569 HPA 3(3,0)
Quality Assurance: PR: RTE 3387C or C.I. Quality control evaluation of radiographic, fluoroscopic and tomographic imaging systems. Implementation procedures, equipment selection criteria, and processing quality control are also addressed.

RTE 4720 HPA 3(3,0)
Anatomy for the Medical Imager: A study of the normal anatomical structures and interrelationships of structures as demonstrated in a radiographic and cross-sectional imaging reference.

RTE 4843 HPA 6(0,24)
Clinical Education V: PR: RTE 4876 or C.I. Advanced clinical practice in diagnostic radiography.
radiation therapy, nuclear medicine, special procedures, and other diagnostic imaging.

RTV 4876 Clinical Education IV: PR: C.I. Supervised clinical practice; emphasis on competency evaluation of routine radiographic examinations or radiation therapy procedures.

RTV 3000 Foundations of Broadcasting: Nature of the media, the mechanics of operation, history, economics, programming, and internal and external control.

RTV 3200 Broadcast Techniques: PR or CR: RTV 3000. Introduction to audio production and multi-camera video production. Instruction in audio mixers, microphones, and tape recorders and TV studio production equipment (cameras, switches, etc.)

RTV 3210 Radio Production: PR: RTV 3200 or C.I. The production of music (live and recorded), talk, interview, discussion, sports, and documentary including performance (talent and announcing) and direction.

RTV 3223 Lighting for Video: PR: RTV 3200. Basic lighting techniques for both studio and location, single and multiple-camera video production.

RTV 3231 Broadcast Announcing and Performance: PR: RTV 3200 or C.I. A study of communication problems on camera and microphone. Development of performance skills in announcing, interviewing, narrating, and reporting. Lab TBA.


RTV 3300 Broadcast Newswriting: PR: Grammar Proficiency Examination and departmental typing exam. The study and practice of writing news for radio and television.

RTV 3301 Advanced Broadcast Newswriting: PR: RTV 3300. The writing of in-depth news items, including documentaries, features, and investigative materials.

RTV 3501 Broadcast Copywriting: PR: Grammar Proficiency Examination and departmental typing exam. Preparation of written commercial copy for radio and television and public service.

RTV 3610 Broadcast Promotion: PR: RTV 3200. Examination of techniques that stations use to keep listeners and viewers and to attract new ones. Use of advertising and merchandising.

RTV 3942 Television Practicum: PR: RTV 3200 and C.I. Primarily an activity course. Student will serve in some position of responsibility for UCF Weekly News or other TV activity. Can be repeated.

RTV 4205 Television Directing: PR: RTV 3200 and RTV 3260. Preparation and direction of programs, with emphasis on dramatic values of composition.

RTV 4270 Radio Production and Programming: PR: RTV 3200 or C.I. The study and production of current radio formats and their effects on today's radio listener.

RTV 4402 Broadcast Criticism: PR: RTV 3000 for RTV majors. Evaluation and criticism of past and present radio and television programs, policies, and critics. Concentration on the problem of criteria development.

RTV 4403 Radio, Television and Society: PR: RTV 3000 for RTV majors. A study of the impact of electronic media upon the habits, customs, and thinking of our times. Considerations of internal media problems.

RTV 4404 International Broadcasting: PR: RTV 3000. Comparative analysis of national broadcast systems. World broadcasting as a social, political, and economic force.

RTV 4600 Non-Commercial Broadcasting: The uses of the electronic mass media for the dissemination of non-commercial programming. Public broadcasting and educational uses of the media.

RTV 4700 Regulation of Broadcasting: PR: RTV 3000. Federal, state, local and self-regulatory agencies and practices which govern electronic media.

RTV 4800 Broadcast Management: PR: RTV 4700. Consideration of broadcast management problems in station operations at the local, regional, and national levels.

RUS 1115 Basic Review of Russian: A review of Russian grammar, vocabulary and civilization. For students with previous instruction in German. Graded S or U.
RUS 1120
Elementary Russian Language and Civilization I: Designed to initiate the student to the major language skills. Open only to students with no previous experience with this language.

RUS 1121
Elementary Russian Language and Civilization II: PR: RUS 1115, RUS 1120, or experience with this language. Continuation of RUS 1120.

RUS 2210
Intensive Russian Conversation: PR: One year of Russian or equivalent. Practical use of the language, leading toward fluency and correctness in speaking.

RUS 2230
Intermediate Russian Language and Civilization I: PR: RUS 1121 or equivalent. Development of language skills and cultural knowledge at the intermediate level.

RUS 2231
Intermediate Russian Language and Civilization II: PR: RUS 2230 or equivalent. Continuation of RUS 2230, with emphasis on Russian civilization.

RUS 3240
Russian Conversation: PR: RUS 2231 or equivalent. Development of skills in conversation and comprehension through practice. This course may be repeated for credit. When repeated, credit will apply to general electives only.

RUS 3420
Russian Composition: PR: RUS 2231 or equivalent. Development of skills in composition. This course may be repeated for credit. When repeated, credit will apply to general electives only.

RUS 4421

RUW 3100
Survey of Russian Literature I: PR: RUS 2231. A survey course of the major Russian writers and poets from Pushkin to Turgenev.

RUW 3101
Survey of Russian Literature II: PR: RUS 2231. A survey course of the major Russian writers and poets from Dostoyevsky to the present.

RUW 3370

RUW 4330
Russian Poetry: PR: RUS 2231. A survey of Russian poetry from Zhukovsky to the present.

RUW 4480

RUW 4481

SCE 3310
Teaching Science in Elementary School: PR: Junior standing or C.I. Selected concepts; organizing for instruction; techniques; evaluation procedures.

SCE 3330
Science Instructional Analysis: PR: EDG 4321 or C.I. Course objectives for a school curriculum and methods and materials.

SCE 5825
Space Science for Educators: PR: Senior standing or C.I. Introduction to space science, manned space flight and space education curriculum.

SLS 2311
Overview of Selected Medical Careers: Introduction to medical careers in medicine, dentistry, veterinary medicine, osteopathic medicine, optometry, chiropractic medicine, podiatry, and pharmacy. Graded “S” or “U.”

SOP 3004

SOP 3724
The Psychology of Racial Prejudice: PR: PSY 2013. Examination of literature relating to prejudice toward ethnic groups; effects of racism on individuals, development and maintenance of prejudice, and possible ways to reduce prejudice.

SOP 3742
on women in modern society. Topics include childrearing, working women, and sex differences in personality and cognition.

SOP 3772


SOW 3104


SOW 3111

Assessing Human Systems: Development of skills in assessing families, groups, organizations, and communities, their impact on human functioning, and their potential for providing social support.

SOW 3203

Social Welfare and Community Resources: Study of social welfare, programs and services, including socio-cultural, political, economic, and historical forces affecting changes in societal responses to human needs.

SOW 3232


SOW 3300

Generalist Practice in Social Work: Study of social work functions, knowledge, values, and skills. Development of ability to use a generalist model of practice.

SOW 3352

Interpersonal Skills in Social Work Practice: Study and practice of interviewing, group leadership, written communication, and oral presentations, in consensual as well as conflictual contexts of social work.

SOW 3401

Social Work Research: Study of quantitative and qualitative methods of building knowledge for social work and the ethical use of research in professional practice.

SOW 4341

Micro-Level Roles and Interventions in Social Work: PR: SOW 3300, SOW 3352. Study and simulated practice of roles and tasks in systemic problem solving with individuals, families, and supportive and remedial groups.

SOW 4343

Macro-Level Roles and Interventions in Social Work: PR: SOW 3300, SOW 3352. Study and simulated practice of roles and tasks in systemic problem solving to obtain and improve social welfare resources within organizations and communities.

SOW 4381

Agency Management: Basic administrative practice, including planning, staffing, delegating, managing and developing personnel, monitoring services, budgeting, and fund raising.

SOW 4431

Evaluating Social Work Practice and Service Programs: PR: SOW 3403, SOW 3000. The study of systematic data collection and of measurement of change in individuals, families, groups, programs, and communities.

SOW 4510

Field Education: PR: Completion of required courses in major: CR: SOW 4522, SOW 4620. Supervised learning experiences in agencies which relate social work practice to theory, involving 420 clock hours in the field.

SOW 4522

Field Education Seminar: PR: Completion of required courses in major: CR: SOW 4510, SOW 4620. Weekly seminar to examine the field experience and to relate theory with practice situations.

SOW 4602

Social Work in Health Settings: Study of social work roles, interventions, and issues related to helping patients in health settings.

SOW 4620

Social Work with Minorities: PR: SOW 4341, SOW 4343, or C.I. Study of oppressed groups and relevant social work interventions; skill development in work with, and in behalf of, people of minority groups.

SOW 4644

Children's Services: Study of societal responses to children's needs. Development of skills for preventing family breakdown, placing children in alternative care, and reuniting children with their families.

SPA 3000

SPA 3002
Introduction to Communicative Disorders: Etiology, symptoms, and methods of diagnosing and treating communicative disorders. For beginning and prospective majors in communicative disorders.

SPA 3050
Clinical Observation and Practice: PR: SPA 3550, C.I. Observation and supervised participation in speech pathology and audiology in the university clinic and local clinics.

SPA 3101
Physiological Bases of Speech and Hearing: PR: SPA 3002. An introduction to the anatomical, physiological, and physical elements underlying the communication process.

SPA 3112
Basic Phonetics: Physiological descriptions and visual notation of speech patterns and regional dialects.

SPA 3112L
Basic Phonetics Laboratory: Students will have practical experiences in transcription of normal and deviant speech.

SPA 3333
Introduction to Signed English and Culture of the Deaf. Vocabulary and grammar through introductory level. Conceptual basis of ASL discussed.

SPA 3550

SPA 3550L
Clinical Methods in Communicative Disorders Laboratory: Students will have practical experience in analysis of live and videotaped diagnosis and therapy sessions.

SPA 4011
Fundamentals of Speech and Hearing Science: Lectures and demonstrations in basic acoustics and speech acoustics.

SPA 4032
Audiology I: Introduction to physics of sound, anatomy of hearing mechanism, pure tone audiometry, hearing aids, problems of the hearing handicapped. Clinical skills development will be required.

SPA 4033
Audiology II: PR: SPA 4030. An overview of medical aspects of hearing loss, electrophysiological audiometry, and other differential diagnostic testing.

SPA 4201

SPA 4201L
Communicative Disorders: Articulation Laboratory: Students will have practical experience in diagnosis and treatment in articulation disorders.

SPA 4210

SPA 4222

SPA 4222L
Nonorganic Speech Disorders Laboratory: Students will have practical experience in diagnosis and treatment in nonorganic speech disorders.

SPA 4251

SPA 4251L
Organic Speech Disorders Laboratory: Students will have practical experience in observations of organic speech disorders.

SPA 4310
Audiology II: PR: SPA 4032. An overview of medical aspects of hearing loss, electrophysiological audiometry, and other differential diagnostic testing.

SPA 4321

SPA 4380
Introduction to American Sign Language: Development of ASL vocabulary and grammar. Deaf culture, literature, research examined.

SPA 4381
Intermediate American Sign Language: Expansion of ASL vocabulary with increased development of knowledge concerning deaf culture.
Intermediate American Sign Language: Conversation. Emphasis on refining fluency receptively and expressively. Practicum with the deaf community.

SPC 4402


SPC 4402L

Communicative Disorders: Language Laboratory: Students will have practical experience in diagnosis and treatment in language disorders.

SPC 4412

Augmentative Communications Systems: PR: LIN 3710, SPC 4032. Students will learn the rudiments of nonverbal communication systems, for example, Bliss, Rebus, Manual Signing, Language Boards, and finger spelling.

SPC 4841

Practicum in Communicative Disorders.

SPC 5005

Survey of Communicative Disorders: A survey of speech, language, and hearing disorders for habilitative personnel and other interested professionals.

SPC 5120

Physiological Acoustics: PR: SPC 4032; Graduate status or C.I. Lectures, readings, and experiments pertaining to the subjective reception of sound.

SPC 5225

Fluency Disorders: PR: Graduate status or C.I. Identification and evaluation of disorders of rhythm. Emphasis will be on methods of intervention in disorders of fluency.

SPC 5225L

Fluency Disorders Laboratory: PR: Graduate status or C.I. Practical application of clinical skills in fluency disorders.

SPC 5307

Differential Diagnosis of Auditory Disorders: PR: SPC 4032; Graduate status or C.I. Clinical techniques in pure tone speech, acoustic impedance, and electrophysiologic response audiometry.

SPC 5327

Aural Habilitation/Rehabilitation: PR: Graduate status or C.I. Principles and procedures involved in speech and language acquisition management, utilization of residual hearing, speech reading, and the use of hearing aids.

SPC 5553

Differential Diagnostic in Speech and Language: PR: SPC 6204, 6403, 6211, 5805. Administration and interpretation of evaluation techniques, including standardized tests, will be presented. Emphasis on techniques allowing for differential diagnosis of speech and language disorders.

SPC 5553L

Differential Diagnosis in Speech and Language Laboratory: PR: SPC 6204, 6403, 6211, 5805. Assignment to diagnostic teams to apply the diagnostic techniques presented in SPC 5553. Experiences include test administration, interviewing, writing diagnostic reports, and oral presentations.

SPC 5554

Therapeutic Communication: PR: Graduate status or C.I. Practical interviewing and counseling in the area of communicative disorders.

SPC 5600

Administration and Management of Communicative Disorders Programs: PR: SPC 3002. Methods and techniques for organization and administration of speech-language and hearing disorders in public school, hospital, rehabilitation center, and private practice facilities.

SPC 5805

Research in Communicative Disorders: PR: STA 4163, graduate status or C.I. Introduces the student to empirical research in the area of communicative disorders. Emphasis is on hypothesis testing, methodology, analysis, and interpretation of results.

SPC 1600

Fundamentals of Oral Communication: Use of the body and voice; participation in various speaking situations; planning, organizing, and delivering public speeches.

SPC 1600H

Honors Fundamentals of Oral Communication: PR: University Honors Program. Same as SPC 1600 with honors-level content.

SPC 3301

Interpersonal Communication: Nature of the communication process; variables affecting the process and the individuals involved. Analysis of communication models, interactant behavior, situational cues, verbal and non-verbal messages.

SPC 3410

Parliamentary Procedures: Principles and rules governing participation and leadership in the conduct of formal business meetings.

SPC 3425

Group Interaction and Decision-Making: A study of small group processes. Attention is given to
problem solving, leadership emergence, conformity behavior, and group member role responsibilities.

SPC 3445 Leadership Through Oral Communication: A theoretical and practical investigation of leadership in oral communication situations, principles of parliamentary law, and approaches to problem solving.

SPC 3511 Argumentation and Debate: PR: SPC 1600 or C.I. Study and practice in the preparation and delivery of argumentative speeches emphasizing argument, evidence, and organization.

SPC 3601 Advanced Public Speaking: PR: SPC 1600 or C.I. Advanced training in selecting and organizing materials for various types of speeches. Practice in thinking and speaking before audiences.

SPC 4330 Nonverbal Communication: Review of current behavioral research in such areas as proxemics, kinesics, physical characteristics, tactile communication, and paralanguage. Lectures are supplemented by frequent nonverbal exercises.

SPC 4350 Studies in Listening: Analysis of current trends, professional literature, and resource materials bearing upon the teaching of listening. Practice in listening; preparing listening experiences; oral and written reports.

SPC 4440 Group Dynamics: A study of human behavior in group situations.

SPC 4540 Attitudes and Communication: PR: Grammar Proficiency Examination. A survey of the immediate and direct ways in which persuasive communications and social groups come to influence attitudes.

SPC 4633 Rhetoric of Social and Political Action: PR: Junior standing. A critical investigation of social and political speaking within contemporary American society, including agitative rhetoric of political dissent.

SPC 5200 Evolution of Communication Theory: General Survey: Major communication trends from classical era to the present. Comparison of Aristotelian and non-Aristotelian rhetorics. Contributions of principal figures will be discussed.

SPN 1115 Basic Review of Spanish: A review of Spanish grammar, vocabulary and civilization. For students with previous instruction in Spanish. Graded S or U.

SPN 1120 Elementary Spanish Language and Civilization I: Designed to initiate the student to the major language skills. Open only to students with no previous experience with this language.

SPN 1121 Elementary Spanish Language and Civilization II: PR: SPN 1115, SPN 1120 or experience with this language. Continuation of SPN 1120.

SPN 1170 Elementary Spanish Study Abroad: Elementary Spanish language and civilization taught in the native environment.

SPN 2140 Business Spanish I: Spanish language and culture for beginning Spanish language students from a business professional perspective. Emphasis on communicative skills in a professional setting. (Does not fulfill University foreign language requirement.)

SPN 2141 Business Spanish II: Spanish language and culture for beginning Spanish language students who have already begun Spanish language studies. Does not fulfill foreign language requirement.)

SPN 2230 Intermediate Spanish Language and Civilization I: PR: SPN 1121 or equivalent. Development of language skills and cultural knowledge at the intermediate level.

SPN 2231 Intermediate Spanish Language and Civilization II: PR: SPN 2230 or equivalent. Continuation of SPN 2230, with emphasis on Spanish civilization.

SPN 2240 Intensive Spanish Conversation: PR: One year of Spanish or equivalent. Practical use of the language, leading toward fluency and correctness in speaking at the intermediate level.

SPN 2270 Intermediate Spanish Study Abroad: PR: Elementary Spanish. Designed to continue development of language skills at the intermediate level taught in the native environment.

SPN 3142 Business Spanish III: Continuation of Business Spanish II. (Does not fulfill University foreign language requirement.)

SPN 3143 Business Spanish IV: Continuation of Business Spanish III. (Does not fulfill University foreign language requirement.)
Spanish Conversation: PR: SPN 2231 or equivalent. Development of skills in conversation and comprehension through practice. This course may be repeated for credit. When repeated, credit will apply to general electives only.

Spanish Composition: PR: SPN 2231 or equivalent. Development of skills in composition. This course may be repeated for credit. When repeated, credit will apply to general electives only.

Advanced Spanish Conversation: PR: SPN 3241. Advanced conversation on directed topics from various disciplines: literature, art, psychology, philosophy, music, business, and the sciences.

Advanced Spanish Composition: PR: SPN 3420. Readings and written imitations of modern literary styles in the form of themes, sketches, poems, and original stories.

Stylistics: PR: SPN 3420 or equivalent. An intense study of textural criticism. An examination of the relationship between language and literature, explications and linguistic analysis of literary texts.

Spanish Civilization and Culture: PR: SPN 3241 or SPN 3420. A study of Spanish civilization and culture from Pre-Roman times to the present. Conducted in Spanish.

Latin American Civilization and Culture: PR: SPN 3241 or SPN 3420. An overview of the currents in Latin American culture and civilization from the Pre-Columbian period to the present. Conducted in Spanish.

Spanish-American Syntax: The course examines the Spanish language from its beginning to the present, with special emphasis as it is written and spoken in Latin America and the U.S.

Survey of Spanish Literature I: PR: SPN 2231 or equivalent. Main literary currents and works from the Middle Ages through the Eighteenth century.

Survey of Spanish Literature II: PR: SPN 2231 or equivalent. Main literary currents and works of the Nineteenth century to the present.

Survey of Latin-American Literature I: PR: SPN 2231 or equivalent. Main literary currents and works from the colonial period to the Nineteenth Century Romanticism.

Survey of Latin-American Literature II: PR: SPN 2231 or equivalent. Main literary currents and works of the Nineteenth century from the Realism to the present.

Spanish Short Story: PR: SPN 2231 or equivalent. A study of representative 19th and 20th-century Spanish short stories and their authors.


Nineteenth Century Spanish Literature: PR: SPW 3101. A study of the representative authors and works in Spanish Romanticism, Realism, and Naturalism.

Twentieth Century Spanish Literature: PR: SPW 3101. A study of the representative authors and works in drama and the novel.


Cervantes II: PR: SPW 3100. Don Quixote (Part II).


Caribbean Spanish Literature: An overview of the literature of the Spanish-speaking Caribbean countries from colonial time to the present.

Teaching Social Science in the Elementary School: PR: Admission to Phase II or C.I. Selected themes, problems, and concepts; organizing for instruction; techniques; evaluation procedures.

Social Science Instructional Analysis: PR: EDG 4321 or C.I. Study of instructional programs in social sciences; objectives; materials; techniques; organization of instruction; evaluation procedures; current research.

Principles of Statistics: Introduction to statistical concepts in modern society. Basic principles,
frequency distributions, measures of location and dispersion, probability, statistical inference.

STA 3023 AS 3(3,0) Statistical Methods I: PR: MAC 1104 or MGF 1203. First methods course introducing probability and statistical inference, including estimation, hypothesis testing, binomial and normal distributions, sample size.

Honors Statistical Methods I: PR: Honors Program Student; Calculus desired but not necessary. Same as STA 3023 with honors-level content.

STA 3032 EN 3(3,0) Probability and Statistics for Engineers: PR: MAC 3312 and computer programming. Axioms of probability; combinatorial and geometrical probability; probability distributions; measures of location and dispersion; sampling and sampling distributions; estimation and tests of hypotheses; engineering applications.

STA 3096 AS 3(3,0) Statistical Graphics: PR: STA 3023 or STA 3032 and a knowledge of a programming language. Principles of graph construction, graphical perception, graphical methods, computer programs for graph construction.

STA 4095 AS 1(1,0) Statistical Problem Solving: PR: STA 4164. Course presents approaches to solving a wide variety of statistics problems. Emphasizes assumptions, parametric and nonparametric approaches to problems in all areas of statistics.

STA 4102 AS 3(3,0) Computer Processing of Statistical Data: PR: STA 4163 and knowledge of a programming language. Use of packages such as SAS, BMD, SPSS for data validation, description and analysis of data, regression and analysis of variance and covariance.

STA 4163 AS 3(3,0) Statistical Methods II: PR: STA 3023 or STA 3032. Methods of analyzing data, statistical models, estimation, tests of hypotheses, regression and correlation, an introduction to analysis of variance, chi-square, and nonparametric methods.

STA 4164 AS 3(3,0) Statistical Methods III: PR: STA 4163. A continuation of STA 4163, including further study of regression, analysis of variance and covariance and multiple comparisons.

STA 4173 AS 3(3,0) Biostatistical Methods: CR: STA 4163. Introduction to the application of statistical principles and methods to problems in medical, biological, and health sciences.

STA 4202 AS 3(3,0) Design of Experiments: Methods of constructing and analyzing designs for experimental investigations, concepts of blocking, randomization, replication, confounding in factorial experiments, incomplete block designs.


STA 4321 AS 3(3,0) Statistical Theory I: PR: STA 3023 or STA 3032; CR: MAC 3313. Probability axioms, discrete and continuous sample spaces, conditional probability, independence, one-dimensional random variables, moment generating functions, transformations, jointly distributed random variables.

STA 4322 AS 3(3,0) Statistical Theory II: PR: STA 4321. Conditional distributions, sums of random variables, Chebyshev's inequality, central limit theorem, method of moments, maximum likelihood, confidence intervals, hypothesis testing, transformations of two random variables.

STA 4502 AS 3(3,0) Nonparametric Statistical Methods: PR: STA 3023 or STA 3032. Distribution-free tests on location and dispersion, goodness of fit tests, tests of independence, measures of association, nonparametric analysis of variance.

STA 4664 AS 3(3,0) Statistical Quality Control: PR: STA 3023 or STA 3032. Statistical concepts and methods applied to the control of quality of manufactured products.


STA 5156 EN 3(3,0) Probability and Statistics for Engineers: PR: STA 3032 or equivalent. Theory and applications of discrete and continuous random variables, hypothesis tests, confidence intervals, regression analysis and correlation.

STA 5205 AS 3(3,0) Experimental Design and Response Surface Methodology: PR: STA 4164 or STA 5206. Construction and analysis of designs for experimental investigations. Concepts of blocking, randomization, and
replication. Confounding in factorial experiments, incomplete block designs. Response surface methodology.

STA 5206 AS 3(3,0)
Statistical Analysis: PR: STA 3023; not open to students who have completed STA 4164. Data analysis: statistical models; estimation; tests of hypotheses; analysis of variance, covariance, and multiple comparisons; regression and nonparametric methods.

STA 5505 AS 3(3,0)
Categorical Data Methods: PR: STA 4163 or STA 5206. Considers discrete probability distributions, contingency tables, measures of association, and advanced methods, including loglinear modeling, logistic regression, McNemar's Test, Mantel-Haenszel test.

STA 5825 AS 3(3,0)

SUR 3101C EN 3(2,3)
Surveying: PR: MAC 3311 and Junior standing. Theory and field practice in surveying measurements and the reduction and adjustment of field data.

SYA 3110 AS 3(3,0)
The Development of Social Thought: PR: SYG 2000. An overview of theories concerning the nature of man as a "social being." The nature of society from the beginnings of the scientific study of man's life to World War II.

SYA 3120 AS 3(3,0)
Modern Sociological Thought: PR: SYG 2000. A study of major European and American contributors to modern sociology since World War II.

SYA 3300 AS 4(3,2)

SYA 3301 AS 3(2,1)

SYA 3400 AS 4(3,1)
Research Methods and Statistics: PR: SYG 2000 and one other sociology course.

SYA 4450 AS 4(3,2)
Data analysis: PR: SYA 3300 and STA 2014. Advanced social research design and analytical skills. Emphasis on social data management, various modes of social data analysis, interpretation, integration, presentation, and report writing.

SYA 4650 AS 3(2,2)

SYA 5625 AS 3(3,0)
ProSeminar: Survey of conceptual issues, methodological concerns, and findings in substantive sociological areas that currently dominate scholarly inquiry, including such topics as crime, deviance, community, alcoholism, education.

SYD 3410 AS 3(3,0)

SYD 3700 AS 3(3,0)
Race and Ethnic Minorities in the United States: Theoretical analysis of the emergence, maintenance, and disruption of patterns of racial and ethnic stratification.

SYD 3800 AS 3(3,0)
Sex Roles in Modern Society: The traditional and changing roles of women and men viewed in a sociological perspective.

SYD 4020 AS 3(3,0)
Population: Concerned with the study of human population, its distribution, composition, and change.

SYD 4680 AS 3(3,0)
Soviet Sociology: Analysis of relations of various Soviet institutions such as education, religion, and the Communist party to society; class structure and social problems.

SYG 2000 AS 3(3,0)
General Sociology: Introduction to the sociological perspective and the scientific study of sociological concepts, theories, processes, and methods used in understanding contemporary human behavior in group interaction.

SYG 2000H AS 3(3,0)
Honors General Sociology: Same as SYG 2000, with honors-level content.

SYG 3010 AS 3(3,0)
Social Problems: Analysis of major social problems such as mental disorders, sexual deviance, racial discrimination, poverty, community disorganization, and violence.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYO 3000</td>
<td>Modern Sociology</td>
<td>PR: SYG 2000</td>
<td>An in-depth exploration of contemporary sociology. Introduction to conceptual analysis and methodological techniques, presentation and utilization of sociological literature on major social institutions.</td>
</tr>
<tr>
<td>SYO 3360</td>
<td>Social Organization and Human Relations</td>
<td></td>
<td>Analysis of business, government, and industrial organizations. Topics include organizational theory, social systems, social structure, effects of technology, motivation, leadership, decision-making, and human relations.</td>
</tr>
<tr>
<td>SYO 3410</td>
<td>Sociology of Mental Illness</td>
<td></td>
<td>A sociological examination of mental illness as a social problem; legal aspects of mental illness, and the mental health professions.</td>
</tr>
<tr>
<td>SYO 3530</td>
<td>Social Stratification</td>
<td>PR: SYG 2000</td>
<td>Study of class, status and power, cultural variations in stratification systems; patterns of mobility and change.</td>
</tr>
<tr>
<td>SYO 4100</td>
<td>The Family</td>
<td>PR: SYG 2000</td>
<td>The family viewed functionally as a distinct social and cultural complex in the contemporary United States. Topics include: mate selection, marriage, adjustment, parenthood, post marriage.</td>
</tr>
<tr>
<td>SYO 4250</td>
<td>Sociology of Education</td>
<td>PR: SYG 2000</td>
<td>This course examines the sociological dimensions of the educational institutions, including the impact of the social structure on learning and the role of education in social change.</td>
</tr>
<tr>
<td>SYO 4300</td>
<td>Political Sociology</td>
<td></td>
<td>Sociological analysis of political and parapolitical groups; socioeconomic variable of voting behavior, power elites; societies and systems of government.</td>
</tr>
<tr>
<td>SYO 4400</td>
<td>Medical Sociology</td>
<td></td>
<td>Analysis of patient beliefs and behavior, health practitioners, the social organization of hospitals and health services, contemporary problems in the delivery of health care.</td>
</tr>
<tr>
<td>SYP 3300</td>
<td>Collective Behavior</td>
<td>PR: SYG 2000</td>
<td>Analysis of relatively unstructured social situations, such as mobs, crowds, etc. as well as more structured forms of collective behavior such as social movements.</td>
</tr>
<tr>
<td>SYP 3400</td>
<td>Social Change</td>
<td>PR: SOC 2000</td>
<td>Concerned with the context and essential sources of social development and change.</td>
</tr>
<tr>
<td>SYP 3510</td>
<td>Sociology of Deviant Behavior</td>
<td></td>
<td>An examination of the nature, types, and societal reactions to deviant behavior; special emphasis on the process of stigmatization and the emergence of deviant subcultures.</td>
</tr>
<tr>
<td>SYP 3520</td>
<td>Criminology</td>
<td></td>
<td>Chief causes of anti-social behavior and current methods of prevention and reform. Effects of heredity and environment, prevalence of delinquency and crime, penal institutions.</td>
</tr>
<tr>
<td>SYP 3530</td>
<td>Juvenile Delinquency</td>
<td></td>
<td>Types of delinquency behavior found among juveniles; possible causes and ways society attempts to treat the various forms of delinquency.</td>
</tr>
<tr>
<td>SYP 3540</td>
<td>Sociology and Law</td>
<td></td>
<td>The relationship between law and society, including the functions of law and its organization, social and economic consequences, jury selection, and moder trends.</td>
</tr>
<tr>
<td>SYP 3551</td>
<td>Sociology of Alcoholism</td>
<td></td>
<td>Introduction to the nature of alcoholism and review of its impact on society.</td>
</tr>
<tr>
<td>SYP 3602</td>
<td>Sociology of Popular Music</td>
<td></td>
<td>This course examines the role of popular music in the process of social change and in reflecting American culture. Consideration is given to the nature of the popular music business.</td>
</tr>
<tr>
<td>SYP 3650</td>
<td>Sociology and Sport</td>
<td></td>
<td>Utilization of sociological concepts and theories to investigate sport as a social institution. Includes subjects of racism, sexism, drug abuse, violence, and current issues of sport.</td>
</tr>
<tr>
<td>SYP 4000</td>
<td>Sociological Social Psychology</td>
<td>PR: SYG 2000</td>
<td>Study of human socialization processes as well as organizational influences and interpersonal behavior on attitude formation and change, self-concept, decision-making, and vice versa.</td>
</tr>
<tr>
<td>SYP 4550</td>
<td>Sociology of Drug Abuse</td>
<td></td>
<td>Analysis of the socio-culture elements of the drug culture.</td>
</tr>
<tr>
<td>SYP 4730</td>
<td>Sociology of Aging</td>
<td></td>
<td>Sociological aspects of aging in America.</td>
</tr>
<tr>
<td>TAX 3000</td>
<td>Personal Income Tax</td>
<td></td>
<td>A study of federal income tax designated to convey basic tax concepts and skills related to the individual taxpayer. Not open to accounting majors.</td>
</tr>
</tbody>
</table>
Federal Income Tax I: PR: Junior standing and ACG 3103 with a grade of "C" or better or C.I. Concepts and methods of determining taxable income of individuals, and selected topics.

Federal Income Tax II: PR: ACG 4123, TAX 4001 and meet school admission requirements. Concepts and methods of determining taxable income for partnerships and corporations, and selected topics.


Theatre Survey—Honors: An honors-level overview of the art and craft of the theatre.

Cinema Survey: A broad cultural approach to the study of cinema.

Theatre Practicum I: Open to all students interested in participating in productions of University Theatre. May be repeated for credit. Primarily an activity course.

Theatre History I: PR: None. Development of theatre art from the earliest times through the seventeenth century.

Theatre History II: PR: None. Development of theatre art from the seventeenth century to the twentieth century.

History of the Motion Picture: Development of the film industry; its social and economic impact. Major films and trends in context.


Drama Analysis: A study of a method of analysis for dramatic scripts and an intensive examination of selected modern and period play scripts.

Modern Drama: Drama from Ibsen to Theatre of the Absurd, with reference to developing production styles and dramatic movements.

Theatre Practicum II: PR: THE 2925 and C.I. Primarily an activity course. Student will serve in some position of responsibility in production. May be repeated for credit.

Principles of Motion Picture Art: PR: THE 3251 or C.I. Aesthetic consideration of the motion picture as art. May be repeated for credit.

Theatre for the Schools: PR: None. Designed to aid the student in teaching theatre. Philosophy, methodology, objectives, planning, evaluative techniques, and production procedures relative to performance.

Children's Theatre: An introduction to the bases of theatre production for young people. Production of children's theatre, play selection, costumes, management, and touring.

Technical Theatre Production II: PR: None. A continuation of TPA 2210 (Service on crew as required).

Technical Theatre Production I: PR: None. History, theory, and practice of technical theatre production. Service or crew as required.

Scene Design I: PR: THE 1020, TPA 2210 or C.I. Study of and practice of scene design; perspective drawing, fundamentals of design, and techniques of scene painting.

Scene Painting: PR: TPA 3060 or C.I. Study of the art and craft of painting for the theatre. Research into period designs and execution of examples of a variety of styles.

Stage Lighting: PR: THE 1020 and TPA 2210 or C.I. Study of stage lighting techniques, practices, and equipment. (Service on light crew as required).

Lighting Design: PR: TPA 3220. Continuation of Stage Lighting with emphasis on theory, style, and individual lighting design projects.

Theatrical Costume Construction and Technique: A continuation of THE 3260, in which emphasis is placed on design and construction, planning, and execution of costumes. (Service on crew as required.)

Make-up Technique: Analysis and design of stage make-up.
TPA 3400

Theatre Management: Study of the development, organization, management, funding, and promotion of theatre programs.

TPA 4061

Advanced Design: PR: TPA 3060, 3221 or THE 3260. Continuation of design series, with emphasis on planning and executing scenery, lighting, and/or costume designs.

TPP 2110

Acting I: Emphasis on movement, motivation, voice, characterizational techniques, makeup, and other basic requirements for acting.

TPP 2700

Stage Diction: The role of the voice in the art of acting through practice in vocal characterization.

TPP 3111

Acting II: PR: TPP 2110 or C.I. Continuation of TPP 2110. May be repeated for credit.

TPP 3310

Directing I: PR: TPP 2110 or C.I. Fundamental principles of theatrical directing. Each student to direct short scenes and a one-act play for laboratory presentation and critique.

TPP 4150

Scene Study and Character Development: PR: C.I. The study, development and training of performance skills, with an emphasis on scene study and character development.

TPP 4260


TPP 4311

Directing II: PR: C.I. Techniques of period styles directing. Cuttings from Greek theatre, Shakespeare, Restoration, Experimental, and Musical theatre will be presented and criticized in a laboratory format.

TTE 4004

Transportation Engineering: PR: EGN 3613 and STA 3032. Investigation of all forms of transport-highway, rail, water, air. Systems approach to planning, design, construction, operation, and administration of transportation networks.

TTE 4601

Urban Systems Design. PR: TTE 4004. Project course on design of transportation and urban systems using engineering design methodologies.

TTE 5204

Traffic Engineering: PR: TTE 4004. Study of operator and vehicle characteristics, and design for street capacity, signals, signs, and markings.

TTE 5205


TTE 5805

Geometric Designs of Transportation Systems: PR: TTE 4004. Study of geometric and construction design elements in the engineering of transportation systems.

TTE 5835

Pavement Design: PR: CEG 4101C. Pavement types, wheel loads, stresses in pavement components, design factors such as traffic configurations, environment, and economy.

VIC 3000

Visual Communication: A study of the visual system of man and the influences of the visual media on modern society.

ZOO 2010C

General Zoology: PR: High school biology or C.I. Introduction to zoology; structure, function and representative groups; current concepts in zoological sciences.

ZOO 3303C

Vertebrate Zoology: PR: 6 hours of zoology or C.I. Evolution and classification followed by an introduction to vertebrate ecology, natural history, and behavior.

ZOO 3713C

Comparative Vertebrate Anatomy: PR: ZOO 2010C. The vertebrate animals, relationship of organs and systems, and their phylogenetic significance.

ZOO 3733C

Human Anatomy: PR: BSC 2010C or equivalent. Structure of the human body. Not open to students in ZOO 3713C or equivalent.

ZOO 4203C

Invertebrate Zoology: PR: 8 hours of biology or C.I. Taxonomy, anatomy and ecology of the invertebrate animals.

ZOO 4603C


ZOO 4753C

Vertebrate Histology: PR: BSC 2010C and ZOO 2010C. Microanatomical detail plus appropriate developmental and functional considerations of major cell types, primary tissues, organs, and organ systems. Survey of modern animal-tissue microtechnique.
ZOO 4880C Fisheries Management: PR: ZOO 2010C or C.I. Fisheries Management of freshwater environments to include identification, sampling methods, farming and hatchery operations, propagation and population estimates.

ZOO 5456C Ichthyology: PR: ZOO 3303C or C.I. Introduction to the biology of the fishes, their classification, evolution, and life histories.

ZOO 5463C Herpetology: PR: 6 hours of zoology or C.I. Introduction to the biology of the amphibians and reptiles, their classification, evolution, and life histories.

ZOO 5475C Ornithology: PR: 6 hours of zoology or C.I. Introduction to the biology of birds, their classification, evolution, and life histories.

ZOO 5483C Mammalogy: PR: 6 hours of zoology or C.I. Introduction to the biology of mammals, their classification, evolution, and life histories.

ZOO 5745C Essentials of Neuroanatomy: PR: Human/Comparative Anatomy, or Human/Animal Physiology or C.I. Fundamental concepts of both morphological and functional organization of the nervous system. Primary emphasis on human structure.

ZOO 5815 Zoogeography: PR: 8 hours of zoology or C.I. Principles and concepts concerning regional patterns of animal distributions of the world, both past and present.
FACULTY

The date indicates the first year of employment at the University of Central Florida.

ABBOTT, DAVID W., Professor of Psychology
(1968), B.A., M.S., Ph.D. (University of Massachusetts)

ABEL, EILEEN M., Assistant Professor of Social Work
(1978), A.B., M.S.W. (University of Maryland)

ACIERNO, LOUIS J., Professor of Cardiopulmonary Sciences
(1981), B.S., M.D. (Georgetown University)

ADICKS, RICHARD R., Professor of English
(1968), B.A.E., M.A., Ph.D. (Tulane University)

ALLEN, JEFFERY W., Assistant Professor of Marketing
(1990), B.S., M.B.A., D.B.A. (University of Kentucky)

ALLEN, KAY WILLIAMSON, Assistant Professor of Education
(1990), B.S., M.Ed., Ph.D. (University of South Carolina)

ALSAKA, Y. A., Assistant Professor of Engineering
(1986), B.S., M.S., Ph.D. (University of Florida)

ANDERSEN, STEVEN, President of the University and Professor of Management

ANDERSEN, SUSAN M., Assistant Professor of Communication
(1968), B.A., M.A., Ed.D. (University of Central Florida)

ANDERSON, B. BETTY, Professor of Education
(1968), B.A., M.A., Ed.D. (University of Maryland)

ANDERSON, HENRY R., Professor of Accounting

ANDERSON, LOREN A., Associate Professor of Engineering
(1982), B.S., M.S.E., Ph.D. (University of Dayton), P.E. (Florida and Ohio)

ANDREWS, LARRY C., Professor of Mathematics
(1972), B.S., M.S., Ph.D. (Michigan State University)

ANTHONY, JOBY M., Associate Professor of Mathematics
(1970), B.S., M.A.M., Ph.D. (North Carolina State University)

ARISTIQUETA, MARIA P., Instructor of Public Service Administration
(1988), B.S.W., M.P.A., (University of South Florida)

ARMSTRONG, JOHN H., Assistant Dean of College of Education and Associate Professor of Education
(1970), B.S., M.S., Ed.D. (Oklahoma State University)

ARMSTRONG, LEE H., Associate Professor of Mathematics
(1968), B.A., M.S., Ph.D. (Florida State University)

ARNOLD, ROBERT L., Director of Instructional Resources and Professor of Communication
(1968), B.A., M.A., Ph.D. (Ohio University)

ASHLEY, ROBERT A., Assistant of Hospitality Management
(1984), B.S., M.S. (Florida International University)

ASTRO, RICHARD, Provost and Vice President of Academic Affairs and Professor of English
(1986), B.A., M.A., Ph.D., (University of Washington)

ATKINSON, STANLEY M., Associate Professor of Finance

AVERY, CLARENCE G., Visiting Assistant Professor
(1990), B.S., B.A., M.S.A., Ph.D. (University of Illinois), C.P.A. (State of Illinois and Ohio)

AZIMI, CYRUS, Visiting Instructor of Psychology
(1985), B.S., M.A., Ph.D. (Michigan State)

BAILEY, CHARLES D., Professor of Accounting

BAILEY, REBECCA A., Associate Professor of Education
(1988), B.S., M.A., Ph.D. (Florida State University)
BALADO, CARL, Assistant Professor of Education

BANDY, DALTON D., Professor of Accounting
(1985), B.S., M.B.A., Ph.D. (The University of Texas at Austin), C.P.A.

BARNES, BETH, Associate Professor of English
(1975), B.A., M.A., Ph.D. (University of North Carolina at Chapel Hill)

BARR, CAROL J., Director and Assistant Professor of Medical Record Administration
(1986), B.S., M.A. (University of Central Florida)

BARSCH, KARL-HEINRICH, Associate Professor of Foreign Languages and Literatures
(1977), B.A., M.A., Ph.D. (University of Colorado)

BASS, MICHAEL, Vice President of Research and Professor of Engineering Science
(1987), B.S., M.S., Ph.D. (University of Michigan)

BASSIOUNI, MOSTAFA, Associate Professor of Computer Science
(1981), B.S., M.S., Ph.D. (Pennsylvania State University)

BAUER, CHRISTIAN S., JR., Chair, Department of Computer Engineering and Professor of Engineering
(1970), B.S.I.E., M.S.E., Ph.D. (University of Florida), P.E. (Florida)

BAUMBACH, DONNA J., Professor of Education
(1978), B.S., M.S., Ed.D. (Indiana University)

BEADLE, JAMES S., Associate Professor of Education
(1968), B.S., M.S., Ph.D. (Michigan State University)

BECK, BARRY F., Director, Florida Sinkhole Research Institute
(1983), B.S., M.S., Ph.D. (Rice University), P. Geol. (Georgia)

BECK, JAMES K., Associate Professor of Engineering
(1970), B.S.A.E., M.S.E. (University of Central Florida), P.E. (Florida)

BECKER, DONALD C., Assistant Professor of Criminal Justice
(1976), B.A., M.Ed. (Wayne State University)

BECKER, STEPHEN, Distinguished Lecturer in English
(1986), B.A. (Harvard College)

BELKERDID, MADJID A., Associate Professor of Engineering
(1979), B.S.E., M.S.E., Ph.D. (Florida State University), P.E. (Florida)

BELL, MARTHA, Associate Professor of Education

BENSON, CYNTHIA, Visiting Instructor of Political Science
(1985), B.S., M.A. (Ohio University)

BERGNER, JOHN F., JR., Professor of Health Sciences
(1975), B.S., M.S.P.H., Ph.D., M.P.H. (University of North Carolina)

BERRINGER, ORVILLE M., Preprofessional Coordinator and Professor of Biological Sciences
(1981), B.S., M.S., Ph.D. (University of Oregon)

BIEGEL, JOHN E., Professor of Engineering
(1982), B.S.I.E., M.S.E.S., Ph.D. (Syracuse University), P.E. (Florida and New Mexico)

BIRAIMAH, KAREN L., Associate Professor of Education

BISHOP, PATRICIA J., Associate Professor of Engineering
(1978), B.S.E., M.S.M.E., Ph.D. (Purdue University), P.E. (Florida)

BLAU, BURTON I., Associate Professor of Psychology
(1972), B.A., M.A., Ph.D. (Southern Illinois University)

BLEDSOE, ROBERT L., Professor of Political Science
(1968), A.B., M.A., Ph.D. (University of Florida)

BLOCK, DAVID L., Director, Florida Solar Energy Center and Professor of Engineering
(1968), B.S., M.S., Ph.D. (Virginia Polytechnic Institute), P.E. (Florida)

BLUME, DELORYS M., Associate Professor of Education

BOGUMIL, WALTER A., JR., Associate Professor of Management
(1972), B.S., M.B.A., Ph.D. (University of Georgia)

BOJACK, JOCELYN C., Visiting Instructor of Marketing
(1988), B.B.A., M.B.A. (Delta State University)
BOLEMANN, JAY S., Associate Professor of Physics
(1968), B.S., Ph.D. (University of South Carolina)

BOLLET, ROBERT M., Associate Professor of Education
(1973), B.S., M.S., Ed.D. (Ball State University)

BOLTE, JOHN R., Vice President, Administration and Finance and Professor of Physics
(1968), B.A., M.A., M.S., Ph.D. (State University of Iowa)

BOREMAN, GLENN D., Associate Professor of Engineering
(1984), B.S., M.S., Ph.D. (University of Arizona), P.E. (Florida)

BOSE, SUBIR K., Professor and Chair, Department of Physics
(1987), B.Sc., M.Sc., Ph.D. (University of Allahabad)

BOSTON, RALPH C., Director of Community College Relations
(1967), B.S., Ed.M. (University of Buffalo)

BOYER, DOROTHY M., Assistant Professor of Social Work
(1990), A.B., M.S.W., M.P.H. (University of Pittsburgh)

BOYTE, JUDITH P., Director, Office of Academic Support and Information Services
(1984), B.A., M.P.A. (University of Central Florida)

BOZEMAN, WILLIAM C., Professor of Education

BRAIN, PRISCILLA V., Instructor in English
(1964), B.A., M.A. (University of Central Florida)

BRAUN, BRADLEY M., Assistant Professor of Economics
(1986), B.S., M.A., Ph.D. (Tulane University)

BRAY, DENNIS W., Assistant Professor of Military Science
(1989), B.S. (Arizona State University)

BRENNAN, DAVID C., Assistant Professor of Legal Studies
(1983), B.S., J.D. (University of Florida)

BRENNAN, JOHN J., Professor of Physics
(1968), B.S., M.S., Ph.D. (Georgia Institute of Technology)

BRIGHAM, ROBERT C., Professor of Mathematics and Computer Science
(1970), B.S., Ph.D. (New York University)

BROCK, TIMOTHY R., Assistant Professor of Aerospace Studies
(1990), B.A., M.A. (Central Missouri State University)

BRODIE, LYMAN A., Associate Professor of Music
(1990), B.A., M.M.E. (North Texas State University)

BROPHY, JAMES C., Associate Professor of Psychology
(1969), B.A., Ph.D. (Vanderbilt University)

BROWN, HAROLD K., Assistant Professor of Engineering
(1985), B.S., M.S., Ph.D. (Ohio State University)

BROWN, WILLIAM R., Professor of Sociology
(1972), B.S., M.S., Ph.D. (Purdue University)

BROWNE-KRIMSLEY, VALERIE A., Coordinator and Visiting Assistant Professor - Brevard Campus

BRUMBAUGH, DOUGLAS K., Professor of Education
(1969), B.S., M.Ed., Ed.D. (University of Georgia)

BUCHOFF, RITA B., Instructor of Education

BURNETTE, CHARLES D., Instructor in Management
(1978), B.S., M.B.A. (Northwest Missouri State University)

BURROUGHS, WAYNE A., Professor of Psychology
(1969), B.A., M.A., Ph.D. (University of Tennessee)

BUTLER, JOHN F., Associate Professor of Communication
(1971), B.A., M.A., Ph.D. (University of Florida)

BYERS, WILLIAM S., Program Coordinator-Electronics Engineering Technology, Professor of Engineering Technology

Caldwell, C. Denise, Associate Professor of Physics
(1985), B.S., M.A., M.Ph., Ph.D. (Columbia University)
CALI, JAMES, Assistant Professor of Theatre
(1990), B.A., M.F.A. (University of Pittsburgh)

CALLARMAN, MARY HELEN, Director of Academic Support, Undergraduate Studies

CALLARMAN, WILLIAM G., Associate Professor of Management

CAMR DONNA J., Assistant Professor of Education

CARON, RICHARD M., Assistant Professor of Mathematics
(1972), B.A., Ph.D. (Louisiana State University)

CARROLL, WILLIAM F., Professor of Engineering
(1985), B.S., M.S., Ph.D. (University of Illinois), P.E. (California, Florida and Illinois)

CELSON, ANTHONY, Assistant Professor of Political Science
(1990), B.A., M.A., Ph.D. (Ohio State University)

CERVONE, ANTHONY V., Professor of Foreign Languages and Literatures
(1968), B.A., Ph.D. (St. Louis University)

CHAI, BRUCE, Professor of Physics
(1989), B.S., Ph.D. (Yale University)

CHANDRASEKHARAN, NARAYANAN, Professor of Computer Science
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(1972), B.S., Ph.D. (University of Rochester)

STEWART, HELEN L., Instructor, Student Internships and Records
(1990), B.A., M.A. (University of Central Florida)

STICKLEY, C. MARTIN, Professor of Engineering
(1990), B.S.E.E., M.S.E.E., Ph.D. (Northeastern University)

STINARD, CHARLENE, Visiting Instructor of Political Science
(1990), B.S., M.A. (Columbia University)
STOUT, I. JACK, Professor of Biology  
(1972), B.S., M.S., Ph.D. (Washington State University)  
STRANGE, C. CLINTON JR., Assistant Professor of Engineering Technology  
(1986), B.I.E., M.S.E. (University of Central Florida), E.I. (Georgia)  
STRASSSFROER, SUSAN, Instructor of English  
(1985), B.A., M.A. (University of Central Florida)  
STRING, TANIA C., Instructor and UCF Gallery Curator  
(1986), B.S., M.A. (Florida State University)  
SUH, EDWARD K., Associate Professor of Social Work  
(1985), B.A., M.A., M.S.W., Ph.D. (Brandeis University)  
SULLIVAN, MICHAEL, Assistant Professor of Communication  
(1985), A.B., M.A. (University of Texas)  
SUNDARAM, KALPATHY B., Assistant Professor of Engineering Science  
(1987), B.S., B.E., M.T., Ph.D. (Indian Institute of Technology, Bombay)  
SUNG, STELLA, Visiting Instructor of Music  
(1987), B.M., M.F.A. (University of Florida)  
SWART, WILLIAM W., Chair, Department of Industrial Engineering and Management Systems and Professor of Engineering  
(1985), B.S., M.S., Ph.D. (Georgia Institute of Technology), P.E. (Florida)  
SWEENEY, MICHAEL J., Professor of Biological Sciences  
(1972), B.S., Ph.D. (Temple University School of Medicine)  
SWEET, HAVEN C., Professor of Biology  
(1971), B.S., Ph.D. (Syracuse University)  
SZNAIER, MARIO, Assistant Professor of Engineering  
(1990), B.S., B.S.E.E., M.S.E.E. (University of Washington)  
TANZI, LAWRENCE A., Associate Professor of Communication  
(1969), B.S.M.E., M.S., Ph.D. (Indiana University)  
TAYLOR, FINLEY M., Assistant Professor of Foreign Languages and Literatures  
(1970), A.B., M.A., Ph.D. (University of Tennessee)  
TAYLOR, JAMES S., Director Environmental Systems Engineering Institute and Professor of Engineering  
(1977), B.S.I.E., M.S., Ph.D. (University of Florida), P.E. (Florida)  
TAYLOR, K. PHILLIP, Professor of Communication  
(1970), B.A., Ph.D. (Indiana University)  
TAYLOR, MICHAEL D., Associate Professor of Mathematics  
(1968), B.A., M.S., Ph.D. (Florida State University)  
TAYLOR, WALTER K., Professor of Biology  
(1969), B.S., M.S., Ph.D. (Arizona State University)  
TEEPELE, EUGENE E., Professor of Marketing  
(1968), B.S., M.B.A., D.B.A. (University of Oregon)  
TELL, PHILLIP M., Associate Professor of Psychology  
(1969), B.A., M.A., Ph.D. (University of Virginia)  
THOMAS, MARGARET H., Professor of Psychology  
(1971), B.A., M.A., Ph.D. (Tulane University)  
THOMPSON, RICHARD A., Professor of Education  
(1969), B.S., M.S., Ed.D. (Ball State University)  
THOMSON, DOUGLAS R., Assistant Professor of Military Science  
THORNTON, DEBORAH P., Assistant Professor of Health Sciences  
(1989), B.S., M.Ed. (University of North Carolina)  
TOWLE, HERBERT C., Professor of Engineering  
(1970), B.S.E., M.S.E., Ph.D. (University of Michigan), P.E. (Florida, New York)  
TREFONAS, LOUIS M., Associate Vice President for Academic Affairs and Dean of Graduate Studies; Professor of Chemistry  
(1981), B.A., M.S., Ph.D. (University of Minnesota)  
TRIMBLE, JOHN L., Visiting Assistant Professor of Finance  
(1990), B.S., M.A., Ph.D. (Texas A&M University)
<table>
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<tr>
<th>Name</th>
<th>Position and University</th>
<th>Degrees and Awards</th>
</tr>
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<tbody>
<tr>
<td>WELCH, JUDITH K.</td>
<td>Assistant Professor of Accounting</td>
<td>B.A., M.B.A., Ph.D. (Florida State University)</td>
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<tr>
<td>WELCH, PAUL R.</td>
<td>Associate Professor of Accounting</td>
<td>B.S., M.B.A., Ph.D. (University of Florida)</td>
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<td>WELKE, JAMES W.</td>
<td>Chair, School of Communication and Professor of Communication</td>
<td>A.B., M.A., Ph.D. (Indiana University)</td>
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<td>WELKER, PATRICIA E.</td>
<td>Assistant Professor of Health Sciences</td>
<td>A.S., B.S., M.A. (Idaho State University)</td>
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<td>WELLMAN, CHARLES W.</td>
<td>Associate Professor of Art</td>
<td>B.F.A., M.A., M.F.A. (The University of New Mexico)</td>
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<tr>
<td>WESTRICK, ROBERT W.</td>
<td>Associate Vice President for Academic Affairs and Director, Brevard Campus</td>
<td>B.A., M.Ed., Ed.D. (University of Alabama)</td>
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<tr>
<td>WHILE, MARGARET L.</td>
<td>Assistant Professor of Education</td>
<td>B.S., M.A., Ed.D. (Ball State University)</td>
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<tr>
<td>WHISLER, BRUCE A.</td>
<td>Associate Dean, College of Arts and Sciences and Associate Professor of Music</td>
<td>B.A., Ph.D. (University of Rochester)</td>
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<tr>
<td>WHITE, DANIEL R.</td>
<td>Assistant Professor of Humanities</td>
<td>B.A., M.A., Ph.D. (Florida State University)</td>
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<tr>
<td>WHITE, KENNETH R.</td>
<td>Associate Professor of Economics</td>
<td>B.S., Ph.D. (University of Oklahoma)</td>
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<td>WHITE, ROSEANN S.</td>
<td>Professor of Biological Sciences</td>
<td>B.S., Ph.D. (University of Texas)</td>
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<tr>
<td>WHITEHOUSE, GARY E.</td>
<td>Dean, College of Engineering and Professor of Engineering</td>
<td>B.S.I.E., M.S.I.E., Ph.D. (Arizona State University), P.E. (Florida, Pennsylvania)</td>
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<td>WHITNEY, JOHN C.</td>
<td>Associate Professor of Music</td>
<td>B.S., M.M. (New England Conservatory)</td>
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<td>WHITTIER, HENRY O.</td>
<td>Professor of Biology</td>
<td>B.S.Ed., M.A., Ph.D. (Columbia University)</td>
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<td>WILDMAN-PEPE, JULIE L.</td>
<td>Assistant in Statistical Consulting</td>
<td>B.A., M.S. (Purdue University)</td>
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<td>WILLIAMS, HENRY L.</td>
<td>Assistant Professor of Engineering Sciences</td>
<td>B.A., M.S., Ph.D. (Washington University)</td>
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<td>WILLIAMS, KARRI J.</td>
<td>Associate Professor, College of Education</td>
<td>B.S., M.Ed., Ph.D. (University of Arizona)</td>
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<tr>
<td>WILLS, D. SCOTT</td>
<td>Assistant Professor of Computer Engineering</td>
<td>B.S., M.S., Ph.D. (Massachusetts Institute of Technology)</td>
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<tr>
<td>WINK, DIANE M.</td>
<td>Assistant Professor of Nursing</td>
<td>B.S., M.A., M.S.N. (Villanova University)</td>
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<tr>
<td>WINTER, PETER J.</td>
<td>Assistant Professor of Management</td>
<td>B.B.A. (University of Georgia)</td>
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<td>WODZINSKI, RUDY J.</td>
<td>Professor of Biological Sciences</td>
<td>B.S., M.S., Ph.D. (University of Wisconsin)</td>
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<td>WOELK, MARTHA D.</td>
<td>Visiting Instructor of History</td>
<td>B.A., M.A. (University of Central Florida)</td>
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<tr>
<td>WOLF, J. GARY</td>
<td>Distinguished Service, Professor of Music</td>
<td>B.M.Ed., M.M., D.M.A. (Eastman School of Music)</td>
</tr>
<tr>
<td>WOOD, ALEXANDER T.</td>
<td>Chair, Educational Foundations and Associate Professor of Education</td>
<td>B.A., M.S., Ph.D. (Florida State University)</td>
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<tr>
<td>WOOTEN, WILLIAM</td>
<td>Assistant Professor of Psychology</td>
<td>B.A., M.S., Ph.D. (Memphis State University)</td>
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<tr>
<td>WORDS, HELMUTH E.</td>
<td>Associate Professor of Engineering Technology</td>
<td>B.S.M.E., M.S.M.E. (Stanford University), P.E. (Florida, California)</td>
</tr>
<tr>
<td>WORKMAN, DAVID A.</td>
<td>Associate Professor of Computer Science</td>
<td>B.S., M.S., Ph.D. (University of Iowa)</td>
</tr>
<tr>
<td>WORRELL, LEWIS T.</td>
<td>Associate Professor of Cardiopulmonary Sciences</td>
<td>B.S., M.P.H. (University of Central Florida)</td>
</tr>
</tbody>
</table>
WRANCHER, ELIZABETH A., Associate Professor of Music
(1974), B.M. (Indiana University), Prima Soprano Koblenz, Augsburg and Detmold

WYATT, WYATT Professor of English
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WYCOFF, EDGAR B., Associate Professor of Communication
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XANDER, JAMES A., Associate Professor of Economics
(1969), B.S., Ph.D. (University of Georgia)

YON, DONNA L., Assistant Professor of Accounting
(1984), B.S., M.Acc., Ph.D. (Texas A&M University)

YOUmans, KAREN G., Visiting Assistant Professor of Medical Records Administration
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Yousef, Yousef A., Professor of Engineering
(1970), B.S.C.E., M.S., Ph.D. (University of Texas), P.E. (Florida, Texas)

YUAN, JIANN S., Assistant Professor of Engineering
(1989), B.S.E., M.S.E., Ph.D. (University of Florida)

Zank, Gail M., Assistant Professor of Marketing
(1990), B.S., M.B.A. (Texas A&M University)

Zayed, Ahmed I., Associate Professor of Mathematics
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PROFESSIONAL LIBRARIANS

ALLISON, ANNE MARIE, Director of Libraries
(1983), B.A., M.A.L.S. (Rosary College)

ANDREWS, JOSEPH C., Head, Collection Development and Acquisitions Department and
Associate University Librarian

BAIN, JANICE, Head, Access Services and Associate University Librarian
(1966), B.A., M.L.S. (University of Maryland)

BALLARD, ROCHELLE R., Assistant University Librarian
(1989), B.S., M.L.S. (University of Maryland)

BAZEMORE, NORRIS S., Associate University Librarian
(1990), B.A., M.A., M.L.S. (University of South Carolina)

CATANIA, MEM, Instructor Librarian
(1990), B.A., M.L.S. (University of Pittsburgh)

FRANKS, JEFFREY, Assistant Head, Reference Department and
Assistant University Librarian
(1987), B.A., M.L.S. (Kent State University)

GROVDAHL, ELBA, Associate University Librarian
(1973), B.A., M.S.L.S., A.M.D. E.D.D. (Florida State University)

HINSHAW, CAROLE S., Assistant University Librarian
(1989), B.S., M.L.S. (Louisiana State University)

HOLLER, SUZANNE, Associate University Librarian
(1987), B.A., M.L.S. (University of South Florida)

HOOD, SHARON L., University Librarian
(1989), B.Sc., M.L.S. (University of Toronto)

HUDSON, PHYLLIS J., University Librarian
(1972), B.A., M.S.L.S. (University of Illinois)

LaBRAKE, Orlyn B., Associate Director of Libraries
(1977), B.A., M.L.S. (State University of New York at Albany)

LEE, CHANG C., University Librarian
(1983), L.L.B., M.S., Ph.D. (Florida State University)

MAHAN, CHERYL B., Associate University Librarian
(1977), B.A., M.L.S. (Florida State University)

PFARRER, THEODORE R., Associate University Librarian
(1976), B.S., M.L.S., Ad.M.L.S., Ph.D. (Florida State University)
ROSSI, PETER, Head, Cataloging Department and Associate University Librarian
(1973), A.B., M.L.S. (State University of New York at Genesco)
RUPPERT, CHERYL, Assistant University Librarian
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(1971), B.A., M.Ed., Ph.D. (Florida State University)
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BROWNE, ROLAND A.
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(1973), B.S., M.A.T., Ph.D. (Florida State University)
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CRAIG, ALBERT
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DUTTON, ARTHUR M.
(1966), B.S., Ph.D. (Iowa State University)
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ELLIS, LESLIE L.
(1968), B.S., M.S., Ph.D. (University of Oklahoma)
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ERICKSON, ERNEST E.
(1969), B.E.E., M.S.E., Ph.D. (University of Florida), P.E. (Florida)
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(1968), B.A.Ed., M.A.Ed., Ph.D. (Kent State University)  
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(1968), B.S., M.Ed., Ed.D. (University of Missouri)  
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GRiffITH, HAROLD L.  
(1972), B.S., M.S. (Pennsylvania State University), P.E. (Florida)  
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(1967), B.M.E., B.E.E., M.S.E., Ph.D. (University of Florida) P.E. (Florida)  
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HUBLER, J. W.  
(1967), B.S.C.E., C.E., M.S.E., M.S.C.E. (Yale University), D.Eng. S. (Hon.) (University of Central Florida), P.E. (Florida and 18 other states)  
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LYTLE, ERNEST J.*  
(1968), B.S., M.A., Ph.D. (University of Florida)  
Professor Emeritus of Mathematical Sciences

McLELLON, WALDRON M.  
(1969), B.S., B.C.E., M.C.E., M.S. (Physics), M.S. (Env. Engr.), Ph.D. (Rensselaer Polytechnic Institute)  
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MILLER, CALVIN C.  
(1967), B.A., M.Ed., Ed.D. (Florida State University)  
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MILLER, ERNEST E.  
(1968), B.S., M.S., Ed.D. (University of North Dakota)  
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MILLICAN, CHARLES N.  
(1965), B.S., M.A., Ph.D. (University of Florida)  
President Emeritus and Professor of Finance

OSTLE, BERNARD  
(1967), B.A., M.A., Ph.D. (Iowa State University)  
Professor Emeritus of Statistics

REIDENBACH, RICHARD C.  
(1970), B.A., M.S., Ph.D. (St. Louis University)  
Professor Emeritus of Management

SCHRADER, GEORGE F.  
(1969), B.S., M.S., Ph.D. (University of Illinois), P.E. (Florida, Illinois)  
Professor Emeritus of Engineering

TESORI, ANTHONY P.  
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TOWLE, HERBERT C.  
(1970) B.S.E., M.S.E. Ph.D. (University of Michigan) P.E. (Florida, New York)  
Professor Emeritus of Engineering

WRIGHT, BURTON  
(1970), B.S., M.S., Ph.D. (Florida State University)  
Professor Emeritus of Sociology

HONORARY DEGREES AWARDED

December, 1969  Kurt H. Debus, Doctor of Engineering Science  
William H. Dial, Doctor of Commercial Science

*Deceased
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<tr>
<th>Date</th>
<th>Name</th>
<th>Degree and Field</th>
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<tr>
<td>June 1970</td>
<td>John W. Young</td>
<td>Doctor of Applied Science</td>
</tr>
<tr>
<td>March 1973</td>
<td>Louis C. Murray</td>
<td>Doctor of Public Service</td>
</tr>
<tr>
<td>August 1974</td>
<td>Fred Elmo Clayton</td>
<td>Doctor of Professional Engineering</td>
</tr>
<tr>
<td>August 1976</td>
<td>Richard F. Livingston</td>
<td>Doctor of Business Administration</td>
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<tr>
<td>June 1979</td>
<td>Albert F. Hegenberger</td>
<td>Doctor of Engineering Science</td>
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<td></td>
<td>Lee R. Scherer</td>
<td>Doctor of Engineering Science</td>
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<tr>
<td>December 1979</td>
<td>Joseph D. Duffey</td>
<td>Doctor of Humane Letters</td>
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<tr>
<td>August 1980</td>
<td>Howard Phillips (Posthumous)</td>
<td>Doctor of Humanities</td>
</tr>
<tr>
<td>December 1981</td>
<td>Gene Burns</td>
<td>Master of Letters</td>
</tr>
<tr>
<td>April 1982</td>
<td>Andrew Duda, Jr.</td>
<td>Doctor of Agricultural Service</td>
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<td>Ferdinand Duda</td>
<td>Doctor of Agricultural Service</td>
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<td>John Duda</td>
<td>Doctor of Agricultural Service</td>
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<td>Robert J. Whalen</td>
<td>Doctor of Engineering Science</td>
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<tr>
<td>July 1982</td>
<td>Mary Jo Stroud Davis</td>
<td>Doctor of Public Service</td>
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<td>William E. Davis</td>
<td>Doctor of Public Service</td>
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<td>December 1982</td>
<td>Joseph A. Boyd</td>
<td>Doctor of Engineering Science</td>
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<td>July 1983</td>
<td>J. W. Hubler</td>
<td>Doctor of Engineering Science</td>
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<td>Charles Wadsworth</td>
<td>Doctor of Public Service</td>
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<td>December 1984</td>
<td>Allan E. Gottlieb</td>
<td>Doctor of Laws</td>
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<tr>
<td>June 1985</td>
<td>George J. Becker, Jr.</td>
<td>Doctor of Public Service</td>
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<td>Jerry Collins</td>
<td>Doctor of Public Service</td>
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<td>D. Robert Graham</td>
<td>Doctor of Public Service</td>
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<td>Walter O. Lowrie</td>
<td>Doctor of Engineering Science</td>
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<td>William C. Schwartz</td>
<td>Doctor of Engineering Science</td>
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<tr>
<td>March 1986</td>
<td>Isaac Bashevis Singer</td>
<td>Doctor of Letters</td>
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<td>October 1988</td>
<td>Elle Wiesel</td>
<td>Doctor of Letters</td>
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<td>December 1988</td>
<td>Sven Caspersen</td>
<td>Doctor of Engineering Science</td>
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<td>John D. Holloway</td>
<td>Doctor of Public Service</td>
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<td>Wolfgang-Datleff Petri</td>
<td>Doctor of Commercial Science</td>
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<td>May 1989</td>
<td>David Albertson</td>
<td>Doctor of Humane Letters</td>
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<td>Frank M. Hubbard</td>
<td>Doctor of Public Service</td>
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<td>William S. Jenkins</td>
<td>Doctor of Humane Letters</td>
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<td>Charles N. Millican</td>
<td>Doctor of Laws</td>
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<td>James C. Robinson</td>
<td>Doctor of Public Service</td>
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<td>May 1990</td>
<td>Helen Harris Perlman</td>
<td>Doctor of Humane Letters</td>
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<td>Thaddeus Seymour</td>
<td>Doctor of Letters</td>
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<td>May 1991</td>
<td>Roald Hoffman</td>
<td>Doctor of Science</td>
</tr>
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</table>

**COURTESY APPOINTMENTS**

**ALBERT, DAVID B.**, Clinical Faculty, Cardiopulmonary Sciences  
M.B.A., RRT. (Florida Institute of Technology)

**ALBERT, JONATHON C.**, Clinical Faculty, Cardiopulmonary Sciences  
RRT. B.S. (University of Central Florida)

**ALEXANDER, GREGOR**, Clinical Faculty, Cardiopulmonary Sciences  
M.D. (Javeriana University)

**ALMEIDA, ARTIE**, Faculty Associate, Instructional Programs  
M.A. (University of Central Florida)

**ARTHUR, THOMAS**, Clinical Faculty, Cardiopulmonary Sciences  
B.S., RRT, RDMS. (University of Central Florida)

**BARGAR, SHERRI**, Faculty Associate, Educational Services  
M.S. (Rollins College)

**BARRON, ANN**, Faculty Associate, Educational Services  
M.A. (University of Central Florida)

**BAUSHER, MICHAEL G.**, Research Associate of Molecular Biology and Microbiology  
B.S., M.S., Ph.D. (University of Florida)

**BECKER, GARY**, Faculty Associate, Educational Services  
M.S. (Syracuse University)

**BERTRAM, BURT**, Associate, Educational Services  
Ed.D. (University of Florida)
BEST, JAMES, Faculty Associate in Theatre
BIRD, MARY, Faculty Associate, Educational Foundations
MSM (Rollins College)

BOLVES, ELLEN, Faculty Associate, Educational Services
M.A. (University of Central Florida)

BOULWARE, ZELLA, Faculty Associate, Educational Services
M.Ed. (University of Central Florida)

BROWN, ASHMUN, Clinical Faculty, Health Sciences
J.D. (University of Michigan)

BUTKINS, PETER, Faculty Associate, Educational Services
M.S. (Niagara University)

CAPRAUN, LYNN W., Clinical Faculty, Cardiopulmonary Sciences
RTT, B.S., M.S. (University of Central Florida)

CARLETON, CHARLES C., Clinical Faculty, Medical Laboratory Sciences
M.D. (McGill University)

CARR, EDWARD O., Clinical Faculty, Medical Laboratory Sciences
S.B.B., M.T., (ASCP), B.S. (Mississippi State)

CLARKE, THOMAS L., Faculty Associate, Department of Mathematics
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Member, State University System of Florida