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University of Central Florida
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Volume 25, Number 1
May 1992

Cover Design: Jagdish J. Chavda

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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.

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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 330, 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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ACADEMIC CALENDAR

FALL SEMESTER 1992

March 13
March 13
August 17 (1 p.m.)
August 16-21
August 18-21
August 24
August 25-28
August 28
August 28
August 28
August 28
August 31
September 7
September 4
September 17
September 19
October 3
October 3
October 10
October 16
October 17
October 24
November 7
November 11
November 13
November 26-28
December 3
December 4
December 5
December 5-11
December 11 (4 p.m.)
December 12
December 12
December 15 (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—$50 late fee
Last day for refund/fees due
Graduation application deadline
Audit registration
Labor Day Holiday (University-wide)
Registration deadline for October 3 CLAST
Last day for removing temporary student status
MCAT
LSAT
CLAST
GRE
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
Prep day for final exams
LSAT
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 1993

Priority application deadline
October

Readmission application deadline
January 6 (1 p.m.)

Residence Halls open
January 7

Orientation and advisement
January 7-8

Registration by appointment
January 11

Classes begin
January 12-13

Add/Drop
January 13

Last day to adjust class schedule
January 13

Last day to submit Grade Forgiveness Request
January 13

Last day of late registration—$50 late fee
January 13

Last day for refund/fees due
January 14

Audit registration
January 15

Graduation application deadline
January 16

Martin Luther King Day. (University Holiday)
January 18

Registration deadline for February 20 CLAST
January 22

FTCE
February 4

Last day for removing temporary student status
February 6

GRE
February 13

LSAT
February 20

CLAST
February 26

Withdrawal deadline
March 8-13

Spring Holidays
March 20

GMAT
April 2

Last day to remove an "I" earned last semester
April 7

Founders' Day Honors Convocation (Classes cancelled
10 am-noon)

April 17

FTCE
April 17

GRE
April 26

Classes end for Spring Semester
April 17

MCAT
April 27-28

Prep day for final exams
April 29-May 5

Final examination period
May 5 (4 p.m.)

Residence Halls close
May 8

Commencement
May 10 (12 noon)

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

## SUMMER “C” SEMESTER 1993

(See also Summer “A” and “B”)

*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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**Calendar Highlights:**
- **February 15:** Priority application deadline
- **February 15:** Readmission application deadline
- **May 5:** Registration deadline for June 5 CLAST
- **May 12 (1 p.m.):** Residence Halls open for Summer Semester
- **May 13:** Orientation and advisement
- **May 13-14:** Registration by appointment
- **May 17:** Classes begin
- **May 18-19:** Add/Drop
- **May 19:** Last day to adjust class schedule
- **May 19:** Last day to submit Grade Forgiveness Request
- **May 19:** Last day of late registration—$50 late fee
- **May 19:** Last day for refund/fees due
- **May 20:** Audit registration
- **May 21:** Graduation application deadline
- **May 31:** Memorial Day Holiday (University-wide)

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<td>Residence halls close</td>
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ACADEMIC CALENDAR

SUMMER "A" TERM 1993

*February 15
Priority application deadline
February 15
Readmission application deadline
May 5
Registration deadline for June 5 CLAST
May 12 (1 p.m.)
Residence Halls open for Summer "A" term
May 13
Orientation and advisement
May 13-14
Registration by appointment
May 17
Classes begin for Summer "A" Term
May 18-19
Add/Drop
May 19
Last day to adjust class schedule
May 19
Last day to submit Grade Forgiveness Request
May 19
Last day for refund
May 19
Last day for late registration—$50 late fee
May 20
Audit registration
May 21
Graduation application deadline
May 31
Memorial Day Holiday (University-wide)
June 4
Withdrawal deadline
June 5
CLAST
June 5
GRE
June 10
Last day for removing temporary student status
June 19
GMAT
June 25
Classes end
June 25 (4 p.m.)
Residence Halls close
June 30 (12 noon)
Grades due in Registrar's Office
August 7
FTCE
August 7
Commencement

*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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ACADEMIC CALENDAR

SUMMER “B” TERM 1993

*February 15  
Priority application deadline
February 15  
Readmission application deadline
May 13-14  
Registration (see also June 25)
May 18-19  
Add/Drop (see also June 29)
May 21  
Graduation application deadline
June 25 (5 p.m.)  
Residence Halls open
June 25  
Orientation and advisement
June 25  
Registration by appointment
June 28  
Classes begin
June 29  
Add/Drop
June 29  
Last day to adjust class schedule
June 29  
Fees Due
June 29  
Last day of late registration — $50 late fee
June 29  
Last day for refund/fees due
June 29  
Last day to submit Grade Forgiveness Request ("B" term only)
June 30  
Audit Registration
July 5  
Independence Day Holiday (University-wide)
July 16  
Withdrawal deadline
July 16  
Last day to remove an "I" earned last semester
July 24  
Last day for removing temporary student status
August 7  
FTCE
August 6  
Classes end
August 6 (4 p.m.)  
Residence Halls close
August 7  
Commencement
August 9 (12 noon)  
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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CAMPUS SERVICES DIRECTORY

OFFICE/SERVICE

A.A. DEGREE APPLICATION
ACADEMIC CLASSIFICATION
ACADEMIC RESOURCE CENTER
ACADEMIC STATUS

ADD/DROP

ADDRESS CHANGE
ADMISSIONS/STANDARDS COMMITTEE
AUDIT A CLASS

BANKING—see Credit Union
BOARD ROOM
BOOKS, SUPPLIES, & SUNDRY ITEMS
CAREER RESOURCE CENTER
CATALOGS
CERTIFICATION OF ENROLLMENT:
  INTERNATIONAL STUDENTS
  GOOD STUDENT DISCOUNT
  FINANCIAL AID & LOANS
CHANGE OF MAJOR
CHECK CASHING
CLAST INFORMATION

CLEP
CONTINUING EDUCATION,
CENTER FOR
COOPERATIVE EDUCATION
COUNSELING:
  ACADEMIC
  ADMISSIONS
  CAREER

PERSONAL
RELIGIOUS
CREDIT BY EXAMINATION
CREDIT UNION
DECALS (PARKING)
EMERGENCY
FINANCIAL AID
FLORIDA RESIDENT AFFIDAVIT
FRATERNITIES
GORDON RULE
GRADE FORGIVENESS
GRADUATE ADMISSIONS-LIAISONS
GRADUATION
HANDICAPPED STUDENTS

HEALTH INSURANCE
 "HOLD" CLEARANCES
HOUSING (Campus/Off-Campus)
 "I.D." CARD INFORMATION

LOCATION

Registrar/Records AD 1st Floor 3-3100
Registrar AD 1st Floor 3-3100
PC-1 102 3-5130
Registrar AD 1st Floor 3-3100
(or Academic Advisor in College)
Registrar/Records (Class Schedule
lists dates for current term)
Registrar/Records AD 1st Floor 3-3100
Admissions AD 1st Floor 3-3000
Registrar/Records AD 1st Floor 3-3100
(Details in UCF Catalog & Class Schedule)

AD 3rd Floor
Bookstore, Student Services 3-2665
AD 124 3-2361
Bookstore, Student Services 3-2665
Registrar/Records AD 1st Floor 3-3100
Registrar/Records AD 1st Floor 3-3100
Registrar/Records AD 1st Floor 3-3100
Present Department
Bookstore, Student Services 3-2665
Student Academic Resource Center,
  PC1-102 3-5130
Counseling & Testing RS 203 3-2811
Research Pavilion/ 249-6100
Research Park
PH 210 3-2667

Academic Advisor (Degree Program Advisor)
Admissions AD 1st Floor 3-3000
Counseling & Testing RS 203 and 3-2811
Career Resources Center
AD 124 3-2361
Counseling & Testing RS 203 3-2811
Campus Ministry SC 208 3-2468
Department Chair
Credit Union, Student Services 3-2855
Police Department 3-5812
Fire, Police, Ambulance 9-1-1
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 3-3100
AD 146 3-2766
Graduation Area/Registrar 3-2842
Handicapped Student Coordinator
AD 282 3-2371
Wellness Center 3-5841
Registrar/Records AD 1st Floor 3-3100
Housing Office SC 137 3-4663
Business Services AD 362 3-2624
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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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<td>Arts and Sciences</td>
<td>American Chemical Society</td>
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<td>Chemistry</td>
<td>National Association of Schools of Music (NASM)</td>
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<td>Music</td>
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<td>Business Administration (all disciplines)</td>
<td>American Assembly of Collegiate Schools of Business (AACSB)</td>
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<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>Engineering</td>
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<td>Aerospace Engineering</td>
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<td>Cardiopulmonary Science</td>
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<td>Medical Record Administration</td>
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<td>Social Work</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. 50-5567

Associate Director, Academic Affairs
James O. Hill
(407) 632-0067 UCF Ext. 50-5565

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. 50-5561

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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 17 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)
  Liberal Studies Program (B.A./B.S.)
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
  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

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.
UCF at Daytona Beach
UCF/DBCC Higher Education Center
1200 Volusia Avenue
P. O. Box 2811
Daytona Beach, Florida 32120-2811
(904) 255-7423

Assistant Director, Student Services:
William J. Wetherell
(904) 255-7423 Ext. 4022

Director of Undergraduate Advising:
Sylvester Covington
(904) 254-4460 Ext. 4017

Associate Vice President and Campus Director:
Sarah H. Pappas
(904) 255-7423 Ext. 4012

Associate Campus Director:
David C. Jordan
(904) 255-7423 Ext. 4023

The Daytona Beach Campus of the University of Central Florida is located in a new two-building Higher Education Center it shares with Daytona Beach Community College. 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**
Liberal Studies Program
Psychology

**College of Business Administration (904) 254-4412**
General Business Administration
Finance (partial)
Management (partial)
Marketing (partial)
The South Orlando Campus of the University of Central Florida is located on Lake Ellenor Drive in Orlando Central Park (west of South Orange Blossom Trail between Oak Ridge and Sand Lake Roads), a location convenient to students who live or work in southwest Orange County and north Osceola County.

The South Campus offers upper division evening courses in business administration and the arts & sciences, undergraduate and graduate vocational education classes, and a graduate engineering program. It also provides a variety of non-credit programs specifically designed to meet the needs of business and industry located in the area, and serves as a site for state-wide seminars and workshops.
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 six fully funded endowed chairs and three 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.

- **Carl H. Galloway Chair in Business Administration**—Created in 1986 to honor Carl Galloway, a pioneer in telecommunications. This chair will establish a Ph.D. program in Business Administration.

- **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.

- **General Mills Chair in Restaurant Management**—Created in 1990 to develop a program of excellence in restaurant management, this chair, the first of its kind in the country, will also serve as a critical resource for the hospitality industry.

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

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

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

INTERNATIONAL STUDIES AND PROGRAMS

**Director:** Denise L. Young, PC 42, Room 114 (Social Work Building), 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 student 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.

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.

For information on additional international studies and programs, look under these listings:
Asian Studies
Canadian Studies Program
Center for Multilingual, Multicultural Studies
Foreign Study Centers
Judaic Studies Program
Latin American Area Studies
Soviet Area 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 facility of 200,000 square feet, has a collection of over 830,000 volumes with approximately 6,300 subscriptions (journals, newspapers, and other serials) and over 7,000 media titles. The Library is a partial depository for US and Florida documents, and US Patents. The Library online catalog, called LUIS, may be accessed through terminals in the Library, at other Campus locations, or from personal computers at home. Through LUIS, Library users can determine whether the UCF Library owns a particular item, and the location and availability of the item. In addition, LUIS also provides online access to catalogs of all state university libraries in Florida, and to ERIC and IAC Academic and Business Indexes.

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 paraprofessionals is available to assist and advise those using the Library. Arrangements may also be made for class or small group instruction. Faculty, staff, and students can obtain materials not available in the Library's collections through the Interlibrary Loan service. The Library can provide customized computer-produced bibliographies from any of approximately 500 different commercially available databases.

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 Kurzweil 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. Online 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, distribution, 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 Resources also administers the Center for Faculty Support, the Multimedia Center, Brevard Educational Cable Network ITFS television, 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 members, 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, 30 S. Magnolia Ave., Suite 250, 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 including the Institute for Simulation and Training, and the Center for Research in Electro-Optics and Lasers (CREOL), are located in the Research Park. The U.S. Naval Training Systems Center (NTSC), the focal point of the nation's simulation and training industry, has its headquarters in the Research Park. Over 700 million dollars a year in federal contracts is granted by NTSC each year.

Currently over 70 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.

**OAK RIDGE ASSOCIATED UNIVERSITIES (ORAU)**

The University of Central Florida is a sponsoring institution of Oak Ridge Associated Universities (ORAU), a not-for-profit consortium of 62 colleges and universities and a management and operating contractor for the U.S. Department of Energy (DOE) with principal offices located in Oak Ridge, Tennessee. Founded in 1946, ORAU identifies and helps solve problems in science, engineering, technology, medicine, and human resources, and assists its member universities to focus their collective strengths in science and technology research on issues of national significance.

ORAU manages the Oak Ridge Institute for Science and Education (ORISE) for DOE. ORISE is responsible for national and international programs in science and engineering education, training and management systems, energy and environment systems, and medical sciences. ORISE's competitive programs bring students at all levels, precollege through postgraduate, and university faculty members into federal and private laboratories.

ORAU's office for University, Industry, and Government Alliances (UIGA) seeks out opportunities for collaborative alliances among its member universities, private industry, and federal laboratories. Current alliances include the Southern Association for High Energy Physics (SAHEP) and the Center for Bio-Electromagnetic Interaction Research (CBEIR). Other UIGA activities include the sponsorship of conferences and workshops, the Visiting Scholars program, and the Junior Faculty Enhancement Awards.

For additional information contact Dr. Michael Bass, Vice President for Research, AD 243, Phone (407) 823-3778.
STUDENT AFFAIRS

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 THE DEAN OF STUDENTS
The Office of the Dean of Students is the primary source for students seeking information on non-academic areas of the University. The office staff strives to introduce students to educational opportunities designed to provide personal, social, and academic growth outside the classroom. Additionally, the Deans supervise the judicial affairs process as well as counsel students confronted with a variety of difficulties, referring students for specialized professional services as necessary.

The Division of Student Affairs annually publishes the student handbook, The Golden Rule, which contains more detailed information on student life. Copies may be obtained in the Student Affairs Suite, Room 282, Administration Building. Students are urged to take advantage of the many services and educational programs available through the Dean of Students Office and the Division.

CONFIDENTIALITY OF STUDENT RECORDS
The procedures for the confidentiality of student records are based on state regulations and the federal Family Educational Rights and Privacy Act of 1974. Students who have questions concerning the confidentiality of records should contact 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 provide a system whereby students can effect progressive changes that bring about improvements in campus life. Student Government also endeavors to promote better communication and understanding among the UCF family and to provide certain services which impact student life. All enrolled students at UCF campuses, both graduate and undergraduate, are considered active members of Student Government who are allowed to voice their opinions through senate representatives. Funds available from the Activity and Service Fee paid by students are used to provide numerous activities and services to students to support their academic endeavors at UCF. SG is effective at ensuring that the voice of the student is recognized at the state and local levels.

The democratic process of SG is grounded in the fundamental structure of the U.S. Government. The executive, legislative, and judicial branches have representatives from each college at UCF. The structure of SG provides an atmosphere that reflects the democratic processes of the real world thus providing students an opportunity to become educated and experienced in practical situations.
Some of the services made available to students and funded by student activity and service fees are: legal services, computer lab, discount entertainment tickets, free local telephones, and vehicles for clubs' and organizations' use.

Students interested in working with SG may obtain information from the SG 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.

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 and 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.

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. Currently, there are seven residence halls on the campus of the University of Central Florida. The total combined designed capacity of the seven halls is 867 spaces. Because of the limited amount of space in University housing facilities, the University 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.
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**

Within two miles of the campus are numerous apartment and duplex communities, in addition to a privately-owned residence hall complex. Sidewalks, bike paths, and Tri-County 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 campus community. 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 of the 24-hour Student Information Buzzline, (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 information may be obtained from the International Office, Administration Building Suite 225, or by calling (407) 823-2337.
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, 9-11 semester hours for three-quarter time benefits, and 6-8 semester hours for half-time benefits. Five semester hours or less will be reimbursed at cost of tuition and fees or quarter-time depending on DVA Chapter. Students 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.

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 UCF Student Records.
Veterans and eligible dependents who wish to change their major, or pursue a double major or dual degree, 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. This includes a minor in Military Sciences. Note: some majors have room in the program for extra electives that can be filled with courses for a minor or for another major.

In order to receive veterans' educational benefits, students must maintain satisfactory academic progress, and conduct. Accordingly, benefits will be terminated for individuals who are disqualified, excluded, suspended or expelled from the University. If reinstated by the University following disqualification, exclusion, suspension or expulsion, 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. For students who fail to maintain satisfactory academic progress, benefits will terminated 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 semester 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:
Office of Minority Student Services (OMSS)
Student Academic Resource Center (SARC)
Student Academic Support Services (SASS)
ADMISSION

APPLICATION FOR ADMISSION

HOW TO APPLY: Applicants should complete the State University System application for admission, and include a 20-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, PO Box 160111, Orlando, FL 32816-0111.

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, 44.

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 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. The deadline for all readmission applications is the same as the deadline for new applications. (This date appears in the academic calendar.)

Readmission of a suspended (disqualified or excluded) student is never automatic. Students who have been disqualified or excluded must complete a readmission application.

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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.

All applicants seeking readmission who have attempted coursework at another institution since last attending UCF will normally be required to be in good standing (2.0 grade point average with no allowance for grade forgiveness) and eligible to return to the last institution attended.

**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 for Required Documents**

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. All final 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.

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. Students whose records are not satisfactory will be placed on Academic Probation and may, in certain instances, be removed from classes.

**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 an accredited 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.

**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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</thead>
<tbody>
<tr>
<td>English (Three of which must have included substantial writing.)*</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics (At or above the Algebra I level.)</td>
<td>3</td>
</tr>
<tr>
<td>Natural Science (Two of which must have included substantial laboratory requirements.)</td>
<td>3</td>
</tr>
<tr>
<td>Social Science (Included: History, Civics, Political Science, Economics, Sociology, Psychology, and Geography.)</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language (Both credits must be in the same language.)</td>
<td>2</td>
</tr>
<tr>
<td>Additional academic electives 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>
<td>4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>19</td>
</tr>
</tbody>
</table>

**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>
</tr>
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<tbody>
<tr>
<td>HSGPA</td>
<td>SAT or</td>
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<tr>
<td>2.0</td>
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<td>860</td>
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<tr>
<td>3.0</td>
<td>**</td>
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</tbody>
</table>

For rolling admissions, in addition to the unit requirements, a minimum 3.0 high school grade point average and 1000 SAT or 24 ACT will normally be required by UCF.

* Four units of English with substantial writing requirements will be required for admission to the University.

** Academic eligibility for admission is determined by a 3.0 or better grade point average and submission of admissions test scores.

Students who have been enrolled in dual enrollment courses will be required to have a "C" average (2.0 GPA) for all dual enrollment course work attempted.

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

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.

Applicants with Fewer Than 60 Credit Hours

All college transfer applicants with fewer than 60 semester hours of acceptable credit must 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 24, and have at least a B average (3.0 GPA) for all college-level academic courses attempted and be in good standing (minimum 2.0 grade point average) and eligible to return as a degree-seeking student to the last institution attended.

Applicants with 60 or More Credit Hours

In addition to the requirements outlined below, all college transfer applicants with 60 or more semester hours of acceptable credit must have a grade point average of at least 2.0 on a 4.0 system for all college-level academic course work attempted and be in good standing (minimum 2.0 grade point average) and eligible to return as a degree-seeking student to the last institution attended.
Applicants with an A.A. Degree from a Florida Public Institution

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 except for limited access programs, 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 transfers directly to UCF, 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, 1989.
B. Students who enrolled prior to August, 1989 in an Associate of Arts program at a Florida public community college or university and maintain continuous enrollment through the completion of the A.A. degree and 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.

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.

Florida Community College Associate in Arts graduates are guaranteed the following rights under the Statewide Articulation Agreement (State Board of Education Rule 6A-10.024):

1. Admission to one of the nine (9) state universities, except to "limited access" programs (programs that have additional admission requirements).
2. Acceptance of at least 60 credit hours by the state universities toward the baccalaureate degree.
3. Adherence to university requirements and policies based on the catalog in effect at the time the student first entered a community college, provided the student maintains continuous enrollment.
4. Transfer of equivalent courses under the Statewide Course Numbering System.
5. Acceptance by the state universities of credit earned in accelerated programs (e.g., CLEP, AP, PEP, Dual enrollment, Early Admission and International Baccalaureate).
6. No additional General Education Core requirements.
7. Advanced knowledge of selection criteria for limited access programs.
8. Equal opportunity with native university students to enter limited access programs.

Should any guarantee be denied, students have the right of appeal through the University Articulation Officer, Office of Community College Relations.

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

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.

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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 Transfer Credits

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 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) with a minimum 2.0 GPA, with no allowance for grade forgiveness, 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:

<table>
<thead>
<tr>
<th>Plan Type</th>
<th>Coverage Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic plan</td>
<td>US $ 3,000.00</td>
</tr>
<tr>
<td>Supplemental</td>
<td>US $30,000.00</td>
</tr>
<tr>
<td>Repatriation</td>
<td>US $ 3,000.00</td>
</tr>
<tr>
<td>Evacuation</td>
<td>US $ 3,000.00</td>
</tr>
</tbody>
</table>

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 at the parent institution and at the last institution attended 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) (Effective 8/1/92) ......... $20.00.
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).

Fall, Spring and Summer Semester 91-92 Rates

<table>
<thead>
<tr>
<th></th>
<th>Florida Resident</th>
<th>Non-Florida Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate¹</td>
<td>$49.16 per hour</td>
<td>$187.11 per hour</td>
</tr>
<tr>
<td>Graduate Level²</td>
<td>86.78 per hour</td>
<td>289.19 per hour</td>
</tr>
</tbody>
</table>

¹Undergraduate courses are those courses numbered 0-4999
²Graduate 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 and Late Payment Fees
   • A $50 late registration fee will be assessed all students who register during the late registration period and pay fees by the deadline.
   • A $50 late payment fee will be assessed all students who pay fees after the deadline.
   • Both a $50 late registration fee and a $50 late payment fee will be assessed all students who both register late and pay fees after the deadline.
   • Both a $50 late registration fee and a $50 late payment fee will be assessed all students who do not pay by the deadline, are cancelled and are then reinstated.

   All payments accepted after drop cards are mailed, approximately the third week of classes, must be cash, cashier's check or money order.

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 ........................................ $40.00

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 .......................... $43.00
   Summer Semester .................................. $32.00

H. Certificate of 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
K. Return Check Charge

Service charge on all returned checks is $15.00 or 5%, whichever is greater, and results in the loss of check cashing privileges.

**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 Appeals Committee 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 can not 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 1992-93 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 and/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), the need analysis report must be received from the national processor by March 15 of the preceding Spring.

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

All 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 of 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 that 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. The form will not be mailed from UCF.

It is crucial to follow the instruction booklet carefully. Errors, omissions, and/or submission without the filing fee, if required, 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 process 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 ACT Status 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 1-609-951-1025.

To transfer the remainder of a Pell Grant, students should request the need analysis processor to send a duplicate set of their Student Aid Reports (SAR's) to them. 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 the student is:
- 24 years old
- an orphan or ward of the court
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. Students must be enrolled at UCF for at least 6 UCF hours in order to be automatically deferred. Transient students may have their UCF tuition manually deferred by submitting a copy of their approved transient student form and class schedule from the transient institution to the UCF Financial Aid office, and signing a manual deferral authorization.

*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! 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 Deferment 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. Perkins Loans will be disbursed at the Cashier's Office (open Mon. 9:00 am to 6:00 pm, Tues-Fri - 9:00 am to 3:30 pm); a picture ID is required. Stafford and SLS checks will be mailed to students, except if the student has failed to complete all requirements for disbursement eligibility. In those cases only, the student must pick up the check in the Cashier's Office upon completion of the requirement(s).

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

<table>
<thead>
<tr>
<th>Week of withdrawal</th>
<th>Summer A, B, and C Terms</th>
<th>Amount of repayment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st week</td>
<td>100% of total aid* received</td>
<td></td>
</tr>
<tr>
<td>2nd week</td>
<td>Total aid* - book allowance - tuition and fees x 75%</td>
<td></td>
</tr>
<tr>
<td>3rd week</td>
<td>Total aid* - book allowance - tuition and fees x 50%</td>
<td></td>
</tr>
<tr>
<td>4th week or later</td>
<td>No repayment due</td>
<td></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, if selected, 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 (previous Summer, Fall, and 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 the 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.

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 is required to be submitted as a part of 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 will remain in effect. 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.

Approved Appeals: If the appeal is approved and requires a probationary period, the student must meet satisfactory academic standards for hours and a 2.0 minimum term G.P.A. for the next term enrolled at UCF.

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 BEHAVIOR STANDARDS

The University of Central Florida is committed to a policy of honesty in academic affairs. Examples of conduct for which students may be subject to academic and/or disciplinary penalties including expulsion are:

Cheating whereby non-permissible written, visual or oral assistance including that obtained from another student is utilized on examinations, course assignments or projects. The unauthorized possession or use of examination or course related material may also constitute cheating.

Plagiarism whereby another's work is deliberately used or appropriated without any indication of the source, thereby attempting to convey the impression that such work is the student's own. Any student failing to properly credit ideas or materials taken from another has plagiarized.

NOTE: A student who has assisted another in any of the aforementioned breach of standards shall be considered equally culpable.

In cases of cheating or plagiarism, the instructor may take appropriate academic action ranging from loss of credit for a specific assignment, examination or project to removal from the course with a grade of "F". Additionally, the instructor may request disciplinary action through the Dean of Students Office as outlined in The Golden Rule.

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
A—Excellent ................................................................. 4 grade points
B—Good ................................................................. 3 grade points
C—Average ............................................................. 2 grade points
D—Passing .............................................................. 1 grade point
F—Failure ............................................................... 0 grade point

Other Actions
W—Withdrawn ........................................................... 0 grade point
WP—Withdrawn Passing ............................................. 0 grade point
WF—Withdrawn Failing ............................................. 0 grade point
WM—Medical Withdrawal ........................................... 0 grade point
I—Incomplete .......................................................... 0 grade point
X—Audit (no credit) .................................................... 0 grade point
S—Satisfactory (with credit)/Satisfactory Progress
   (Research, Thesis, or Dissertation) ................................ 0 grade point
U—Unsatisfactory (no credit) ....................................... 0 grade point
T—(followed by grade)
   —Subsequently repeated (no credit) ......................... 0 grade point
R—(followed by grade)
   —Repeated course (grade forgiveness) ....................... 0 grade point
N—No grade reported by professor ............................... 0 grade point

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 or 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.

Semester Average Grade Point Average on work attempted during any given semester.
UCF Average Grade Point Average on all work attempted while in attendance at the University of Central Florida.
Overall Average Grade Point Average on all work attempted since entering college, including work from all previously attended institutions.
Academic Warning 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.

Academic Probation 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.
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 cannot 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

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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 "WP" 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. Students who are taking courses in transient status during the term in which they expect to graduate and who have been approved by the procedures indicated above, must provide an official transcript to the Graduation Area of the Records Office no later than two weeks after commencement. It is the student's responsibility to request this transcript from the transient institution. Students, whose transcripts not received by the deadline date, may not be approved for graduation that semester. Transient forms are available in the Records Office. Transient credit cannot be used to reduce the last 30 semester hour residency requirement for a baccalaureate degree or the last 20 semester hour residency requirement for an Associate of Arts degree. Transient credit cannot 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.
Except for: 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 comparable college 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 can not be used to reduce a grade point deficiency. For example, CLEP can not 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>
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<td>Social Science</td>
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*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>
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<tbody>
<tr>
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<td>3</td>
<td>50</td>
<td>None</td>
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<td>American Government</td>
<td>3</td>
<td>50</td>
<td>POS 2041</td>
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<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>
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<tr>
<td>American Literature***</td>
<td>6</td>
<td>50</td>
<td>AML 3031 and</td>
</tr>
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<td></td>
<td></td>
<td>AML 3051</td>
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<tr>
<td>Analysis and Interp. Lit.***</td>
<td>6</td>
<td>51</td>
<td>ENC 1101 and</td>
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<td>ENC 1102</td>
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<tr>
<td>Calculus w/Elem. Functions</td>
<td>4</td>
<td>49</td>
<td>MAC 3311</td>
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<td>Calculus w/Anal. Geometry</td>
<td>3</td>
<td>49</td>
<td>MAC 3253</td>
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<td>6.7</td>
<td>50</td>
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<td>College Algebra</td>
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<td>MAC 1104</td>
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<tr>
<td>College Algebra &amp; Trigonometry</td>
<td>3</td>
<td>50</td>
<td>MAC 1104 or</td>
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<td>MAC 1114</td>
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<td>ENC 1101 and</td>
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<td>Computer and Data Processing</td>
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<td>51</td>
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<td>ENL 3031 or</td>
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<td></td>
<td>ENL 3051</td>
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<td>51</td>
<td>ENC 1101 and</td>
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<td></td>
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<td>ENC 1102</td>
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<tr>
<td>General Biology****</td>
<td>6</td>
<td>49</td>
<td>BSC 1020</td>
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<td>General Chemistry****</td>
<td>6</td>
<td>50</td>
<td>CHM 1020 and 1032</td>
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<td></td>
<td></td>
<td></td>
<td>or CHS 1440</td>
</tr>
<tr>
<td>General Psychology</td>
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<td>50</td>
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<tr>
<td>Hematology***</td>
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<td>Human Growth and Development</td>
<td>3</td>
<td>51</td>
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<td>Immunohematology**</td>
<td>6.7</td>
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<tr>
<td>Introduction to Accounting</td>
<td>3</td>
<td>50</td>
<td>ACG 2001</td>
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<td>Introduction to Business Law</td>
<td>6</td>
<td>51</td>
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<td>Introduction to Management</td>
<td>3</td>
<td>49</td>
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<tr>
<td>Introduction to Macroeconomics</td>
<td>3</td>
<td>50</td>
<td>ECO 2013</td>
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<td>Introduction to Microeconomics</td>
<td>3</td>
<td>50</td>
<td>ECO 2023</td>
</tr>
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</table>
Introduction to Marketing 3 50 MAR 3023
Introduction to Sociology 6 50 SYG 2000
Languages: French 6/9/12 44/49/56 Corresponding
German 6/9/12 43/52/55 1120 and 1121,
Spanish 6/9/12 45/48/55 2200* and 2201*,

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>
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<tr>
<td>Biology*</td>
<td>3-4</td>
<td>3</td>
<td>BSC 1020</td>
</tr>
<tr>
<td></td>
<td>5 6</td>
<td></td>
<td>BSC 1020 + 3 hours general elective</td>
</tr>
<tr>
<td>Chemistry*</td>
<td>3 4-5</td>
<td>3 7</td>
<td>CHM 2045 CHM 2045 and 2046</td>
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<td>Computer Sci A</td>
<td>3-4</td>
<td>3</td>
<td>General Elective</td>
</tr>
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<td>Computer Sci A</td>
<td>5 3</td>
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<td>COP 2500</td>
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<td>Computer Sci AB</td>
<td>3-5</td>
<td>3</td>
<td>COP 2500</td>
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<tr>
<td>Language &amp; Composition**</td>
<td>3-5</td>
<td>3</td>
<td>ENC 1101</td>
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<td>Literature***</td>
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<td>3</td>
<td>ENC 1101</td>
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<td>Microeconomics</td>
<td>3-5</td>
<td>3</td>
<td>ECO 2023</td>
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<td>Macroeconomics</td>
<td>3-5</td>
<td>3</td>
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<tr>
<td>French</td>
<td>3-4</td>
<td>3</td>
<td>FRE 1120</td>
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<td></td>
<td>5 6</td>
<td></td>
<td>FRE 1121 + 3 hours general elective</td>
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<td>German</td>
<td>3-4</td>
<td>3</td>
<td>GER 1120</td>
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<td></td>
<td>5 6</td>
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<td>3</td>
<td>AMH 2010</td>
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<td>5 6</td>
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<td>AMH 2010 + 3 hours general elective</td>
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<tr>
<td>History (EUR)</td>
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<td>3</td>
<td>EUH 2001</td>
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<td>5 6</td>
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<td>EUH 2001 + 3 hours general elective</td>
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<td>Subject Area</td>
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<td>Credit Awarded</td>
<td>UCF Course</td>
</tr>
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<td>Applied Chemistry</td>
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<tr>
<td>Higher Level</td>
<td>4,5,6,7</td>
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<td>CHM 1032</td>
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<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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<td></td>
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<tr>
<td>Higher Level</td>
<td>4,5,6,7</td>
<td>3</td>
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</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.
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<tr>
<th>Subject</th>
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<tbody>
<tr>
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</tr>
<tr>
<td>Chemistry</td>
<td>Higher Level</td>
<td>4,5,6,7</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Subsidiary Level</td>
<td>4,5,6,7</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science</td>
<td>Higher Level</td>
<td>4,5,6,7</td>
<td>3</td>
</tr>
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<td>Economics</td>
<td>Higher Level</td>
<td>4,5,6,7</td>
<td>3</td>
</tr>
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<td>English</td>
<td>Higher Level</td>
<td>4,5,6,7</td>
<td>3</td>
</tr>
<tr>
<td>Experimental Psychology</td>
<td>Higher Level</td>
<td>4,5,6,7</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Languages</td>
<td>Higher Level</td>
<td>4,5,6,7</td>
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</tr>
<tr>
<td></td>
<td>French, Spanish, German</td>
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<td>SAME AS HIGHER LEVEL ENGLISH</td>
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<td>Others</td>
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<td>History</td>
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<td>Mathematics with Further Studies</td>
<td>Higher Level</td>
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<td>Mathematics</td>
<td>Higher Level</td>
<td>4,5,6,7</td>
<td>3</td>
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<td></td>
<td>Subsidiary Level</td>
<td>4,5,6,7</td>
<td>3</td>
</tr>
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<td>Music</td>
<td>Higher Level</td>
<td>4,5,6,7</td>
<td>3</td>
</tr>
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<td>Organizational Studies</td>
<td>Higher Level</td>
<td>4,5,6,7</td>
<td>3</td>
</tr>
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<td>Philosophy</td>
<td>Higher Level</td>
<td>4,5,6,7</td>
<td>3</td>
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<td>4,5,6,7</td>
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<td>Physics</td>
<td>Higher Level</td>
<td>4,5,6,7</td>
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<td>Subsidiary Level</td>
<td>4,5,6,7</td>
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<td>Psychology</td>
<td>Higher Level</td>
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<tr>
<td>Social Anthropology</td>
<td>Higher Level</td>
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<td>3</td>
</tr>
<tr>
<td></td>
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</tr>
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<td>Subsidiary Level</td>
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<td>5,6,7</td>
<td>3</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 complete 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. The first three transcripts are provided at no cost to the student. For additional transcripts, there is a charge of $2.00 each. The check or money order should be made payable to: UCF. Cash payments can be accepted only by the Cashier's Office (Monday 9-6:30; Tues-Fri 9-3:30). Students requesting transcripts may do so in person or by writing to: Transcript Request, Office of the Registrar, University of Central Florida, PO Box 160114, 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 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)

A. Communication Foundations

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. *ENC 1101 English Composition I</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>2. *ENC 1102 English Composition II PR: ENC 1101</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>3. SPC 1600 Fundamentals of Oral Communication</td>
<td>3(3,0)</td>
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B. Cultural and Historical Foundations

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>1. Take one of the following two-semester sequences:</td>
<td>6</td>
</tr>
<tr>
<td>*EUH 2000 Western Civilization I</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>*EUH 2001 Western Civilization II PR: EUH 2000</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>*HUM 2211 Western Humanities I</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>*HUM 2230 Western Humanities II PR: HUM 2221</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>*AMH 2010 U.S. History: 1492-1877</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>*AMH 2020 U.S. History: 1877-present PR: AMH 2010</td>
<td>3(3,0)</td>
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</table>

2. Take one course from the following: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>1. ARH 2050 The History of Art I</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>2. ARH 2051 The History of Art II</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>3. MUL 2010 Enjoyment of Music</td>
<td>3(2,1)</td>
</tr>
<tr>
<td>4. THE 1020 Theatre Survey</td>
<td>3(2,1)</td>
</tr>
<tr>
<td>5. THE 2071 Cinema Survey</td>
<td>3(2,2)</td>
</tr>
<tr>
<td>6. REL 2300 World Religions</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>7. PHI 2010 Introduction to Philosophy</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>*LIT 2110 World Literature I PR: ENC 1102</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>*LIT 2120 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, MAC 3254, MAC 3311, MAC 3312, 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, PHY 3014C, PHY 5015, CHM 2045, CHM 1032, CHS 1440</td>
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<tr>
<td>CHM 1020 (Chemistry)</td>
<td>BSC 2010C, CGS 1060C, CGS 3000, CGS 3422, COP 1200, COT 3100</td>
</tr>
<tr>
<td>BSC 1020C or BSC 1030C (Biology)</td>
<td>GEO 3370</td>
</tr>
<tr>
<td>GEO 1200 (Geography)</td>
<td></td>
</tr>
<tr>
<td>CGS 1060C (Intro to Computer)</td>
<td></td>
</tr>
<tr>
<td>STA 2014 (Statistics)</td>
<td>STA 3023, STA 3032</td>
</tr>
</tbody>
</table>

**FOREIGN LANGUAGE PROFICIENCY REQUIREMENT**

Students graduating with a Bachelor of Arts degree must demonstrate proficiency in a foreign language equivalent to one year of college instruction. 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. Students who have previously received a baccalaureate are exempt from this requirement.

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:
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

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.

COLLEGE LEVEL ACADEMIC SKILLS TEST—(CLAST)
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 32611, 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. Lile, 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 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.

AIR FORCE ROTC (Aerospace Studies)

Chair: J. C. Linn, BIO 306, Phone (407) 823-1247
Faculty: Linn, Brock, Hernandez, Irizarry, 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 26 1/2 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, 3 1/2, 3 1/2, 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, Lemelin, 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, management skills, 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 (AMH 3540) Computer Literacy, and Math Reasoning. (MIS 3301, 3410, 4421, and 4430.

3. Summer Camp
Prior to commissioning, each cadet must successfully complete an evaluation of skills learned. This evaluation is conducted at Ft. Bragg, North Carolina, 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:

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 $225 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 Director: 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 may also earn credit for objectives accomplished on a co-op assignment when this credit counts toward a student's degree requirement.
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 for co-op 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, and 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.

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. Prospective Honors students and their parents are strongly encouraged to visit with the Honors Director as part of the admissions process. 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. In addition, students who meet the following academic criteria will also be eligible for Early Decision.

<table>
<thead>
<tr>
<th>HIGH SCHOOL GRADE</th>
<th>COMBINED SAT SCORE</th>
<th>COMBINED ACT SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>POINT AVERAGE (WTD.)</td>
<td>1000</td>
<td>24</td>
</tr>
<tr>
<td>3.9+</td>
<td>1100</td>
<td>26</td>
</tr>
<tr>
<td>3.7 - 3.89</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 required 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 $60.00 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 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.

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; (2) complete, with a "satisfactory" grade, "Honors Symposium I" and "Honors Symposium II"; (3) complete one "Honors Lecture" course; and (4) complete two upper division "Honors Seminars" outside of the major field of study.

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."

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1The $60.00 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.

2When 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.

3"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.

4Each 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.

5The 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.
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*. 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; permission of the department in which such Honors are sought; and permission of the Director of the University Honors Program. 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 achieved.7 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 |
|---------------------------------|-----------|-------------|-------------|-------------|
|                                  | GEP*      | Seminars*   | Symposium*  | Lecture*    |
| Univ. Honors                    | 12 Hrs.   | 6 Hrs.      | 2 Hrs.      | 3 Hrs.      |
| Hon. in Major                   | Up to 6 Hrs. | AND | 3 Hrs. | OR 3 Hrs. |

*Denotes Honors Hours

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6Honors 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.

7It 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.
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 (SARC)
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.

The Academic Mentoring Program provides academic assistance to at-risk minority students through study skills workshops, academic and career advisement, tutoring, and weekly meetings with mentors. Students are equipped with the knowledge and skills they need to be successful in college.

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.

STUDENT ACADEMIC SUPPORT SERVICES
Director: Russell Tiberii, PH 202, (407) 823-5322

Student Academic Support Services (SASS) is a student centered source of academic support and information for the UCF community. It is the focal point for the academic advising support role of the computerized degree audit system, providing consultation and
assistance to the faculty, staff and students. SASS is responsible for evaluating transfer courses/credits for appropriate application to the university's General Education Program requirements, and recording this data on the degree audits for students majoring in the Colleges of Business, Education, Engineering, Health and Public Affairs, and for pre-majors (undecided majors). SASS is also responsible for evaluating student's records to determine their appropriate catalog year.

Four academic advising and support programs are coordinated or directed through SASS: peer advising, early admission program advising and administration, pre-major (undecided) advising, and displaced major advising. Central to all academic advising and support is a developmental approach to assisting students toward the fulfillment of their academic and life goals. Through individual and group advising programs, SASS provides general support for self-assessment, exploration of academic disciplines, and decision making. Course selection assistance is provided during each registration period, and long range academic planning assistance is provided throughout the academic year.
ACADEMIC PROGRAMS

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 Office of Undergraduate Studies, AD 210 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, Hospitality Management, 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.)

College of Health and Public Affairs

Bachelor of Arts (B.A.)

Majors: Communicative Disorders, Criminal Justice, Legal Studies, Public Administration

Bachelor of Science (B.S.)

Major: Cardiopulmonary Sciences, Health Services Administration, Medical Laboratory Sciences, Medical Record Administration, Molecular Biology and Microbiology, Radiologic Sciences, Physical Therapy

Bachelor of Science in Nursing (BSN)

Major: Nursing

Bachelor of Social Work (B.S.W)

Major: Social Work

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 departmental office in the respective college or see the Graduate Catalog.
PRE-HEALTH PROFESSIONS ADVISING

Preprofessional Coordinators:
College of Arts & Sciences: H. C. Sweet, BIO 210, Phone (407) 823-2141
College of Health & Public Affairs: J. F. Charba, BL 331, Phone (407) 823-5932

Pre-Health Professions Advisement was established to function as a service to all students preparing for and seeking admission to professional schools of chiropractic, dentistry, medicine, osteopathic medicine, optometry, pharmacy, podiatry, and veterinary medicine. The services afforded students through this office are numerous and range from basic counseling in pre-health professions matters to providing a Composite Evaluation of the student (upon his/her request) to each professional school to which the student applies. However, in order to be considered for a Composite Evaluation, the student must have a minimum overall GPA of 2.8 and at least 30 semester hours of typical undergraduate pre-health professions courses taken at UCF by the end of the Spring semester preceding his/her application to the professional schools, (usually between the junior and senior year). Additionally, all pre-health professions students are strongly encouraged to affiliate with and participate in the activities of the Preprofessional Medical Society.

PREPROFESSIONAL PLANNING

Pre-health professions students should bear in mind that admission to a health professional school is competitive. For this reason, pre-health professions students should pay close attention to the characteristics of successful applicants. For example, while some dental and medical schools require only two and three years of college preparation, approximately 91 percent of all predental and 95 percent of all premedical students accepted throughout the nation each year have completed four years of college. Consequently, since pathways such as "premed" do not result in a degree, each pre-health professions student is urged to carefully select a degree-granting major. This will not only allow one to become more competitive for admission, but also to prepare for an alternate career in the event admission to a professional school is denied. Any degree-granting program offered by the University may be selected as a major; however, those programs within the sciences will generally lend themselves most adequately to pre-health professions preparation due to the nature and content of their curricula. While satisfying degree requirements, students will find in their curricula many courses required for admission to most professional schools. Additionally, prudent use of elective hours in the curricula will permit other appropriate pre-health professions courses to be obtained. Obviously, pre-health professions students are expected to be high achievers, and to obtain good grades with heavy credit hour loads and rigorous course combinations. Most professional schools expect applicants to present at least a B average and to carry a minimum of 15 credit hours each term, with the exception of summer terms. Sustained high-level performance while carrying 15 or more credit hours is one of the strongest predictors of success in professional school.

CURRICULA GUIDELINES

All pre-health professions students are strongly encouraged to enroll in SLS 2311, OVERVIEW OF SELECT MEDICAL CAREERS, the first fall semester they are enrolled. This course provides a broad exposure to guest speakers representing the various four-year health professions. In addition, the entire preprofessional process (academic preparation, applications, prescreening, interviews, admission exams, admissions, scholarships etc.) is explained in depth. Following this awareness, students are prepared to make informed decisions relative to planning their pre-health professional studies.

Concerning required courses all pre-health professions students are required to complete the General Education Program (GEP) plus the following courses (many of which are applicable to the GEP):
- General Biological Sciences, BSC 2010C, ZOO 2010C
- Genetics, PCB 3063 and 3063L
- General Chemistry, CHM 2045, 2046, 2046L
- Organic Chemistry, CHM 3210, 3211, 3211L
- Microbiology, MCB 3013C
- English Composition, ENC 1101, 1102
- Calculus, MAC 3233 (although MAC 3233 is acceptable, the MAC 3311, 3312, sequence is preferable)
Physics, PHY 3053C, 3054C (although the preceding courses are acceptable, the
sequence PHY 3048, 3048L, 3049L, is preferable)
Statistics, STA 3023
Additional required strongly recommended courses not common to all preprofessional
students are the following:

Premedical and predental students should take:
  Molecular Cell Biology, PCB 3023
  Comparative Anatomy, ZOO 3713C or
  Human Anatomy, ZOO 3733C
  Embryology, ZOO 4603C
  Histology, ZOO 4753C
  Microbiology, MCB 3203C, and PCB 3233
  Analytical Chemistry, CHM 3121C plus either (or both) Biochemistry, BCH 4053, 4054, or
  Physical Chemistry, CHM 3410.
Preoptometry students must take
  General Botany, BOT 2010C
  Microbiology, MCB 3203C and it is strongly recommended they take Human Anatomy
  and/or Human Physiology, ZOO 3733C, PCB 3703C
Prepharmacy students must take
  General Botany, BOT 2010C.
  Microbiology, MCB 3203C and it is strongly recommended they take Histology, ZOO
  4753C; and Biochemistry, BCH 4053
Preveterinary students must take
  General Botany, BOT 2010C
  Analytical Chemistry, CHM 3121C
  Microbiology, MCB 3203C
  Animal Science, ASG 3003, and ASG 3402. *These courses to be taken as a transient
  student at the University of Florida, preferably during the summer following the sopho-
  more year.
It is strongly recommended they also take:
  Comparative Anatomy ZOO 3713C;
  Histology ZOO 4753C;
  Embryology ZOO 4603C; and
  Biochemistry BCH 4053
For Maximal Preparation: Additionally, the UCF courses Biochemistry (BCH 4053),
Histology (ZOO 4753C), Embryology (ZOO 4603C), Genetics (PCB 3063), Immunology
(PCB 3223), Neuroanatomy (ZOO 5745C) and Human Anatomy (ZOO 3733C), are strongly
recommended for maximum preparation for the Basic Medical Sciences of most first year
professional school curricula.

Meaningful Electives:
All pre-health professions students are strongly encouraged to make prudent selections
of elective courses complementary to their pre-health professions preparation. Listed below
are a number of appropriate courses from which elective selections can be made.
  Accountancy: (ACG 2001 and 2011) or ACG 3023.
  Biochemistry: BCH 4053.
  Communication: SPC 3301 or 4330.
  Endocrinology: PCB 5806C
  Health Sciences: APB 3600; HSC 3122; 3110; 4411; SPA 3001.
  Human Anatomy: ZOO 3733C.
  Human Physiology: PCB 3703C
  Literature: LIT 2110 and 2120.
  Management: GEB 3004.
  Philosophy: PHI 3600; 3630.
  Political Science: PUP 4602.
  Psychology: CLP 3143; DEP 3004; 3202; 3212; EAB 3704; DEP 3464; PSB 3002; 3442;
  4013C; PCO 4203.
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 admissions 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.

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.

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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 applica-
tion 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.

Other Health Professions
For Nursing and other Allied Health Services, see College of Health and Public Affairs.
# COLLEGE OF ARTS AND SCIENCES

## UNDERGRADUATE PROGRAMS

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<tr>
<td>Anthropology (BA)</td>
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<td>Music (BA, BM)</td>
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<td>Biology (BS)</td>
<td>Music Education (BME)</td>
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<td>Philosophy (BA)</td>
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## PREPROFESSIONAL PROGRAMS

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## OTHER PROGRAMS

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<td>Latin-American Area Studies</td>
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<td>Soviet Area Studies</td>
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<td>Women’s Studies</td>
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See also: Summer Study Programs under Department of Foreign Languages.

## GRADUATE PROGRAMS*

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<tr>
<td>Biology (MS)</td>
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<td>Communication (MA)</td>
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<td>Computer Science (MS, Ph.D.)</td>
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<td>English (MA)</td>
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<td>Psychology, Industrial (MS)</td>
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<td>Sociology, Applied (MA)</td>
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<td>Statistical Computing (MS)</td>
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*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 Coordinator: Dr. H. C. Sweet, BIO (407) 823-2141

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 majoring in the biological or chemical sciences facilitates completing both the requirements for admission to a professional school and those for graduating from UCF. Students concerned with planning for, applying to, and being successful in professional school can obtain information from the Pre-Health Coordinator. Academic advisement concerning UCF and departmental requirements is provided by the advisor with the department of the student's major.

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) is the primary office for undergraduate academic assistance in the College of Arts and Sciences. OASIS assists students in the College of Arts and Sciences with matters concerning College and University requirements, policies and procedures. The Office oversees General Education course evaluation and substitutions as well as evaluation and application of TSD credits (CLEP and AP) for Arts and Sciences students.

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.

Foreign Language Proficiency Requirement
The College of Arts and Sciences has a foreign language proficiency requirement pertaining to ALL majors in the college:

Students graduating with a Bachelor of Science degree must demonstrate a 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 one and one-half years of college instruction, i.e. FRE 2200, SPN 2230, GER 2200.

The Foreign Language Proficiency requirement may be satisfied by successful completion of the appropriate coursework or by examination. Foreign language proficiency examinations are given each semester in Counseling and Testing (RS 117); students must register in advance for the exams. Students who were required to submit a passing TOEFL (Test of English as a Foreign Language) score are also considered to have met the proficiency requirement.

PLEASE NOTE THAT THIS FOREIGN LANGUAGE PROFICIENCY REQUIREMENT IS A COLLEGE OF ARTS AND SCIENCES REQUIREMENT THAT EXCEEDS ANY UNIVERSITY-WIDE GRADUATION AND/OR ADMISSION REQUIREMENT.

Any questions or requests regarding the Arts and Sciences Foreign Language Proficiency requirement should be directed to the OASIS (Office of Academic Support and Information Services) located in FA 208, Phone: (407) 823-2492.

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, Statistics, and Physics contain courses which will introduce the student to the three major scientific disciplines of physical science, biological sciences, and mathematical and computer 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
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, LIT 4354, SYD 3720. For further information, contact Dr. K. Seidel, Dean's Office, FA 511, (407) 823-2251.

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.

ANTHROPOLOGY (see Department of Sociology and Anthropology)

DEPARTMENT OF ART

Acting Chair: Jagdish J. Chavda, ART 117, Phone (407) 823-2676
Faculty: Chavda, Congdon, Eyfells, Gaudnek, Lotz, Rivers, Skoglund, 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 administration, 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 Specialization: Courses at many institutions 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. This program’s last two-year curriculum is sequential; portfolio applications are accepted only for Fall semester. **Deadline for all portfolio applications is April 1 for commencing the program in Fall semester.**

**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 Major in Graphic Design**

I **ART HISTORY**
- a. ARH 2050 (required)
- b. ARH 2051 (required)
- c. Any upper division ARH

II **DESIGN FUNDAMENTALS**
- a. ART 2201 (required)
- b. ART 2202 (required)

III **DRAWING FUNDAMENTALS**
- a. ART 2300 (required)
- b. ART 2301 (required)

IV **STUDIO ART SPECIALIZATION**

<table>
<thead>
<tr>
<th>TRACK A</th>
<th>TRACK B</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 3281 Type &amp; Design</td>
<td>ART 2481 Intro. to Computer Graphics</td>
</tr>
<tr>
<td>ART 3280 Graphic Design I</td>
<td>ART 3281 Type &amp; Design</td>
</tr>
<tr>
<td>ART 3232 Graphic Design II</td>
<td>ART 3280 Graphic Design I</td>
</tr>
<tr>
<td>ART 4235 Adv. Graphic Design</td>
<td>ART 3232 Graphic Design II</td>
</tr>
<tr>
<td>ART 4237 Special Problems in Graphic Design</td>
<td>ART 3484 Computer Graphics</td>
</tr>
</tbody>
</table>

V **RESTRICTED ELECTIVES**

(Upper Division Hours)

Minimum of three (3) areas represented, all courses must be outside of the area of specialization.

<table>
<thead>
<tr>
<th>Drawing</th>
<th>Painting</th>
<th>Printmaking</th>
<th>Photography (PGY)</th>
<th>Sculpture</th>
<th>Ceramics</th>
<th>Fibers &amp; Fabrics</th>
<th>Any Upper Division ARH</th>
<th>Special Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>3330 (3)</td>
<td>3510 (3)</td>
<td>3400 (3)</td>
<td>3401 (3)</td>
<td>3701 (3)</td>
<td>3110 (3)</td>
<td>4130 (3)</td>
<td>(3)</td>
<td>(3)</td>
</tr>
<tr>
<td>3331 (3)</td>
<td>4530 (3)</td>
<td>4402 (3)</td>
<td>4420 (3)</td>
<td>4703 (3)</td>
<td>4111 (3)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL required hours in major (Graphic Design Track A or Track B)** (48)

Graduation Portfolio Presentation.
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 Major
   A. Required Courses
      | Course   | Description                        | Hours |
      |----------|------------------------------------|-------|
      | ARH 2050, 2051 | History of Art I, II              | 6     |
      | ART 2201C   | Design Fundamentals I             | 3     |
      | ART 2300C or 2202 | Drawing Fund. I, or Design Fund. II | 3-6   |
      | ARH 4912   | Senior Research                   |       |

   B. Art History 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.

   C. Restricted Electives
      Any three of the following and not more than one from each area:
      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)
      ENC 3311 Advanced Expository Writing or ENC Journal Writing (3)
      EUH 3000-4000-5000 level course (3)
      ARH 3000-4000-5000 level Community Arts course (3)
      ARH 3000-4000-5000 level studio course (3)

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

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

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

II. Art (Studio) Major
   A. Required Courses
      | Course   | Description                        | Hours |
      |----------|------------------------------------|-------|
      | ART 2201C, 2202C | Design Fundamentals I, II         | 6   |
      | ART 2300C, 2301C | Drawing Fundamentals I, II        | 6   |
      | ARH 2050, 2051 | History of Art I, II              | 6   |
      | ARH 3000-4000 | Art History Courses               | 6   |

   B. Studio Specialization
      3000-4000 level courses from:
      *See Two-Track specialization in Graphic Design

96
C. Restricted Electives

3000-4000 level courses from at least 3 areas outside the area 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

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. A portfolio is required for Graphic Design specialization.

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>
</tr>
</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.)*

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

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.
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. Upper Division 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 PCB 3023 or 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 specialization 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</td>
</tr>
<tr>
<td>BSC 2010C</td>
<td>General Biology</td>
</tr>
<tr>
<td>ZOO 2010C</td>
<td>General Zoology</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 should plan to take a full year of Physics with laboratory. Such students may wish to take Biochemistry (BCH 4053, 54) as well. Calculus is also considered desirable for many postgraduate and professional programs. Students are urged to consult their advisor. Preprofessional students may obtain current information about professional programs and admission requirements from the College of Arts and Sciences preprofessional coordinator, Dr. Haven Sweet (BIO 407, phone 823-2922).

CHM 2045, 2046, 2046L
Chem. Fund I and II with lab
8 hours
and one of the following 2 course groups

CHM 3210, 3211, 3211L
Organic Chem. I & II with lab
8 hours
or

CHM 3120C and
Analytical Chemistry and
10 hours

CHM 2205
Intro Organic & Biochemistry
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
Minimum Physics
4 hours

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOT 4713C</td>
<td>Plant Taxonomy</td>
<td>5</td>
</tr>
<tr>
<td>ENY 4004C</td>
<td>General Entomology</td>
<td>4</td>
</tr>
<tr>
<td>MCB 3013C</td>
<td>General Microbiology</td>
<td>5</td>
</tr>
<tr>
<td>MCB 4114C</td>
<td>Microbial Systematics</td>
<td>4</td>
</tr>
<tr>
<td>PCB 3301C</td>
<td>Aquatic Biology</td>
<td>4</td>
</tr>
<tr>
<td>ZOO 3303C</td>
<td>Vertebrate Zoology</td>
<td>4</td>
</tr>
<tr>
<td>ZOO 4203C</td>
<td>Invertebrate Zoology</td>
<td></td>
</tr>
</tbody>
</table>

Group B

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOT 3800</td>
<td>Ethnobotany</td>
<td>3</td>
</tr>
<tr>
<td>BOT 3820</td>
<td>Plants and Urban Envir</td>
<td>3</td>
</tr>
<tr>
<td>BOT 4623C</td>
<td>Plant Geography &amp; Ecology</td>
<td>4</td>
</tr>
<tr>
<td>PCB 4683</td>
<td>Population Biol &amp; Evolution</td>
<td>4</td>
</tr>
<tr>
<td>PCB 3043L</td>
<td>Ecology Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PCB 4302C</td>
<td>Limnology I</td>
<td>4</td>
</tr>
<tr>
<td>PCB 4303C</td>
<td>Limnology II</td>
<td>4</td>
</tr>
<tr>
<td>ZOO 4800C</td>
<td>Fisheries Management</td>
<td>4</td>
</tr>
<tr>
<td>Group C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
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<td></td>
</tr>
<tr>
<td>BOT 4223C</td>
<td>Plant Anatomy</td>
<td>4 hours</td>
</tr>
<tr>
<td>BOT 4303C</td>
<td>Plant Kingdom</td>
<td>5 hours</td>
</tr>
<tr>
<td>BSC 4103</td>
<td>History of Biology</td>
<td>3 hours</td>
</tr>
<tr>
<td>PCB 3063L</td>
<td>Genetics Laboratory</td>
<td>1 hour</td>
</tr>
<tr>
<td>ZOO 3713C</td>
<td>Comp Vert. Anatomy</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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</table>

<table>
<thead>
<tr>
<th>Group D</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BCH 4053 and 4054</td>
<td>Biochemistry</td>
</tr>
<tr>
<td>BOT 4503C</td>
<td>Plant Physiology</td>
</tr>
<tr>
<td>MCB 4404</td>
<td>Microbial Metabolism</td>
</tr>
<tr>
<td>PCB 3233</td>
<td>Immunology</td>
</tr>
<tr>
<td>PCB 4723</td>
<td>Animal Physiology</td>
</tr>
</tbody>
</table>

*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 5875, PCB 5721, ZOO 5456, ZOO 5463, ZOO 5475, ZOO 5483, ZOO 5745, ZOO 5815 or, with advisor’s approval, up to 4 hours of special topics or Independent Study.

4. Unrestricted electives may include 8 hours of Foreign Language and additional biology courses.

5. Total Minimum Hours Required for B.S. in Biology 120 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
   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
   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
   A. Biology
   B. Cognate Sciences
   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
   8 hours
   ZOO 3303C Vertebrate Zoology
   or ZOO 4203C Invertebrate Zoology
   or ENY 4004C Entomology
   or PCB 3301C Aquatic Biology

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

   Group C
   4-5 hours
   BOT 4223C Plant Anatomy
   or BOT 4303C Plant Kingdom

   Group D
   4 hours
   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
   28-31 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, ENY 4004C, PCB 4723, 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

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 2045, 2046, 2046L</td>
<td>Chem. Fund I and II with lab and</td>
<td>8 hours</td>
</tr>
<tr>
<td>CHM 3210, 3211, 3211L</td>
<td>Organic Chem. I &amp; II with lab or</td>
<td>8 hours</td>
</tr>
<tr>
<td>PHY 3053, 3054C</td>
<td>College Physics I &amp; II or</td>
<td>8 hours</td>
</tr>
<tr>
<td>PHY 3048, 3048L</td>
<td>Physics for Eng. &amp; Sci. with Lab or</td>
<td>8 hours</td>
</tr>
<tr>
<td>PHY 3049, 3049L</td>
<td>Concepts of Calculus or</td>
<td>3 hours</td>
</tr>
<tr>
<td>MAC 3233</td>
<td>Calc &amp; Anal Geom I &amp; II or</td>
<td>8 hours</td>
</tr>
<tr>
<td>STA 3023</td>
<td>Statistical Methods</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

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>Description</th>
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</thead>
<tbody>
<tr>
<td>MCB 3013C</td>
<td>General Microbiology</td>
</tr>
</tbody>
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   Group B
<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOT 3800</td>
<td>Ethnobotany</td>
</tr>
</tbody>
</table>

   Group C
<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCB 3063L</td>
<td>Genetics Lab</td>
</tr>
<tr>
<td>ZOO 3713C</td>
<td>Comp Vert. Anat.</td>
</tr>
<tr>
<td>ZOO 4603C</td>
<td>Embryology/Development</td>
</tr>
<tr>
<td>ZOO 4753C</td>
<td>Vertebrate Histology</td>
</tr>
</tbody>
</table>

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

5. Unrestricted Electives may include 8 hours of foreign language and 8-13 hours 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, (PC 542) Room 115, Social Work Module, (407) 823-2079.

**DEPARTMENT OF CHEMISTRY**

Chair: H. Miles, CH 117, Phone (407) 823-2246

Faculty: Beck, 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 opportunities 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 (20-22 semester hours): CHM 2045, 2046, 2046L, 3210, 3211, 3211L, and 3120C.

Restricted electives (6-8 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, CHM 3411L, CHM 5451L
Group II: BCH 4053, 4054, CHM 3410, 3411, 4220, 4221, CHS 4110C, 4200, CHM 5235, 5250

To be eligible for a minor in Chemistry a student must have a GPA of at least 2.0 in all UCF Chemistry courses and an overall 2.0 GPA in all Chemistry courses used to satisfy this requirement. A minimum of 11 hours of Chemistry must be earned at UCF and no D grades from another institution will be accepted.

Bachelor of Science: Chemistry
Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. To be eligible for an undergraduate degree in Chemistry a student must have a GPA of at least 2.0 in all UCF Chemistry courses and an overall 2.0 GPA in all Chemistry courses used to satisfy this requirement. Grades earned in CHM 4932 and CHM 4912 will not be applied to determination of the Chemistry GPA. At least 15 Chemistry credits must be earned at UCF.
4. Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 2045, 2046</td>
<td>Chemistry Fundamentals I, II</td>
<td>7</td>
</tr>
<tr>
<td>CHM 2046L</td>
<td>Chemistry Fundamentals Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>CHM 3210, 3211</td>
<td>Organic Chemistry I, II</td>
<td>6</td>
</tr>
<tr>
<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 3411L</td>
<td>Physical Chemistry Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>CHM 4610</td>
<td>Inorganic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHM 4610L</td>
<td>Inorganic Chemistry Laboratory</td>
<td>2</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>
<tr>
<td>ENC 3241</td>
<td>Technical Report Writing</td>
<td>3</td>
</tr>
<tr>
<td>MAC 3311,3312,3313</td>
<td>Calculus with Analytic Geometry I,II,III</td>
<td>12</td>
</tr>
<tr>
<td>PHY 3048, 3048L, 3049, 3049L</td>
<td>Physics for Engineers &amp; Scientists</td>
<td>8</td>
</tr>
<tr>
<td>STA 3023</td>
<td>Statistical Methods I</td>
<td>3</td>
</tr>
</tbody>
</table>

5. 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
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

<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</td>
<td>Chemistry Fundamentals I, II</td>
<td>7</td>
</tr>
<tr>
<td>CHM 2046L</td>
<td>Chemistry Fundamentals Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>CHM 3210, 3211</td>
<td>Organic Chemistry I, II</td>
<td>6</td>
</tr>
<tr>
<td>CHM 3210L</td>
<td>Organic Laboratory Techniques I</td>
<td>2</td>
</tr>
<tr>
<td>CHM 3120C</td>
<td>Analytical Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>CHS 3501</td>
<td>Introduction to Forensic Science</td>
<td>3</td>
</tr>
<tr>
<td>CHS 3505</td>
<td>Forensic Microscopy</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Semester Hours Required: 128

SCHOOL OF COMMUNICATION
Director: J. Welke, FA 534, Phone (407) 823-2681
Faculty: Andersen, Arnold, J. Butler, Collachia, Collins, Davis, Fedler, Fowles, Grasty, Hall, Harpole, Hoglin, Hooper, Jeffery, Johnson, F., Johnson, M., Jones, Maunez-Cuadra, Meeske, O’Hara, O’Keefe, Pryor, Shearer, R. Smith, 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
   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 therefore, meeting the minimum GPA does not guarantee admission. 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 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 12, 1992 for Spring, 1993
- MARCH 8, 1993 for Summer, 1993
  (See FILM note below)
- JULY 12, 1993 for Fall, 1993.
NOTE: Applications for the Motion Picture Technology major are accepted only ONCE PER YEAR. Applications will be accepted MARCH 8, 1993 for admission to the Fall, 1993.

Limited Access Requirements
The requirements for admission consideration and continuation as a major in the School for all programs, except Motion Picture Technology [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. Internship credit is allowed for majors only.

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 may be taken in the School of Communication.
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].

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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 3100<sup>1,2</sup> (3), MMC 4200 (3), plus TWO JOU elective
   (writing and/or editing) courses<sup>1,2</sup> (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 3300<sup>1,2</sup> or RTV 3501<sup>1,2</sup> (4), RTV 4700 or RTV 4403 (3).

<sup>1</sup>Prerequisite Grammar Proficiency Examination required.
<sup>2</sup>Prerequisite 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**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOU 3004</td>
<td>History of American Journalism</td>
<td>3 hours</td>
</tr>
<tr>
<td>JOU 3100</td>
<td>News Reporting</td>
<td>3 hours</td>
</tr>
<tr>
<td>JOU 3101</td>
<td>Advanced News Reporting</td>
<td>3 hours</td>
</tr>
<tr>
<td>JOU 3200</td>
<td>Editing I</td>
<td>3 hours</td>
</tr>
<tr>
<td>JOU 3201</td>
<td>Editing II</td>
<td>3 hours</td>
</tr>
<tr>
<td>JOU 4104</td>
<td>Public Affairs Reporting</td>
<td>3 hours</td>
</tr>
<tr>
<td>JOU 4300</td>
<td>Feature Writing</td>
<td>3 hours</td>
</tr>
<tr>
<td>MMC 4200</td>
<td>Mass Communication Law</td>
<td>3 hours</td>
</tr>
<tr>
<td>MMC 4602</td>
<td>Contemporary Media Issues</td>
<td>3 hours</td>
</tr>
<tr>
<td>PGY 3610</td>
<td>Photojournalism I</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

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

1Prerequisite Grammar Proficiency Examination and Typing Proficiency 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)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 3011</td>
<td>Communication and Human Relations</td>
<td>3 hours</td>
</tr>
<tr>
<td>COM 3110</td>
<td>Business and Professional Speaking</td>
<td>3 hours</td>
</tr>
<tr>
<td>COM 3120</td>
<td>Organizational Communication</td>
<td>3 hours</td>
</tr>
</tbody>
</table>
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
   RTV 3000 Foundations of Broadcasting 3 hours
   RTV 3200 Broadcast Techniques 4 hours
   RTV 3210 Radio Production or 4 hours
   RTV 3260 Electronic Field Production
   RTV 3300 Broadcast Newswriting 4 hours
   RTV 3501 Broadcast Copywriting 4 hours
   RTV 4403 Radio/Television and Society 3 hours
   RTV 4700 Broadcast Regulations 3 hours
   RTV 4800 Broadcast Management 3 hours
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.

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 Motion Picture Technology program are:

1Prerequisite Grammar Proficiency Examination and Typing Proficiency Test required.

Bachelor of Arts: Motion Picture Technology

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 Motion Picture Technology 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 should 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 Motion Picture Technology 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)
   - FIL 3100
   - CRW 3410
   - FIL 3200
   - FIL 3300
   - FIL 3400
   - THE 3251
   - FIL 3503
   - FIL 4201
   - FIL 4600
   - FIL 4601
   - FIL 4209
   - Restricted Sequence Electives: Six (6) credit hours FIL courses.

   Total Semester Hours Required: 120

2. Required Courses: Animation
   (27 credit hours)
   - FIL 3100
   - CRW 3410
   - FIL 3200
   - FIL 3242
   - FIL 3400
   - THE 3251
   - FIL 3410
   - FIL 4201
   - FIL 4230
   - FIL 4231
   - FIL 4942
   - 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 105B, Phone (407) 823-2195.

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: 6 hours
  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

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: 6 hours
  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. Women and Art in Twentieth Century America
  7. ENC 3501 Journal-Writing Practicum
  8. 1 to 2 approved courses in education or a related field
  9. Other Community Art Classes

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: Bassioumi, Brigham, Chandreseharan, Chen, Cottrell, Deo, Driscoll, Dutton, Frederick, Gerber, Gomez, Guha, Hua, Hughes, Lang, Leeson, Lindholm, Mosheii, Mukherjee, Orooji, Riggs, Shah, Vempaty, Vemulaapati, 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 3178, 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 4.11 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: 42 hours
      Computer Science Courses
      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
COT 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 2025, 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. Boyte, FA 208, Phone (407) 823-2492

The Bachelor of Arts in Economics is designed to provide students with a liberal arts background to serve as a strong foundation for future graduate studies or as training for a career in politics, teaching, research, social services and a variety of other areas. 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 Decision 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

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### DEPARTMENT OF ENGLISH

**Chair**: J. Schell, FA 452, Phone (407) 823-2212  
**Faculty**: Adicks, Astro, Barnes, Becker, Bell, Brain, Deane, Donnelly, Fiammia, George, Halle, Hemischemeyer, Higgins-Young, Jaffe, Jones, Keller, Murray, Omans, Price, Regler, Rushin, Schifflhorst, 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, or literature. 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* and *The Cypress Dome*.

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.

### 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 3411, 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 two of the following three:
   - LIT 3000 Introduction to Literary Interpretation 3 hours  
   - CRW 2000 Introduction to Creative Writing 3 hours  
   - ENC 3211 Introduction to Technical Writing 3 hours

   Choose three of the following four:
   - ENL 3010 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
or
ENL 4341 Milton 3 hours
or
ENL 4330 Shakespeare 3 hours
LIN 4100 History of the English Language
or
LIN 3010 Introduction to Linguistics
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
CRW 3300 Poetry Writing
ENC 3310 Magazine Writing
CRW 3410 Script Writing
Choose Two (6 hours)
CRW 4120 Advanced Fiction Writing Workshop
CRW 4320 Advanced Poetry Writing Workshop
CRW 4410 Advanced Script Writing Workshop
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

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.

DEPARTMENT OF FOREIGN LANGUAGES AND LITERATURES

Acting Chair: P. Crant, FA 443, Phone (407) 823-2469
Faculty: Barsch, Cervone, Crant, Decker, Del-Rio, DiPierro, Fernandez, Micarelli, Patrone, Payas, Redmon, Taylor

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.

ADVISEMENT: Because of the various options opened to language majors, it is obligatory that they have an adviser. Students must go to the Foreign Languages & Literatures Office to be assigned an adviser as soon as possible since class schedules must be approved by their adviser each semester. Failure to fulfill this obligation could result in delaying graduation.

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 language major 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 a literature course chosen in consultation with an advisor in the department.

Language Credit by Examination will not be given in courses lower in level than these 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 and/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

In colleges or departments where a Foreign Language Proficiency Requirement exists, it can be met for the B.S. degree 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 third semester of a foreign language.

The following is a list of courses students can take to satisfy the proficiency-level foreign language requirement:

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.

A third semester 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: all at 3000 level or above, at least a "C" average, at least 2 courses at 4000 level

- Conversation: 3 hours
- Composition: 3 hours
- Survey of Literature*: 6 hours
- Two of the following Linguistics courses**: 6 hours
  - French Corrective Phonetics and Diction: (3 hours)
  - French Phonetics and Diction: (3 hours)
  - Romance Philology: (3 hours)
  - Spanish Diction and Syntax: (3 hours)
  - Modern Spanish Morphosyntax: (3 hours)
  - Spanish American Syntax: (3 hours)

- French Language Electives
  - At least 2 courses in literature
  - beyond the survey level.
  - Total: 12 hours

- Spanish majors must take both semesters of the Survey of Spanish Literature or both semesters of the Survey of Latin American Literature.

- French and Spanish majors must include at least one Linguistics course in the language of their major.

- Not more than six hours out of the 30 required may be taken in Foreign Language courses not taught in the target language.

Bachelor of Arts: Foreign Language Combination
Degree Requirements

A student may receive a BA degree in a Foreign Language Combination by completing with a grade of C or better 24 credits in a first language and 15 in a second. These credits must be in courses at the 3000 level or above. Language combinations may consist of French, German or Spanish as a first language and any of those three as a second language as well as Italian or Russian.

In the first language, the following courses must be taken as part of the required 24 credit hours:

- Conversation: 3 hours
- Composition: 3 hours
- Survey of Literature*: 6 hours
- One Foreign Language Linguistics course**: 3 hours
  - (as approved by advisor)
- Language Electives
  - (at least 2 courses at 4000 level)
  - Total: 9 hours

Total: 24 hours
If Spanish is the first language, two semesters of the Survey of Spanish Literature or two semesters of the Survey of Latin American Literature must be taken.

In the second language, the following courses must be taken as part of the 15 required credits:

- **Conversation**
- **Composition**
- **Language Electives**
  - (chosen with advisor)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conversation</td>
<td>3</td>
</tr>
<tr>
<td>Composition</td>
<td>3</td>
</tr>
<tr>
<td>Language Electives</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>15</td>
</tr>
</tbody>
</table>

**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.

**St. Petersburg, Russia**

This program is offered in cooperation with the Hertzen Pedagogical Institute of St. Petersburg. Courses in Russian art and language and civilization are offered at all levels. Visits to points of historical and cultural interest in St. Petersburg 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 letters are given in English; language courses are conducted in Italian.

**Jonquière, 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 6 hrs. of classroom instruction in French each weekday, and pledge to use French only at all times during the program. Participants earn 8 credits. Educational week-end excursions and a number of socio-cultural activities are included. The program takes place during Summer A.

**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. **Russian Area Studies.** The College of Arts and Sciences offers an academic minor in Russian 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: Colbourn, 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.

The Department participates in the programs in Women's Studies, American Studies, Afro-American Studies, and Canadian Studies.

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 in 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 Renaiss-
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.

LIBERAL STUDIES PROGRAM

Director: Dennis R. Kamrad, FA 208, Phone: (407) 823-2492

The Liberal Studies Program offers students the opportunity to pursue interdisciplinary studies through two different programs of study, the Liberal Arts Option and the General Studies Option.

The Liberal Arts Option

Purpose

The Liberal Arts Option is a Bachelor of Arts degree program available to those students seeking an individualized, interdisciplinary major concentration within the College of Arts and Sciences outside of the traditional department-based majors. The Liberal Arts Option Committee, composed of faculty from the College of Arts & Sciences, will coordinate and approve curricular decisions for this option.

Degree Requirements

1. See Undergraduate Degree Requirements
2. See Special College Requirements
3. Required Courses

Students must complete areas A through D as identified below, for a minimum of 51 semester hours and a grade point average of 2.5 in all courses in the Liberal Arts Option.

A. Students will be required to take an approved course in ethics and an approved course in critical thinking. 6 hours

B. Students must complete two tracks of twelve hours each from the following areas:
   - Fine Arts
   - Natural Sciences
   - Social Sciences
   - Letters

The specific courses for each track will be determined by the Liberal Arts Option Committee in consultation with the departments. As an option, students will be allowed to develop an individually designed program in consultation with an advisor and approval by the Liberal Arts Option Committee. It is recommended that each of these tracks include a course in methodologies as part of the requirements. Courses should be developed on an interdisciplinary basis. 24 hours

C. Students must complete a minor from those offered at UCF, or an individually designed minor program of study approved by the Liberal Arts Option Committee and the relevant department, for a minimum of 18 hours. 18 hours

D. Students must conclude their program with an Undergraduate Thesis under the direction of a faculty member or members, or an undergraduate seminar which will be a capstone event in the program. 3 hours

Total Required 51 hours
The General Studies Option

Purpose
The General Studies Option is a university-wide general purpose program leading to the Bachelor of Arts or the Bachelor of Science in Liberal Studies. The determination of the B.A. or B.S. is determined by the majority of the course areas selected.

The program is administered through the College of Arts and Sciences and is designed for general studies 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 main purpose of the program is to accommodate students who desire a general, nonprofessional education which encompasses several disciplines.

Degree Requirements
1. See Undergraduate Degree Requirements
2. See Special College requirements
3. Required Courses

Students must complete three different subject area concentrations from those specified below. At least one of the subject areas must be satisfied by the completion of a minor. A minimum of 18 hours is required in each subject area concentration. Generally, courses used to meet General Education requirements cannot be used in the subject areas and courses used in one subject area cannot be used in another. Of the 54 hours required, a minimum of 48 must be upper level. A minimum grade point average of 2.0 is required in each of the subject areas. Total Required: 54 hours

Course Subject Areas
Students must complete three different course subject areas, including at least one minor, from those listed below:

1. Business Administration
   A minor in Business Administration (24 hours)

2. Education
   Students who were previously majors in the College of Education may utilize a maximum of 18 hours of approved courses.

3. Engineering
   A minor in Technology and Society (18 hours), or
   18 hours of approved courses in Engineering, or
   18 hours of approved courses in Engineering Technology

4. Health Sciences
   A minor in Health Sciences (18 hours) or
   a minor in Molecular Biology and Microbiology (30)

5. Fine Arts
   18 hours of approved courses in Art, Music, or Theatre or
   a minor in Music (21 hours), Theatre (29 hours), or
   Art History (24 hours).

6. Humanities
   18 hours of approved courses in History, Philosophy, Humanities or
   Judaic Studies, or
   a minor in History (18 hours), Philosophy (21 hours), Humanities (24 hours), or
   Judaic Studies (18 hours).

7. Letters
   18 hours of approved courses in English, Foreign Literature, Comparative Literature, or
   a minor in Creative Writing (21), Literature (21 hours), Linguistics (18 hours), or
   Technical Writing and Editing (22 hours)

8. Languages
   18 hours of approved courses in Chinese, French, German, Hebrew, Italian, Latin, Russian, Spanish, or
   a minor in French (18 hours), German (18 hours), Italian (18 hours), Russian (18 hours), Spanish (18 hours), Asian Studies (21 hours), Latin America Area Studies (18 hours), or Soviet Area Studies (18 hours).
9. Mathematical Sciences
18 hours of approved courses in mathematics and statistics or
a minor in Mathematics (21 hours) or a minor in Statistics (18 hours)

10. Computer Science
A minor in General Computer Science (18 hours)

11. Physical Sciences
18 hours of approved courses in Astronomy, Chemistry, Forensic Science, Physical
Geography, Geology, Physics, Oceanography and Meteorology, or
a minor in Chemistry (28 hours) or Physics (20 hours)

12. Behavioral and Social Sciences
18 hours of approved courses in Anthropology, Psychology, Sociology, Political
Science, Cultural Geography, or
a minor in Political Science (18 hours), Psychology (22-25 hours), Anthropology
(21 hours), or Sociology (18 hours).

13. Communication
18 hours of approved courses in Interpersonal or Organizational Communication
or a minor in Interpersonal Communication (18 hours) or Organizational Communi-
cation (18 hours)

14. Public Affairs
18 hours of approved courses in Criminal Justice or a minor in Legal Studies (18
hours) or a minor in Public Administration (21 hours)
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 special courses for students in the Honors Program. These are listed as MAC 3311H, MAC 3312H, MAC 3313H, MAC 3930H, and MTH 3930H.
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 (Elementary Linear and Matrix Algebra) before taking MAS 3106 (Linear Algebra). MAS 3105 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

1st Year Sequence

- MAC 3311 Calculus I (F) 4 hours
- STA 3023 Statistical Methods I (F) 3 hours
- MAC 3312 Calculus II (Sp) 4 hours
- MHF 2300 Logic and Proof (Sp) 3 hours
- BSC 2010 General Biology (Sp) 4 hours

2nd Year Sequence

- MAC 3313 Calculus III (F) 4 hours
- MAS 3105 Elementary Linear and Matrix Algebra 4 hours
- PHY 3048 Physics for Engineers & Scientists I (F) 3 hours
- PHY 3048L Physics Lab I (F) 1 hour
- MAP 3302 Differential Equations (Sp) 3 hours
- MAS 3106 Linear Algebra (Sp) 4 hours
- PHY 3049 Physics for Engineers & Scientists II (Sp) 3 hours
- PHY 3049L Physics Lab II (Sp) 4 hours

3rd Year Sequence

- MAD 4203 Combinatorics and Graph Theory (F) 3 hours
- MAP 4363 Applied Boundary Value Problems I (F) 3 hours
- STA 4321 Statistical Theory I (F) 3 hours
- COP 2500 Programming I (F) 3 hours
- MAS 4301 Algebraic Structures (Sp) 4 hours
- STA 4322 Statistical Theory II (Sp) 3 hours
- COP 2501 Programming II (Sp) 3 hours

4th Year Sequence

- MAA 4226 Advanced Calculus I (F) 4 hours
- MAA 4227 Advanced Calculus II (Sp) 4 hours
- MTG 4302 Introduction to Topology (Sp) 3 hours

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

1st Year Sequence

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<thead>
<tr>
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<th>Credits</th>
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<td>MAC 3311</td>
<td>Calculus I (F)</td>
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<tr>
<td>STA 3023</td>
<td>Statistical Methods I (F)</td>
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<tr>
<td>MAC 3312</td>
<td>Calculus II (Sp)</td>
<td>4 hours</td>
</tr>
<tr>
<td>MHF 2300</td>
<td>Logic and Proof (Sp)</td>
<td>4 hours</td>
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<tr>
<td>BSC 2010</td>
<td>General Biology (Sp)</td>
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2nd Year Sequence

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<tr>
<td>MAS 3105</td>
<td>Elementary Linear and Matrix Algebra</td>
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<td>PHY 3048</td>
<td>Physics for Engineers &amp; Scientist I (F)</td>
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<td>PHY 3048L</td>
<td>Physics Lab I (F)</td>
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<td>MAP 3302</td>
<td>Differential Equations (Sp)</td>
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<td>MAS 3106</td>
<td>Linear Algebra (Sp)</td>
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<td>Physics for Engineers &amp; Scientist II (Sp)</td>
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3rd Year Sequence

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<td>or</td>
<td>Vector and Tensor Analysis (F)</td>
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<td>MAP 4153</td>
<td>Applied Boundary Values Problems I (F)</td>
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<td>COP 2500</td>
<td>Programming I (F)</td>
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<tr>
<td>STA 4321</td>
<td>Statistical Theory I (Sp)</td>
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<td>MAP 4364</td>
<td>Applied Boundary Values Problems II (Sp)</td>
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<td>COP 2501</td>
<td>Programming II (Sp)</td>
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<td>Statistical Theory II (Sp)</td>
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4th Year Sequence

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<td>Advanced Calculus I (F)</td>
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<td>COT 4500</td>
<td>Numerical Calculus (F)</td>
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<td><em>Math-Stat Elective</em></td>
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*One course selected from upper division or graduate mathematics or statistics courses or from COT 5510 or COT 4210. (MAC 3233, 3253, 3254, MAE 3817 and MHF 4404 may not be used.) One additional course in either the biological or physical sciences must be taken.

**From an approved list

5. Electives

The number of hours depends on the courses chosen to satisfy university requirements and the area of specialization. The courses used as electives must be approved by the Department Standards Committee.

Total Semester Hours Required 120

DEPARTMENT OF MUSIC

Acting Chair: E. Hotaling, FA 105A, Phone (407) 823-2869
Assistant Chair: J. Gardner
Part-time Faculty: J. Beck, Jaskulski, Lesko, Markstein, A. Mascaro, J. Mascaro, McQuinn, Radock, Schwab.

The Department of Music offers a Bachelor of Music degree with options in performance and piano pedagogy; a Bachelor of Arts Degree in performance; and a Bachelor of Music Education Degree with specializations in instrumental, choral and elementary school music.

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 Master of Arts and a Master of Education degree in Music Education are offered by the College of Education.

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 PERFORMANCE AND MUSIC EDUCATION 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.

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, Bachelor of Music students must spread their required 8 semester hours of major ensemble credit over at least 8 separate semesters; Bachelor of Arts students 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, Bachelor of Music students must spread their required 4 semester hours of minor ensemble credit over at least 3 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

Bachelor of Music and Bachelor of Arts students with a performance specialization must complete at least all but one of their required comprehensive examinations before they will be permitted to audition for their senior recital. Bachelor of Music education students must complete at least all but one of their required comprehensive examinations before they will be permitted to do their senior student teaching. Bachelor of Music Education students may not give their required recital during the semester of their senior student teaching. Their senior student teaching must be done in the area of their specialization.

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
Junior Practicum in Recording Arts—Sound Reinforcement and Concert Lighting, Tapeless Studio, Video

8 Semester Hours
10 Semester Hours

Photo Credit: James Meckley
Senior Practicum in Recording Arts—Music Business, Advanced Recording,
Maintenance and Troubleshooting
A recording internship offered by the Music Department
Total course work specified for certificate:

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 Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>MUS 1010</td>
<td>Music Forum (8 semesters)</td>
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<tr>
<td>MUT 1111, 1112, 2116, 2117, 3561</td>
<td>Music Theory</td>
<td>10</td>
</tr>
<tr>
<td>MUT 1241, 1242, 2246, 2247, 3248</td>
<td>Ear Training and Sight Singing</td>
<td>5</td>
</tr>
<tr>
<td>MVK/MVS/MVW/MVB MVP/MVV</td>
<td>Performance (8 semesters including 2 semesters of Level IV)</td>
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<tr>
<td>MUH 4211, 4212</td>
<td>*Music History</td>
<td>6</td>
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<tr>
<td>MUN</td>
<td>Major Ensemble (8 semesters)</td>
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<tr>
<td>MUN</td>
<td>Minor Ensemble (4 semesters)</td>
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<tr>
<td>MVK</td>
<td>Class Piano I-IV (Not required of piano majors)</td>
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<tr>
<td>MUG 3101</td>
<td>Basic Conducting</td>
<td>2</td>
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<td>PHY 3464</td>
<td>Physical Basis of Music</td>
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<tr>
<td>PHY 3464</td>
<td>Foreign Language</td>
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</table>

**Music Electives**

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. Up to one additional year of foreign language.

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 (MVG 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 (MVG 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. University Electives

**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, theory, ear training, and sight singing comprehensive 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 department requirements

3. **Required Courses** [both specializations]

   - MUS 1010 Music Forum (6 semesters)
   - MUT 1111, 1112, 2116, 2117, 3561 Music Theory
   - MUT 1241, 1242, 2246, 2247, 3248 Ear Training and Sight Singing
   - MVK/MVS/MVW/MVB Performance (6 semesters including 2 semesters of Level III)
   - MVP/MVV Major and Minor Ensembles (6 semesters)
   - MUH 4211, 4212 Music History
   - MUN Class Piano I-IV (Not required of piano majors)
   - MVK Music Electives/Special Requirements
   - *Three semester hours of coursework in the General Education Program are satisfied by MUH 4212.

   **Total Semester Hours Required** 120 Hours

**Bachelor of Music Education**

**Degree Requirements**

1. See Undergraduate Degree Requirements

2. See special college and department requirements

3. **Required Courses**

   - MUS 1010 Music Forum (6 semesters)
   - MUT 1111, 1112, 2116, 2117, 3561 Music Theory
   - MUT 1241, 1242, 2246, 2247, 3248 Ear Training and Sight Singing
   - MVK/MVS/MVW/MVB Performance (6 semesters including 2 semesters of Level III)
   - MVP/MVV Major and Minor Ensembles (6 semesters)
   - MUH 4211, 4212 Music History
   - MUN Class Piano I-IV (Not required of piano majors)
   - MVK Music Electives/Special Requirements

   **Total Semester Hours Required** 120 Hours

*Three semester hours of coursework in the General Education Program are satisfied by MUH 4212.*
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<th>Hours</th>
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<td>2 semesters of level III)</td>
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<td>MUN</td>
<td>Major Ensemble (6 semesters)</td>
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<tr>
<td>MUN</td>
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<tr>
<td>MUH 4211, 4212</td>
<td>*Music History</td>
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<tr>
<td>MUG 3101</td>
<td>Basic Conducting</td>
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<tr>
<td>MUE 3460</td>
<td>Brass Techniques</td>
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<td>Percussion Techniques</td>
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<td>MUE 3440</td>
<td>String Techniques</td>
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<td>Classroom Learning Principles</td>
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<td>Secondary School Music Instructional Analysis</td>
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**Program A - Instrumental**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVV 1111</td>
<td>Class Voice</td>
<td>1</td>
</tr>
<tr>
<td>MVK</td>
<td>Class Piano I-IV (Not required of piano majors)</td>
<td>4</td>
</tr>
<tr>
<td>MVB/MVK/MVP/ MVS/MVV</td>
<td>Performance IV</td>
<td>2</td>
</tr>
<tr>
<td>MUE 3460</td>
<td>Brass Techniques (repeat)</td>
<td>1</td>
</tr>
<tr>
<td>MUE 3450</td>
<td>Woodwind Techniques (repeat)</td>
<td>1</td>
</tr>
<tr>
<td>MUG 3302</td>
<td>Instrumental Conducting</td>
<td>2</td>
</tr>
<tr>
<td>MUT 4344</td>
<td>Seminar in Music Arranging</td>
<td>1</td>
</tr>
<tr>
<td>MUE 4480</td>
<td>Marching Band Techniques</td>
<td>1</td>
</tr>
<tr>
<td>ESE 4943</td>
<td>Senior Student Teaching-Secondary</td>
<td>12</td>
</tr>
</tbody>
</table>

**Program B - Choral**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>MVK 1111-1141</td>
<td>Class Piano I-IV (Not required of piano majors)</td>
<td>4</td>
</tr>
<tr>
<td>MVV 1111</td>
<td>Class Voice</td>
<td>2</td>
</tr>
<tr>
<td>MUG 3202</td>
<td>Choral Conducting</td>
<td>2</td>
</tr>
<tr>
<td>MVB/MVK/MVP/ MVS/MVW</td>
<td>Performance IV</td>
<td>2</td>
</tr>
<tr>
<td>ITA 1005, FRE 1005, GER 1005</td>
<td>Diction</td>
<td>3</td>
</tr>
<tr>
<td>ESE 4943</td>
<td>Senior Student Teaching-Secondary</td>
<td>12</td>
</tr>
</tbody>
</table>

**Program C - Elementary School**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>MVK 1111-1141</td>
<td>Class Piano I-IV (Not required of piano majors)</td>
<td>4</td>
</tr>
<tr>
<td>MVV 1111</td>
<td>Class Voice</td>
<td>3</td>
</tr>
<tr>
<td>MVS 1216</td>
<td>Secondary Guitar</td>
<td>1</td>
</tr>
<tr>
<td>MVO 3124</td>
<td>Recorder II</td>
<td>1</td>
</tr>
<tr>
<td>ESE 4943</td>
<td>Senior Student Teaching-Elementary</td>
<td>12</td>
</tr>
</tbody>
</table>

4. **Restricted Electives**
None.

5. **Electives**
None.

Minimum Total Semester Hours Required 125-129

**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).
3. History, theory, ear training, and sight singing comprehensive examinations.
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
Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses (24 semester hours)
   A. Regular Major (33 hours required)
      PHI 1100 Critical Thinking 3 hours
      PHI 3011 Philosophical Reasoning 3 hours
      PHI 3130 Formal Logic I 3 hours
      PHH 3100 Ancient Philosophy 3 hours
      PHH 3400, or Modern Continental Philosophy, or 3 hours
      PHH 3402 Modern British Philosophy
      PHH 3601, or Contemporary Continental Philosophy, or 3 hours
      PHH 3620 Contemporary Analytic Philosophy
      PHI 3600 Ethics 3 hours
      PHI 4360, or Epistemology, or 3 hours
      PHI 4500 Metaphysics

      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)  
   - HUM 3431 Ancient World: Greece  
   - HUM 3432 Ancient World: Rome  
   - HUM 3401 Asian Humanities or  
   - HUM 3250 Contemp. Humanities  
   - HUM 3025 Critical Evaluation/Arts or  
   - PHI 3800 Aesthetics  
   - CLA 3850 Classical Myth or  
   - CLA 3851 Comparative Myth  
   - HUM 4301 The Classical Ideal  
   - HUM 4302 The Romantic Ideal  
   - HUM 4303 The Spiritual Ideal

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.)  
   - ARH 4311 or 4312 Ital. Ren. Art or ARH 3060 Hist. Arch.  
   - ARH 4350 or ARH 4430 or ARH 4450 History of Art  
   - ENL 3031 or 3051 English Lit. or LIT 2110 or 2120 World Lit.  
   - ENL 4330 Shakespeare or AML 3051 American Lit. II  
   - EUH 3122 Medieval Soc. & Civ. or EUH 3142 Ren. & Reform.  
   - MUL 2010 Enjoyment of Music  
   - PHH 3100 Ancient Phil. or PHH 3400 Mod. Continental Phil.  
   - PHM 3350 Introduction to Marxism or PHP 3766 Existentialism  
   - HUM 3552 Hebrew-Christian Heritage  
   - HUM 3417 or HUM 3418 Eastern Religious Thought and Culture  
   - THE 3112 or 3113 Theatre History  
   - THE 3370 Modern Drama or LIT 4094 Mod. Drama as Lit.

5. Electives  
   May be used to obtain a second major or to complete requirements for teacher certification in Humanities in the College of Education.

**DEPARTMENT OF PHYSICS**

**Chair:** S. K. Bose, HPB 310, Phone (407) 823-2325  
**Faculty:** Bass, Beck, Bollem, Bolte, Bose, Brennan, Caldwell, Chai, Chow, Elias, Hagan, Heinonen, Johnson, Kim, Littlewood, Llewellyn, Miller, Neighbor, Peale, Renken, Richardson, Saha, Schulte, Silfvast, Soileau, Stegeman, Van Stryland

The Department of Physics offers B.S., M.S., and Ph.D. degrees. Students interested in being a physics major are encouraged to see, as soon as possible, a faculty advisor who will help the student to design a curriculum. An appointment to see the advisor is necessary prior to registration in each semester.  
Physics is a basic science and coursework in physics helps to prepare a student for a variety of careers in industry and government, as well as teaching in schools, colleges and universities.  
The undergraduate program emphasizes classroom as well as advanced laboratory experiences. The Departmental computer laboratory, including SUN workstations, is available to every physics major; many of the advanced courses require the use of FORTRAN and MATHEMATICA.  
Advanced undergraduates are encouraged to be involved in special projects and re-
search with faculty. Faculty research facilities are extensive in the areas of atomic-molecular, condensed matter, particle, and optical and laser physics.

Service courses required by other department and colleges are offered regularly as well as courses for science education majors and a physical science course satisfying general education requirements.

Degree Requirements
1. General Undergraduate Degree Requirements.
2. 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</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BSC 2010C</td>
<td>General Biology</td>
<td>4</td>
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<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 3048H (or 3048), 3048L</td>
<td>Physics For Scientists and Engineers I and II</td>
<td>8</td>
</tr>
<tr>
<td>PHY 3049H (or 3049), 3049L</td>
<td>Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>PHY 3101H (or 3101)</td>
<td>Physics for Scientists and Engineers III</td>
<td>3</td>
</tr>
<tr>
<td>PHY 3XXX</td>
<td>Introduction to Theoretical Methods in Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHZ 3151</td>
<td>Computer Methods in Physics</td>
<td>3</td>
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<tr>
<td>PHY 3221</td>
<td>Mechanics I</td>
<td>3</td>
</tr>
<tr>
<td>PHY 3503</td>
<td>Thermal and Statistical Physics</td>
<td>3</td>
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<tr>
<td>PHY 3322, 4324</td>
<td>Electricity and Magnetism I &amp; II</td>
<td>6</td>
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<tr>
<td>PHY 3752C</td>
<td>Physics of Scientific Instruments</td>
<td>3</td>
</tr>
<tr>
<td>PHY 4604, 4605</td>
<td>Wave Mechanics I &amp; II</td>
<td>6</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 courses approved by the advisor.
   A minimum of six hours of these must be PHY or PHZ courses. 15 hours
   Total Semester Hours Required 121

DEPARTMENT OF POLITICAL SCIENCE
Chair: M.E. Vittes, FA 426. Phone (407) 823-2608
Faculty: Benson, Bledsoe, Celso, Fine, Handberg, Johnson-Freese, Kennedy, Kiel, Kurfirst, 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. Four courses (12 semester hours) must be taken at senior institutions. 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
   Ten courses (30 semester hours) must be taken at senior institutions.
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 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
   *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 6 hours
   - Two courses from area B if area A is chosen above 3 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 4803  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
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 4225  Vietnam War
INR 4335  Coercion in International Politics
INR 4401  International Law I
INR 4402  International Law II
INR 4404  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 Processes
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
PUP 3---  Introduction to Space Studies

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
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
PSY 2013 General Psychology 3 hours
PSY 2023 Careers in Psychology 1 hour
PSY 3214 Research Methods 4 hours
PSY 3204 Statistical Methods in Psychology 4 hours
EXP 3404 Basic Learning Processes 4 hours
PSB 3002 Physiological Psychology 4 hours

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.

Total Hours Required Outside Major 3
Total Hours Required in Major 38
Total Semester Hours Required 120

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
      or
      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
PPE 3003 Personality Theory 3 hours
Public Service Administration
PAD 3003 Introduction to Public Administration 4 hours
CCJ 3020 Criminal Justice System 4 hours
or PLA 3013 Law and the Legal System 4 hours
Sociology
SYG 2000 General Sociology 3 hours
ANT 2003 General Anthropology 3 hours
5. Electives
Total Semester Hours Required 120

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, ANT 3410, ANT 3422, ANT 3511; and a minimum of 9 semester hours of Anthropology. No more than 6 semester hours of transfer credit in anthropology will be accepted toward the minor, and no more than 6 semester hours of 1000/2000 credit can be applied. The minimum number of semester hours required is 21.
2. Sociology
   Required Courses: SYG 2000, SYO 3000; and a minimum of 12 semester hours of Sociology courses. No more than 6 semester hours of transfer credit will be accepted toward the minor, and no more than 6 semester hours of 1000/2000 credit can be applied. The minimum number of semester hours required is 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)
   SYG 2000 General Sociology 3 hours
   SYA 3110 Development of Social Thought 3 hours
   or SYA 3120 Modern Sociological Thought 3 hours
   SYA 3300 Research Methods 4 hours
   SYA 3400 Research Methods and Statistics 4 hours
   SYO 3360 Social Organization & Human Relations 3 hours
   or
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.)

4. Restricted Electives

Majors must choose a minimum of 21 semester hours from the courses listed below:

- SYG 3010 Social Problems 3 hours
- SYA 4650 Applied Sociology 3 hours
- SYD 3410 Urban Sociology 3 hours
- SYD 3800 Sex Roles in Modern Society 3 hours
- SYD 4020 Population 3 hours
- SYO 3000 Modern Sociology 3 hours
- SYO 3410 Sociology of Mental Illness 3 hours
- SYO 3530 Social Stratification 3 hours
- SYO 4100 Family Trends 3 hours
- SYO 4250 Sociology of Education 3 hours
- SYO 4300 Political Sociology 3 hours
- SYO 4370 Sociology of Occupations and Professions 3 hours
- SYO 4400 Medical Sociology 3 hours
- SYP 3300 Collective Behavior 3 hours
- SYP 3400 Social Change 3 hours
- SYP 3450 Sociology and Law 3 hours
- SYP 3510 Sociology of Deviant Behavior 3 hours
- SYP 3520 Criminology 3 hours
- SYP 3530 Juvenile Delinquency 3 hours
- SYP 3551 Sociology of Alcoholism 3 hours
- SYP 3602 Sociology of Popular Music 3 hours
- SYP 3650 Sociology and Sport 3 hours
- SYP 4550 Sociology of Drug Abuse 3 hours
- SYP 4730 Sociology of Aging 3 hours

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)

- ANT 3211 Archaeology and the Rise of Human Culture (Anthropology I) 3 hours
- ANT 3410 Cultural Anthropology (Anthropology II) 3 hours
- ANT 3511 The Human Species (Anthropology III) 3 hours
- ANT 3145 Archaeology of Complex Societies 3 hours
- ANT 3422 Peoples of the World 3 hours
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT 3610</td>
<td>Language and Culture</td>
<td>3</td>
</tr>
<tr>
<td>ANT 4084</td>
<td>History of Anthropological Thought</td>
<td>3</td>
</tr>
</tbody>
</table>

4. Restricted Electives (24 hours)

<table>
<thead>
<tr>
<th>Area Studies (Select 3)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT 3153 Archaeology of North America</td>
<td>3</td>
</tr>
<tr>
<td>ANT 3162 Archaeology of Middle and South America</td>
<td>3</td>
</tr>
<tr>
<td>ANT 3163 Mesoamerican Archaeology</td>
<td>3</td>
</tr>
<tr>
<td>ANT 3311 Indians of the Southeastern United States</td>
<td>3</td>
</tr>
<tr>
<td>ANT 3312 Ethnology of North American Indians</td>
<td>3</td>
</tr>
<tr>
<td>ANT 3313 Indians of the North American High Plains</td>
<td>3</td>
</tr>
<tr>
<td>ANT 3328 Maya Archaeology</td>
<td>3</td>
</tr>
<tr>
<td>ANT 3332 Peoples and Cultures of Latin America</td>
<td>3</td>
</tr>
<tr>
<td>ANT 3363 Anthropology of Japan</td>
<td>3</td>
</tr>
</tbody>
</table>

Specialized Studies (Select 5)

<table>
<thead>
<tr>
<th>Cultural</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT 3302 Sex, Gender, and Culture</td>
<td>3</td>
</tr>
<tr>
<td>ANT 3241 Magic, Ritual, and Belief</td>
<td>3</td>
</tr>
<tr>
<td>ANT 3432 Culture and the Individual</td>
<td>3</td>
</tr>
<tr>
<td>ANT 3418 Aging and Death</td>
<td>3</td>
</tr>
<tr>
<td>ANT 3262 Rural Society</td>
<td>3</td>
</tr>
<tr>
<td>ANT 3271 Law and Culture</td>
<td>3</td>
</tr>
<tr>
<td>ANT 3705 Action Anthropology</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Archaeology</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT 3122 Archaeological Method and Theory</td>
<td>3</td>
</tr>
<tr>
<td>ANT 3141 The Emergence of Civilizations</td>
<td>3</td>
</tr>
<tr>
<td>ANT 3142 Old World Prehistory</td>
<td>3</td>
</tr>
<tr>
<td>ANT 3144 Prehistory of the American Indians</td>
<td>3</td>
</tr>
<tr>
<td>ANT 4124 Advanced Archaeological Fieldwork</td>
<td>9</td>
</tr>
<tr>
<td>ANT 4180 Seminar in Laboratory Analyses</td>
<td>3</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Physical</th>
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</tr>
</thead>
<tbody>
<tr>
<td>ANT 3462 Medical Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ANT 3464 Human Microevolution</td>
<td>3</td>
</tr>
<tr>
<td>ANT 3512 Biobehavioral Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ANT 3552 Primatology</td>
<td>3</td>
</tr>
</tbody>
</table>

5. Electives                                                                                                    |       |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT 2003 General Anthropology (recommended for non-majors)</td>
<td>3</td>
</tr>
<tr>
<td>ANT 5479 Comparative Cultural Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ANT 5937 Proseminar in Anthropology</td>
<td>3</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, Malone, Nickerson, Richardson, J. Schott, S. Schott, Somerville, M. Wang, 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

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOT 2010C</td>
<td></td>
</tr>
<tr>
<td>BSC 2010C</td>
<td></td>
</tr>
<tr>
<td>ZOO 2010C</td>
<td></td>
</tr>
</tbody>
</table>

Group B

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 2045</td>
<td></td>
</tr>
<tr>
<td>CHM 2046 and CHM 2046L</td>
<td></td>
</tr>
<tr>
<td>PHY 3053C</td>
<td></td>
</tr>
<tr>
<td>PHY 3054C</td>
<td></td>
</tr>
</tbody>
</table>

(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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>STA 3023</td>
<td>Statistical Methods I</td>
<td>3</td>
</tr>
<tr>
<td>STA 4664</td>
<td>Statistical Quality Control</td>
<td>3</td>
</tr>
<tr>
<td>STA 4102</td>
<td>Computer Processing of Statistical Data</td>
<td>3</td>
</tr>
<tr>
<td>STA 4163</td>
<td>Statistical Methods II</td>
<td>3</td>
</tr>
<tr>
<td>STA 4164</td>
<td>Statistical Methods III</td>
<td>3</td>
</tr>
<tr>
<td>STA 4222</td>
<td>Sample Survey Methods</td>
<td>3</td>
</tr>
<tr>
<td>STA 4321</td>
<td>Statistical Theory I</td>
<td>3</td>
</tr>
<tr>
<td>STA 4322</td>
<td>Statistical Theory II</td>
<td>3</td>
</tr>
<tr>
<td>STA 4502</td>
<td>Nonparametric Statistical Methods</td>
<td>3</td>
</tr>
<tr>
<td>COT 4500</td>
<td>Numerical Calculus</td>
<td>3</td>
</tr>
<tr>
<td>COP 2500</td>
<td>Programming I</td>
<td>3</td>
</tr>
<tr>
<td>COP 2501</td>
<td>Programming II</td>
<td>3</td>
</tr>
<tr>
<td>MAC 3311</td>
<td>Calculus with Analytic Geometry I</td>
<td>4</td>
</tr>
<tr>
<td>MAC 3312</td>
<td>Calculus with Analytic Geometry II</td>
<td>4</td>
</tr>
<tr>
<td>MAC 3313</td>
<td>Calculus with Analytic Geometry III</td>
<td>4</td>
</tr>
</tbody>
</table>
MAS 3106 Linear Algebra 4 hours
or
MAS 3105 Elementary Linear and Matrix Algebra 4 hours
COT 3100 Introduction to Discrete Structure 3 hours
or
MHF 2300 Logic and Proof in Mathematics 3 hours
ENC 3241 Technical Report Writing 3 hours

4. Restricted Electives
A minimum of 6 hours selected from upper-division or graduate statistics, mathematics, or computer science courses. (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.

5. Electives
The number of hours depends on the courses chosen to satisfy university requirements.

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 3110 or THE 3111, 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</th>
<th>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 3110</td>
<td>Theatre History I</td>
<td>3</td>
</tr>
<tr>
<td>THE 3111</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</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>THE 3305</td>
<td>Drama Analysis</td>
<td>3</td>
</tr>
<tr>
<td>THE 3925</td>
<td>Theatre Practicum II</td>
<td>2</td>
</tr>
<tr>
<td>TPP 3111</td>
<td>Acting II</td>
<td>3</td>
</tr>
<tr>
<td>TPP 4150</td>
<td>Scene Study and Character Development</td>
<td>3</td>
</tr>
<tr>
<td>TPP 4260</td>
<td>Acting III</td>
<td>3</td>
</tr>
<tr>
<td>TPP 4311</td>
<td>Directing II</td>
<td>3</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</td>
</tr>
<tr>
<td>THE 3925</td>
<td>Theatre Practicum II</td>
<td>2</td>
</tr>
<tr>
<td>TPA 3060</td>
<td>Scene Design</td>
<td>3</td>
</tr>
<tr>
<td>TPA 3081</td>
<td>Scene Painting</td>
<td>3</td>
</tr>
<tr>
<td>TPA 3220</td>
<td>Stage Lighting</td>
<td>3</td>
</tr>
<tr>
<td>TPA 3221</td>
<td>Lighting Design</td>
<td>3</td>
</tr>
<tr>
<td>TPA 4061</td>
<td>Advanced Design</td>
<td>3</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:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMH 3560</td>
<td>Women in American History</td>
</tr>
<tr>
<td>ANT 3302</td>
<td>Sex, Gender and Culture</td>
</tr>
<tr>
<td>ARH 4458</td>
<td>Women and Art in 20th Century America</td>
</tr>
<tr>
<td>HSC 3930</td>
<td>Women and Health</td>
</tr>
<tr>
<td>LIT 3383</td>
<td>Women in Literature</td>
</tr>
<tr>
<td>PHM 4123</td>
<td>Feminist Theory</td>
</tr>
<tr>
<td>PUP 4323</td>
<td>Women and Politics</td>
</tr>
<tr>
<td>SOP 3742</td>
<td>Psychology of Women</td>
</tr>
</tbody>
</table>

Elective Courses (choose one) — 3 hours:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYD 3800</td>
<td>Sex Roles in Modern Society</td>
</tr>
<tr>
<td>SYD 4100</td>
<td>The Family</td>
</tr>
</tbody>
</table>

Other courses as approved by the Women's Studies advisor.
COLLEGE OF
BUSINESS ADMINISTRATION

UNDERGRADUATE PROGRAMS
Accounting (BSBA)
Economics (BSBA)
Finance (BSBA)
General Business Administration (BSBA)
Hospitality Management (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, and a commitment to service in the community, not only from its faculty but also its students. 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 2301, 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.

Attendance at the first meeting of any College of Business course is mandatory. Students not in attendance at the first meeting may be dropped from the course. It is the responsibility of the student to take whatever steps are necessary to determine if they have been officially dropped from a course. This does not remove the student’s responsibility for dropping courses they do not intend to complete.

The degree Bachelor of Science in Business Administration with the following majors is offered by the College of Business Administration:

- Accounting
- Economics
- Finance
- General Business Administration
- Hospitality Management
- Management
- Marketing

Common Body of Knowledge

The following common course work, required of all majors, provides a foundation in the major areas of business administration.

- *ACG 2001 Principles of Financial Accounting 3 hours
- *ACG 2301 Principles of Managerial Accounting 3 hours
- or
- *ACG 2023 Principles of Accounting I & II 6 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 and a minimum 2.0 is required overall.

Student Load
A student who is enrolled in 16 semester hours of course work is considered to be carrying a normal academic load. Students in the College of Business Administration desiring to take more than 16 hours of course work 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 4361, ECO 3702, FIN 4624, MAR 4243 or MAN 4600; 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, 2301, 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 and overall. GEB 3004 may not be used as the business course elective.
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. Students wanting to major in Accounting must apply for admission to the major.
   b. Within the College of Business Administration the first day of class is mandatory. Final exams will be given during Exam Week.
   c. 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.
   d. 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
   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 minimum 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.

DEPARTMENT OF ECONOMICS
Chair: W. McHone, BA 325, Phone (407) 823-3266
Faculty: Braun, Day, Gibbs, Hoffer, D. Hosni, Kilbride, T. Martin, McHone, Otsuka, Pennington, Raffa, Rungeling, Soskin, White, Xander

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. Special college and/or department requirements:
   a. Students wanting to major in Economics must apply for admission to the major.
   b. Within the College of Business Administration the first day of class is mandatory. Final exams will be given during Exam Week.
   c. A transfer student to this program must take a minimum of twelve (12) semester hours in economics at UCF.
3. Required Courses
   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
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.

Bachelor of Science in Business Administration: Finance

Degree Requirements:
1. See Undergraduate Degree Requirements.
2. Special college and/or department requirements:
   a. 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 and to have a 2.0 overall average.
   b. FIN 3403 Business Finance, is prerequisite to all finance courses. FIN 3303 Financial Markets, FIN 3404 Intermediate Corporate Finance, FIN 3453 Financial Models, and FIN 3504 Investment Analysis are prerequisites to all other finance, risk management and insurance, and real estate courses.
   c. Students wanting to major in Finance must apply for admission to the major.
   d. Within the College of Business Administration the first day of class is mandatory. Final exams will be given during Exam Week.
   e. A transfer student to this program must take a minimum of twelve (12) semester hours in finance at UCF.
3. Required Courses.
   FIN 3303 Financial Markets 3 hours
   FIN 3404 Intermediate Corporate Finance 3 hours
   FIN 3453 Financial Models 3 hours
   FIN 3504 Investments 3 hours
   Select two of the following:*
   FIN 3324 Management of Financial Institutions 3 hours
   FIN 4514 Portfolio Analysis and Management 3 hours
   FIN 4503 Speculative Financial Markets 3 hours
   FIN 4624 International Financial Management 3 hours
   FIN 4424 Advanced Topics in Financial Management 3 hours
   REE 4303 Real Estate Investment Analysis 3 hours
4. Restricted Electives
   a. Select three of the following:*
      ACG 3103 Financial Accounting I 3 hours
      ACG 3113 Financial Accounting II 3 hours
      ACG 3361 Cost Accounting 3 hours
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 should seek advisement in the Department of Economics. 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. Special college and/or department requirements:
   a. Students wanting to major in General Business Administration must apply for admission to the major.
   b. Within the College of Business Administration the first day of class is mandatory. Final exams will be given during Exam Week.
   c. A transfer student to this program must take a minimum of twelve (12) semester hours in the major at UCF.
3. 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

<table>
<thead>
<tr>
<th>Department of Hospitality Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interim Chair: A. Milman, BA 409, Phone (407) 823-2188</td>
</tr>
<tr>
<td>Faculty: Ashley, Chesser, Ellis, Farsad, Lebruto, Melton, Milman, Pizam, Quain</td>
</tr>
</tbody>
</table>

The hospitality industry is comprised of the many business organizations that provide services to individuals when away from home. The hospitality industry, the number two 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, institutional 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 800 hours of paid employment in the hospitality field during each student’s course of study.

MINOR
The Hospitality Management Department offers a minor consisting of 24 semester hours.

Required courses for minor:
- HFT 1000, FSS 2202C, HFT 2252, HFT 2750, HFT 3600, HFT 3444, HFT 3700, one 3000/4000 level hospitality restricted elective. A GPA of 2.0 is required for these courses. Twelve (12) semester hours must be taken at UCF.

Bachelor of Science in Business Administration:
Hospitality Management

Degree Requirements
1. See Undergraduate Degree Requirements
2. Special college and/or department requirements:
   a. For Hospitality Management majors the mathematical foundation requirement is MAC 1104 - College Algebra. Thirty-one (31) semester hours in the major must be taken at the upper division level. Twelve (12) semester hours in the major must be taken in residence at UCF.
   b. Students wanting to major in Hospitality Management must apply for admission to the major.
   c. Within the College of Business Administration the first day of class attendance is mandatory. Final exams will be given during Exam Week.
3. Required Courses:
   a. Business College Common Body of Knowledge
      - ACG 2001 Principles of Financial Accounting 3 hours
      - ACG 2301 Principles of Managerial Accounting 3 hours
      - ECO 2013 Principles of Macro-Economics 3 hours
      - ECO 2023 Principles of Micro-Economics 3 hours
      - ENC 3210 Business Report Writing 3 hours
      - STA 3023 Statistical Methods I 3 hours
      - CGS 3000 Computer Fundamentals for Business 3 hours
      - MAC 3233 Concepts of Calculus OR MGF 1203 Finite Math 3 hours
      - HFT 3600 Legal Enviro in Hosp/Tourism Industry 3 hours
      - HFT 3XXX Services Operations Management 3 hours
      - ECO 3411 Quantitative Methods (HFT students may use substitute course. See HFT Dept. BA 409) 3 hours
FIN 3403  Business Finance  3 hours
MAN 3025  Management of Organizations  3 hours
MAR 3023  Marketing  3 hours
GEB 4361  Business in the Intrnl Environment  3 hours
MAN 4720  Business Policies  3 hours

b. Hospitality Management Core
HFT 1000  Intro to Hospitality Management  3 hours
FSS 2202C  Food Production Techniques  3 hours
HFT 2252  Rooms Division Management  3 hours
HFT 2750  Fund of Conventions & Conferences  3 hours
HFT 3444  Hospitality Information System  3 hours
HFT 3700  Travel & tourism Administration  3 hours
HFT 3931  Guest Lecture Series  1 hour
HFT 4420  Profit Planning & Decision Making  3 hours
HFT 4503  Hospitality & Tourism Marketing  3 hours

b. Hospitality Management Core
HFT 1000  Intro to Hospitality Management  3 hours
FSS 2202C  Food Production Techniques  3 hours
HFT 2252  Rooms Division Management  3 hours
HFT 2750  Fund of Conventions & Conferences  3 hours
HFT 3444  Hospitality Information System  3 hours
HFT 3700  Travel & tourism Administration  3 hours
HFT 3931  Guest Lecture Series  1 hour
HFT 4420  Profit Planning & Decision Making  3 hours
HFT 4503  Hospitality & Tourism Marketing  3 hours

c. Hospitality Management Cooperative Education
The Co-op Education program provides students the opportunity to blend theory with practice by combining classroom education with study-related work experience. All students majoring in Hospitality Management must complete a minimum of 600 clock hours (equivalent to 20 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.

d. Restricted Electives
The student must complete 18 credit hours in one of five tracks: lodging management, food service management, conference and convention management, travel and tourism management and generalists. See Department for details.

e. Electives
“The Curriculum in Hospitality Management is currently under revision and students will need to check with the Department and/or Undergraduate Program Office to find out the specifics of the curriculum.”

Total Semester Hours Required 121 hours

DEPARTMENT OF MANAGEMENT
Interim Chair: R. Lewis, BA 335, Phone (407) 823-2679
Faculty: Bogumil, Burnette, Callarman, Eubanks, Fandt, Fernald, Goodman, Gupta, Hattfield, Huseman, H. Jones, Leigh, R. Martin, 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. Special college and/or department requirements:
   a. Students wanting to major in Management must apply for admission to the major.
   b. Within the College of Business Administration the first day of class is mandatory. Final exams will be given during Exam Week.
   c. A transfer student to this program must take a minimum of twelve (12) semester hours in management at UCF.
3. Required Courses (Students are required to take the three required Management electives and five other courses from the designated Management options.)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISM 3011</td>
<td>Management Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>MAN 4120</td>
<td>Business and Society</td>
<td>3</td>
</tr>
<tr>
<td>MAN 4240</td>
<td>Organization Theory and Behavior</td>
<td>3</td>
</tr>
</tbody>
</table>

4. Restricted Electives (Select a minimum of five courses)
(Students should select one of the following concentration areas and take the designated five courses.)
a. Human Resource Management

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>MAN 3301</td>
<td>Personnel Management</td>
<td>3</td>
</tr>
<tr>
<td>MAN 4101</td>
<td>Human Relations in Management</td>
<td>3</td>
</tr>
<tr>
<td>MAN 4310</td>
<td>Personnel Management Issues</td>
<td>3</td>
</tr>
<tr>
<td>MAN 4350</td>
<td>Training and Development</td>
<td>3</td>
</tr>
<tr>
<td>MAN 4401</td>
<td>Labor Relations Management</td>
<td>3</td>
</tr>
</tbody>
</table>

b. Management Information Systems

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>PHI 3130</td>
<td>Formal Logic I</td>
<td>3</td>
</tr>
<tr>
<td>ISM 4212</td>
<td>Data Base Management Systems</td>
<td>3</td>
</tr>
<tr>
<td>ISM 4113</td>
<td>Information Systems Analysis and Design</td>
<td>3</td>
</tr>
<tr>
<td>ISM 4130</td>
<td>Implementation Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>ISM 4090</td>
<td>Seminar in Management Information Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

c. Production/Operational Management

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>MAN 4029</td>
<td>Management of Service Organizations</td>
<td>3</td>
</tr>
<tr>
<td>MAN 4521</td>
<td>Production Planning and Control</td>
<td>3</td>
</tr>
<tr>
<td>MAN 4572</td>
<td>Procurement Management</td>
<td>3</td>
</tr>
<tr>
<td>MAN 4854</td>
<td>Management Science</td>
<td>3</td>
</tr>
<tr>
<td>MAN 4595</td>
<td>Automated Materials Planning</td>
<td>3</td>
</tr>
</tbody>
</table>

d. General Management

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>MAN 4101</td>
<td>Human Relations in Management</td>
<td>3</td>
</tr>
<tr>
<td>MAN 4600</td>
<td>International Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Three additional courses to be selected from two of the other MAN or ISM concentration areas. 9 hours

5. Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
</table>

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 2301, CGS 3000, MAN 3025, PHI 3130, ISM 3011, ISM 4212, ISM 4113, ISM 4130.

DEPARTMENT OF MARKETING

Interim Chair: Ray P. Fisk, BA 317, Phone (407) 823-2108
Faculty: Allen, Davis, Fisk, Fuller, Gillett, Jarvis, Morris, 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. Special college and/or department requirements:
   a. Students wanting to major in Marketing must apply for admission to the major.
   b. Within the College of Business Administration the first day of class is mandatory. Final exams will be given during Exam Week.
   c. A transfer student to this program must take a minimum of twelve (12) semester hours in marketing at UCF.
d. Students majoring in Marketing must earn a grade of "C" or better in each course applied toward the major, and a 2.0 overall average in the major. MAR 3023 is included in this requirement.

3. Required Courses
   - 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 4823  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 4841  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 (MA, M.Ed)
Elementary Education (MA, M.Ed)
English Language Arts Education (MA, M.Ed)
Exceptional Child (MA, M.Ed)
Instructional Systems (MA)
Instructional Technology/Media (MA, M.Ed)
Mathematics Education (MA, M.Ed)
Music Education (MA, 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 and Industry Training (MA, M.Ed)

Doctoral and Specialist Programs
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.

Admission to Teacher Education

Admission to Teacher Education will be granted when students who have been admitted to the College of Education 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

The following course work provides the foundation of professional knowledge and understanding and is required of all majors:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDG 4321</td>
<td>Teaching Strategies</td>
<td>4</td>
</tr>
<tr>
<td>EDG 4324</td>
<td>Teaching in the Schools</td>
<td>3</td>
</tr>
<tr>
<td>EDF 3603</td>
<td>Analysis of Educational Foundations</td>
<td>3</td>
</tr>
<tr>
<td>EDF 4214</td>
<td>Classroom Learning Principles</td>
<td>3</td>
</tr>
</tbody>
</table>

Student Internships

Assistant Dean: T. Blair, ED 115, Phone (407) 823-2436
Directors: R. Martin, M. Miller, 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 three semester hour 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 a limited number of related professional courses during the junior student teaching experience with the consent of their department chair. Application is made through the Office of Student Internships.

Admission to Junior Student teaching is restricted to those students who have been admitted to the Teacher Education program. A 2.5 overall GPA is required when application is submitted.

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 permitted to enroll in other classes only with the consent of their department chair.

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 temporary certification. 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**

Interim Chair: J. Nannette McLain, ED 243, Phone (407) 823-2426

Faculty: Professors: Cowgill, Dziuban, Kysilka, Lange, Manning

Associate Professors: Beadle, Biramiah, Blume, Harrow, Hiett, McLain, Miller, 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**

Chair: William C. Bozeman, ED 318, Phone (407) 823-2596

Faculty: Professors: Baumbach, Bozeman, Hernandez, Johnson, Lynn, Rohter

Associate Professors: Bollet, Cornell, Driscoll, Orwig, Tubbs

Assistant Professors: Balado, Daly, Hill, Murray, Pawlos, 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, A. Cross, L. 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 specialties in: (a) emotionally handicapped; (b) mentally retarded and (c) specific learning disabilities. The Physical Education program is a K-8 specialization. In addition, minors and secondary certification programs are available. Students are responsible for completion of program requirements and are encouraged to review their programs with an assigned advisor.
Bachelor of Science: Exceptional Child Education

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

Preprofessional Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>SPC 1600</td>
<td>Fundamentals of Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2013</td>
<td>General Psychology OR</td>
<td>3</td>
</tr>
<tr>
<td>SYG 2000</td>
<td>General Sociology</td>
<td>3</td>
</tr>
<tr>
<td>MAC 1104</td>
<td>College Algebra OR</td>
<td>3</td>
</tr>
<tr>
<td>MGF 1203</td>
<td>Finite Math</td>
<td>3</td>
</tr>
<tr>
<td>DEP 3004</td>
<td>Developmental Psychology</td>
<td>3</td>
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</table>

Prerequisites to Junior Internship

<table>
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<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>EDG 4321</td>
<td>Teaching Strategies</td>
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</tr>
<tr>
<td>MAE 2117</td>
<td>Elementary School Math</td>
<td>4</td>
</tr>
<tr>
<td>RED 3012</td>
<td>Foundations of Reading</td>
<td>3</td>
</tr>
<tr>
<td>EDF 4214</td>
<td>Classroom Learning Principles</td>
<td>3</td>
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Junior Internship

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>EDF 3603</td>
<td>Analysis of Educational Foundations</td>
<td>3</td>
</tr>
<tr>
<td>EDG 4324</td>
<td>Teaching in Schools</td>
<td>3</td>
</tr>
<tr>
<td>EDF 4214</td>
<td>Classroom Learning Principles</td>
<td>3</td>
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Specialization Requirements

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>EEX 3102</td>
<td>Language Development and Common Disorders*</td>
<td>3</td>
</tr>
<tr>
<td>EEX 4221</td>
<td>Assessment of Exceptional Students</td>
<td>3</td>
</tr>
<tr>
<td>EEX 4601</td>
<td>Behavioral Management</td>
<td>3</td>
</tr>
<tr>
<td>EEX 3243</td>
<td>Techniques for the Exceptional Adolescent-Adult*</td>
<td>3</td>
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<tr>
<td>EEX 3241</td>
<td>Methods for Academic Skills for Exceptional Students*</td>
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</tr>
<tr>
<td>EEX 2010</td>
<td>Introduction to Special Education*</td>
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Specialization Core
Mentally Handicapped Specialization
EMR 4011 Introduction to Mental Retardation 4 hours
LAE 4314 Language Arts in Elementary Schools 3 hours
Learning Disabilities Specialization
ELD 4011 Introduction to Specific Learning Disabilities 4 hours
LAE 4314 Language Arts in Elementary Schools 3 hours
Emotionally Disturbed Specialization
EED 4011 Teaching Emotionally Disturbed Students 4 hours
EED 3250 Behavioral Issues of the Emotionally Handicapped 3 hours

Senior Internship
EDE 4943 Senior Student Teaching - Elementary OR 4 hours
ESE 4943 Senior Student Teaching - Secondary 12 hours
EEX 4920 Senior Seminar in K-8 Special Education 2 hours
Minimum Total Semester Hours Needed 120

Bachelor of Science: Physical Education

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

Preprofessional Requirements
SPC 1600 Fundamentals of Oral Communication 3 hours
PSY 2013 General Psychology 3 hours
MAC 1104 College Algebra OR 3 hours
MGF 1203 Finite Math 3 hours
ZOO 3733C Human Anatomy 3 hours
Prerequisites to Junior Internship
EDG 4321 Teaching Strategies 4 hours
EDF 4214 Classroom Learning Principles 3 hours
Junior Internship
EDE 3942 Junior Student Teaching—Elementary 3 hours
Additional Professional Requirements
EDF 3603 Analysis of Educational Foundation 4 hours
PET 3720C Teaching Physical Education (K-8) 2 hours
PET 3740C Teaching Physical Education (6-12) 2 hours
EDG 4324 Teaching in Schools 3 hours
EDF 4214 Classroom Learning Principles 3 hours
Additional Specialization Requirements
PET 3041 Games Elementary Physical Education Program 3 hours
DAE 3370 Dance & Rhythms 3 hours
PEP 3204 Gymnastics 3 hours
PET 4035 Motor Development Learning 3 hours
PET 4312 Biomechanics 3 hours
PET 4351 Applied Exercise and Human Physiology 3 hours
PEO 3011 Team Sports 3 hours
PEO 3031 Individual Sports and Leisure Activities 3 hours
PET 4401 Administration and Measurement in Physical Education 3 hours
PET 4640 Adapted Physical Education 3 hours
PET Elective approved by advisor 3 hours
Senior Internship
EDE 4943 Senior Student Teaching - Elementary 12 hours
Minimum Total Semester Hours Needed 120

DEPARTMENT OF INSTRUCTIONAL PROGRAMS
Chair: D. Kirby, ED 346, Phone (407) 823-2939
Faculty: Professors: Anderson, Blair, Brumbaugh, Clarke, Hall, Hynes, Joels, Kirby, Martin, Palmer, Thompson, West
Associate Professors: Armstrong, Bailey, Gurney, Hopkins, Hudson, Paugh, Siebert, Sorg, Williams
Assistant Professors: Camp, Cope, Cornett, Everett, McGhee, Ortiz, Ratliff
Instructors: Buchoff, Gard, Kiger, McGuffee, Robinson

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, mathematics, 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 (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/Foreign Language

Three programs are designed to prepare specialists to teach at both the elementary and secondary levels (K-12). Majors in Art and Foreign Language Education are available. 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

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

Preprofessional Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>SPC 1600</td>
<td>Fundamentals of Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2013</td>
<td>General Psychology OR</td>
<td>3</td>
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<tr>
<td>SYG 2000</td>
<td>General Sociology</td>
<td></td>
</tr>
<tr>
<td>MAC 1104</td>
<td>College Algebra OR</td>
<td>3</td>
</tr>
<tr>
<td>MGF 1203</td>
<td>Finite Mathematics</td>
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</tr>
<tr>
<td>ART 2201</td>
<td>Design Fundamentals I</td>
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Prerequisites to Junior Internship

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>EDG 4321</td>
<td>Teaching Strategies</td>
<td>4</td>
</tr>
<tr>
<td>EDF 4214</td>
<td>Classroom Learning Principles</td>
<td>3</td>
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Junior Internship

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>EDE 3943</td>
<td>Junior Student Teaching K-12</td>
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Additional Professional Requirements

<table>
<thead>
<tr>
<th>Course</th>
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<th>Hours</th>
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<tbody>
<tr>
<td>ARE 4143</td>
<td>Methodology for Teaching Art Education I</td>
<td>2</td>
</tr>
<tr>
<td>ARE 4144</td>
<td>Methodology for Teaching Art Education II</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
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<tr>
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</tr>
<tr>
<td>EDF 3603</td>
<td>Analysis of Educational Foundations</td>
<td>3 hours</td>
</tr>
<tr>
<td>EDG 4324</td>
<td>Teaching in Schools</td>
<td>3 hours</td>
</tr>
<tr>
<td>EDF 4214</td>
<td>Classroom Learning Principles</td>
<td>3 hours</td>
</tr>
<tr>
<td></td>
<td><strong>Specialization requirements</strong></td>
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<tr>
<td>ART 2201C</td>
<td>Design Fundamentals I</td>
<td>3 hours</td>
</tr>
<tr>
<td>ART 2202C</td>
<td>Design Fundamentals II</td>
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<td>ART 2300C</td>
<td>Drawing Fundamentals I</td>
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<tr>
<td>ART 2301</td>
<td>Drawing Fundamentals II</td>
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<tr>
<td>ART 3110C</td>
<td>Ceramics</td>
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<tr>
<td>ART 3510C</td>
<td>Painting I</td>
<td>3 hours</td>
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<tr>
<td>ART 3400C</td>
<td>Printmaking</td>
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<tr>
<td>ART 3230C</td>
<td>Design in Advertising</td>
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<tr>
<td>ARH 2050</td>
<td>History of Art I</td>
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<tr>
<td>ARH 2051</td>
<td>History of Art II</td>
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<tr>
<td>ARE XXXX</td>
<td>Teaching Art Appreciation</td>
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<td>PGY 3401C</td>
<td>Photography</td>
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<tr>
<td>ARE 3662</td>
<td>Community Arts I</td>
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<tr>
<td>ARE 3663</td>
<td>Community Arts II</td>
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<tr>
<td>ART 5109C</td>
<td>Crafts Design</td>
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<td>ART 3701</td>
<td>Sculpture</td>
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<td>PHI 3800</td>
<td>Aesthetics</td>
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<td>PHI 3803</td>
<td>Philosophy and Creativity (PR: PHI 3800)</td>
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<td>ART 4530</td>
<td>Advanced Painting</td>
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<td>ART 4166</td>
<td>Metals, Woods</td>
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<td>ART 4130</td>
<td>Fibers, Fabrics</td>
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<td>ARE 3550</td>
<td>Introduction to Art Therapy</td>
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<td><strong>Senior Internship</strong></td>
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</tr>
<tr>
<td>EDE 4943</td>
<td>Senior Student Teaching - Elementary OR</td>
<td>12 hours</td>
</tr>
<tr>
<td>ESE 4943</td>
<td>Senior Student Teaching - Secondary</td>
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**Bachelor of Science: Elementary Education**

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

**Preprofessional Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>SPC 1600</td>
<td>Fundamentals of Oral</td>
<td>3 hours</td>
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<tr>
<td></td>
<td>Communication</td>
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<tr>
<td>PSY 2013</td>
<td>General Psychology I</td>
<td>3 hours</td>
</tr>
<tr>
<td>MAC 1104</td>
<td>College Algebra OR</td>
<td></td>
</tr>
<tr>
<td>MGF 1203</td>
<td>Finite Math</td>
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<tr>
<td>GEO 1200</td>
<td>Physical Geography</td>
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**Prerequisites to Junior Internship**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>EDG 4321</td>
<td>Teaching Strategies</td>
<td>4 hours</td>
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<tr>
<td>RED 3012</td>
<td>Foundations of Reading</td>
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<tr>
<td>MAE 2117</td>
<td>Instruction of Mathematics</td>
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<td>in the Elementary School</td>
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<tr>
<td>EDF 4214</td>
<td>Classroom Learning Principles</td>
<td>3 hours</td>
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**Junior Internship**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>MAE 4326</td>
<td>How Children Learn Math</td>
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<td>RED 4519</td>
<td>Diagnostic and Corrective Reading Strategies</td>
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<td>SSE 3312</td>
<td>Teaching Social Science in the Elementary Schools</td>
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<td>EDE 3942</td>
<td>Junior Student Teaching Elementary</td>
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**Additional Professional Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>EDF 4214</td>
<td>Classroom Learning Principles</td>
<td>3 hours</td>
</tr>
<tr>
<td>EDF 3603</td>
<td>Analysis of Educational Foundations</td>
<td>3 hours</td>
</tr>
<tr>
<td>EDG 4324</td>
<td>Teaching in Schools</td>
<td>3 hours</td>
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Additional Specialization Requirements

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<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ARE 4313</td>
<td>Art/Elementary Schools</td>
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<tr>
<td>HLP 4722</td>
<td>Teaching Elementary School Health/Physical</td>
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<td>Education</td>
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<tr>
<td>LAE 3414</td>
<td>Literature for Children</td>
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<tr>
<td>LAE 4314</td>
<td>Language Arts/Elementary</td>
<td>3</td>
</tr>
<tr>
<td>MUE 3210</td>
<td>Music Elementary School</td>
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<td>SCE 3310</td>
<td>Teaching Science in Elementary School</td>
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<td>Senior Internship</td>
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<tr>
<td>EDE 4943</td>
<td>Senior Student Teaching Elementary</td>
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<td>Minimum Total Semester Hours Needed</td>
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**Bachelor of Science: English Language Arts Education**

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

Preprofessional Requirements

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<tr>
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<tbody>
<tr>
<td>SPC 1600</td>
<td>Fundamentals of Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>CRW 2000</td>
<td>Introduction to Creative Writing</td>
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<tr>
<td>MAC 1104</td>
<td>College Algebra OR</td>
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<tr>
<td>MGF 1203</td>
<td>Finite Math</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2013</td>
<td>General Psychology</td>
<td>3</td>
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Prerequisites to Junior Internship

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>EDG 4321</td>
<td>Teaching Strategies</td>
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</tr>
<tr>
<td>EDF 4214</td>
<td>Classroom Learning Principles</td>
<td>3</td>
</tr>
<tr>
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<td>RECOMMENDED:</td>
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<tr>
<td>ESE 3940</td>
<td>Junior Student Teaching Secondary</td>
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Junior Internship

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>LAE 3335</td>
<td>English Instructional Analysis</td>
<td>4</td>
</tr>
<tr>
<td>EDF 3603</td>
<td>Analysis of Educational Foundations</td>
<td>3</td>
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<tr>
<td>EDG 4324</td>
<td>Teaching in Schools</td>
<td>3</td>
</tr>
<tr>
<td>EDF 4214</td>
<td>Classroom Learning Principles</td>
<td>3</td>
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</table>

Specialization Requirements

<table>
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<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>LIT 2110</td>
<td>World Literature I OR</td>
<td>3</td>
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<tr>
<td>LIT 2120</td>
<td>World Literature II</td>
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<tr>
<td>ENL 3031</td>
<td>English Literature I to 1798</td>
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</tr>
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<td>ENL 3051</td>
<td>English Literature II to 1950</td>
<td>3</td>
</tr>
<tr>
<td>AML 3031</td>
<td>American Literature I</td>
<td>3</td>
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<tr>
<td>AML 3051</td>
<td>American Literature II</td>
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<tr>
<td>LIT 3000</td>
<td>Literary Analysis</td>
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<tr>
<td>LAE 4464</td>
<td>Literature for Adolescents</td>
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<td>ENC 3311</td>
<td>Advanced Expository Writing</td>
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<tr>
<td>LIN 4680</td>
<td>Modern English Grammar OR</td>
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<td>LIN 2670</td>
<td>Grammar and Composition</td>
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<td>LAE 4342</td>
<td>Teaching Language/Composition</td>
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Restricted Electives (6SH)

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<tr>
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Senior Internship

<table>
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<th>Hours</th>
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<tbody>
<tr>
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<td>Minimum Total Semester Hours Needed</td>
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**Bachelor of Science: Foreign Language Education—French**

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

Preprofessional Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>SPC 1600</td>
<td>Fundamentals of Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2013</td>
<td>General Psychology OR</td>
<td>3</td>
</tr>
<tr>
<td>SYG 2000</td>
<td>General Sociology</td>
<td>3</td>
</tr>
<tr>
<td>MAC 1104</td>
<td>College Algebra OR</td>
<td>3</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Hours</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------</td>
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</tr>
<tr>
<td>MGF 1203</td>
<td>Finite Math</td>
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<tr>
<td>FRE 2201</td>
<td>Intermediate French Language and Civilization</td>
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### Prerequisites to Junior Internship

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>EDG 4321</td>
<td>Teaching Strategies</td>
<td>4</td>
</tr>
<tr>
<td>EDF 4214</td>
<td>Classroom Learning Principles</td>
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### Junior Internship

<table>
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<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>EDE 3940</td>
<td>Junior Student Teaching K-12</td>
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### Additional Professional Requirements

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<th>Course Code</th>
<th>Course Title</th>
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<td>FLE 3333</td>
<td>Foreign Language Instructional Analysis</td>
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<tr>
<td>FLE 4xxx</td>
<td>Foreign Language K-6</td>
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</tr>
<tr>
<td>EDF 3603</td>
<td>Analysis of Educational Foundations</td>
<td>3</td>
</tr>
<tr>
<td>EDG 4324</td>
<td>Teaching in Schools</td>
<td>3</td>
</tr>
<tr>
<td>EDF 4214</td>
<td>Classroom Learning Principles</td>
<td>3</td>
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</table>

### Specialization Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>FLE 3063</td>
<td>Foreign Language as Human Behavior</td>
<td>2</td>
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<tr>
<td>FRE 1120</td>
<td>Elementary French and Civilization I</td>
<td>4</td>
</tr>
<tr>
<td>FRE 1121</td>
<td>Elementary French and Civilization II</td>
<td>3</td>
</tr>
<tr>
<td>FRE 2200</td>
<td>Intermediate French and Civilization I</td>
<td>4</td>
</tr>
<tr>
<td>FRE 2201</td>
<td>Intermediate French and Civilization II</td>
<td>4</td>
</tr>
<tr>
<td>FRE 3244</td>
<td>French Conversation</td>
<td>3</td>
</tr>
<tr>
<td>FRE 3240</td>
<td>French Composition</td>
<td>3</td>
</tr>
<tr>
<td>FRW 3100</td>
<td>Survey French Lit I</td>
<td>3</td>
</tr>
<tr>
<td>FRW 3101</td>
<td>Survey French Lit II</td>
<td>3</td>
</tr>
</tbody>
</table>

### Restricted Electives

- 4 upper division courses in French (with advisor approval)

### Cognate Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>LIN 3010</td>
<td>Principles of Linguistics OR</td>
<td></td>
</tr>
<tr>
<td>LIN 4440</td>
<td>Sounds and Forms of Language OR</td>
<td></td>
</tr>
<tr>
<td>LIN 4801</td>
<td>Language and Meaning</td>
<td>3</td>
</tr>
<tr>
<td>ANT 3410</td>
<td>Cultural Anthropology (Anthropology II)</td>
<td>3</td>
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</table>

### Senior Internship

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDE 4943</td>
<td>Senior Student Teaching Elementary OR</td>
<td>12</td>
</tr>
<tr>
<td>ESE 4943</td>
<td>Senior Student Teaching Secondary</td>
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<tr>
<td></td>
<td>Minimum Total Semester Hours Needed</td>
<td>120</td>
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</tbody>
</table>

### Bachelor of Science: Foreign Language Education—Spanish

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

### Preprofessional Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>SPC 1600</td>
<td>Fundamentals of Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2013</td>
<td>General Psychology OR</td>
<td>3</td>
</tr>
<tr>
<td>SYG 2000</td>
<td>General Sociology</td>
<td>3</td>
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<tr>
<td>MAC 1104</td>
<td>College Algebra OR</td>
<td>3</td>
</tr>
<tr>
<td>MGF 1203</td>
<td>Finite Math</td>
<td>3</td>
</tr>
<tr>
<td>SPN 2231</td>
<td>Intermediate Spanish Language and Civilization</td>
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</table>

### Prerequisites to Junior Internship

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>EDG 4321</td>
<td>Teaching Strategies</td>
<td>4</td>
</tr>
<tr>
<td>EDF 4214</td>
<td>Classroom Learning Principles</td>
<td>3</td>
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</tbody>
</table>

### Junior Internship

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDE 3940</td>
<td>Junior Student Teaching K-12</td>
<td>3</td>
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</table>

### Additional Professional Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>FLE 3333</td>
<td>Foreign Language Instructional Analysis</td>
<td>2</td>
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<tr>
<td>FLE 4xxx</td>
<td>Foreign Language K-6</td>
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</tr>
<tr>
<td>EDF 3603</td>
<td>Analysis of Educational Foundations</td>
<td>3</td>
</tr>
<tr>
<td>EDG 4324</td>
<td>Teaching in Schools</td>
<td>3</td>
</tr>
<tr>
<td>EDF 4214</td>
<td>Classroom Learning Principles</td>
<td>3</td>
</tr>
</tbody>
</table>
Specialization Requirements

FLE 3063 Foreign Language as Human Behavior 2 hours
SPN 1120 Elementary Spanish and Civilization I 4 hours
SPN 1121 Elementary Spanish and Civilization II 4 hours
SPN 2200 Intermediate Spanish and Civilization I 4 hours
SPN 2201 Intermediate Spanish and Civilization II 4 hours
SPN 3241 Spanish Conversation 3 hours
SPN 3420 Spanish Composition 3 hours
SPW 3100 Survey Spanish Lit I 3 hours
SPW 3101 Survey Spanish Lit II 3 hours

Restricted Electives

4 upper division courses in Spanish (with advisor approval)

Cognate Requirements

LIN 3010 Principles of Linguistics OR 3 hours
LIN 4440 Sounds and Forms of Language OR 3 hours
LIN 4801 Language and Meaning 3 hours
ANT 3410 Cultural Anthropology (Anthropology II) 3 hours

Senior Internship

EDE 4943 Senior Student Teaching Elementary OR 12 hours
ESE 4943 Senior Student Teaching Secondary

Minimum Total Semester Hours Needed 120

Bachelor of Science: Mathematics Education

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

Preprofessional Requirements

SPC 1600 Fundamentals of Oral Communication 3 hours
PSY 2013 General Psychology
MAC 1104 College Algebra OR
MGF 1203 Finite Math
CGS 1060 Introduction to Computer Science 3 hours

Prerequisites to Junior Internship

EDG 4321 Teaching Strategies 4 hours
EDF 4214 Classroom Learning Principles 3 hours

Recommended:
EDF 4214 Classroom Learning Principles 3 hours

Junior Internship

EDE 3940 Junior Student Teaching Secondary 3 hours

Additional Professional Requirements

MAE 3330 Mathematics Instructional Analysis 4 hours
EDF 3603 Analysis of Educational Foundations 3 hours
EDF 4324 Teaching in Schools 3 hours
EDF 4214 Classroom Learning Principles 3 hours

Specialization Requirements

MAC 3311 Calculus with Analytic Geometry I 4 hours
MAC 3312 Calculus with Analytic Geometry II 4 hours
MAS 3105 Elementary Linear and Matrix Algebra 3 hours
MAS 3203 Number Theory 3 hours
MHF 2300 Logic and Proof in Mathematics 3 hours
MTG 4212 Modern Geometry 4 hours
STA 3023 Statistical Methods I 3 hours
MAE 4634 Programs in Teaching of Mathematics 3 hours
MHF 4404 History of Mathematics 3 hours
CGS 1060 Introduction to Computer Science 3 hours

Restricted Electives - Select One (with advisor approval)

MAC 1114 College Trigonometry 3 hours
MAC 3313 Calculus with Analytic Geometry III 3 hours
MAD 4203 Combinatorics and Graph Theory 3 hours
MAC 4301 Algebra Structure 3 hours
MAS 3103 Linear Algebra 3 hours
Senior Internship
ESE 4943 Senior Student Teaching Secondary
Minimum Total Semester Hours Needed 120

Bachelor of Science: Science Education—Biology
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
Preprofessional Requirements
SPC 1600 Fundamentals of Oral Communication 3 hours
STA 2014 Principles of Statistics OR 3 hours
STA 3023 Statistical Methods 3 hours
MAC 1104 College Algebra 3 hours
PSY 2013 General Psychology OR 3 hours
SYG 2000 General Sociology 3 hours
Prerequisites to Junior Internship
EDG 4321 Teaching Strategies 4 hours
RECOMMENDED:
EDF 4214 Classroom Learning Principles 3 hours
Junior Internship
ESE 3940 Junior Student Teaching Secondary 3 hours

Additional Professional Requirements
SCE 3330 Science Instructional Analysis 4 hours
EDF 3603 Analysis of Educational Foundations 3 hours
EDG 4324 Teaching in Schools 3 hours
EDF 4214 Classroom Learning Principles 3 hours

Specialization Requirements
BSC 2010C General Biology 4 hours
ZOO 2010C General Zoology 4 hours
BOT 2010C General Botany 4 hours
PCB 3023 Molecular Cell Biology 3 hours
PCB 3083 Genetics 3 hours
PCB 3083L Genetics Lab 1 hour
PCB 3043 Ecology 3 hours
PCB 3043L Ecology Lab 1 hour
MCB 3013C Microbiology 5 hours
CHM 2205 Introduction to Organic and Biochemistry 5 hours
PCB 4xxx Biology and Evolution OR 3 hours
PCB 4683 Population Biology and Evolution 4 hours

Support Science Requirements
CHM 2045 Chemistry Fundamentals I 4 hours
CHM 2046 Chemistry Fundamentals II 3 hours
CHM 2046L Chemistry Fundamentals Lab 1 hour
PHY 3033C College Physics I 4 hours
GLY 1030 Geology and Its Applications 3 hours
Senior Internship
ESE 4943 Senior Student Teaching Secondary 12 hours
Minimum Total Semester Hours Needed 120

Bachelor of Science: Science Education—Chemistry
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
Preprofessional Requirements
SPC 1600 Fundamentals of Oral Communication 3 hours
STA 2014 Principles of Statistics OR 3 hours
STA 3023 Statistical Methods 3 hours
MAC 1104 College Algebra 3 hours
PSY 2013 General Psychology OR 3 hours
SYG 2000 General Sociology 3 hours
Prerequisites to Junior Internship
EDG 4321 Teaching Strategies 4 hours
RECOMMENDED:
EDF 4214 Classroom Learning Principles 3 hours
Bachelor of Science: Science Education—Physics

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

Preprofessional Requirements
- SPC 1600 Fundamentals of Oral Communication 3 hours
- STA 2014 Principles of Statistics OR 3 hours
- STA 3023 Statistical Methods 3 hours
- MAC 1104 College Algebra 3 hours
- PSY 2013 General Psychology OR 3 hours
- SYG 2000 General Sociology 3 hours

Prerequisites to Junior Internship
- EDG 4321 Teaching Strategies 4 hours
- EDF 4214 Classroom Learning Principles 3 hours

Junior Internship
- ESE 3940 Junior Year Student Teaching - Secondary 3 hours

Additional Professional Requirements
- SCE 3330 Science Instructional Analysis 4 hours
- EDF 3603 Analysis of Educational Foundations 3 hours
- EDG 4324 Teaching in Schools 3 hours
- EDF 4214 Classroom Learning Principles 3 hours

Mathematics Requirements
- 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
- MAC 3302 Differential Equations 3 hours

Additional Specialization Requirements
- PHY 3053C College Physics I 4 hours
- PHY 3054C College Physics II 4 hours
- PHY 3048 Physics for Engineers and Scientists I 3 hours
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<tr>
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<th>Course Title</th>
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<tbody>
<tr>
<td>PHY 3048L</td>
<td>Physics Laboratory for Engineers and Scientists I</td>
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<tr>
<td>PHY 3049</td>
<td>Physics for Engineers and Scientists II</td>
<td>3</td>
</tr>
<tr>
<td>PHY 3049L</td>
<td>Physics Laboratory for Engineers and Scientists II</td>
<td>1</td>
</tr>
<tr>
<td>PHY 3101</td>
<td>Modern Physics</td>
<td>3</td>
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<tr>
<td>PHY 3752C</td>
<td>Physics of Scientific Instruments</td>
<td>4</td>
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**Select 3 SH from the Following:**

<table>
<thead>
<tr>
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<th>Course Title</th>
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<tbody>
<tr>
<td>PHY 3221</td>
<td>Mechanics I</td>
</tr>
<tr>
<td>PHY 3323</td>
<td>Electricity and Magnetism</td>
</tr>
<tr>
<td>PHY 4604</td>
<td>Wave Mechanics</td>
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**Select 3 SH from the Following:**

<table>
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<tr>
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<th>Course Title</th>
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<tbody>
<tr>
<td>PHY 3503</td>
<td>Thermodynamics</td>
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<tr>
<td>PHY 4424</td>
<td>Optics</td>
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**Select 3 SH from the Following:**

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<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>PHZ 3151</td>
<td>Computer Methods in Physics</td>
</tr>
<tr>
<td>PHY 3802L</td>
<td>Intermediate Physics Laboratory</td>
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**Support Science Requirements**

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CHM 2045</td>
<td>Chemistry Fundamentals I</td>
<td>4</td>
</tr>
<tr>
<td>CHM 2046</td>
<td>Chemistry Fundamentals II</td>
<td>3</td>
</tr>
<tr>
<td>CHM 2046L</td>
<td>Chemistry Fundamentals Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>BSC 2010C</td>
<td>General Biology</td>
<td>4</td>
</tr>
<tr>
<td>GLY 1030</td>
<td>Geology and its Applications</td>
<td>3</td>
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</table>

**Senior Internship**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ESE 4943</td>
<td>Senior Student Teaching - Secondary</td>
<td>12</td>
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</tbody>
</table>

**Bachelor of Science: Social Science Education**

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

**Preprofessional Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>SPC 1600</td>
<td>Fundamentals of Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>SYG 2000</td>
<td>General Sociology</td>
<td>3</td>
</tr>
<tr>
<td>MAC 1104</td>
<td>College Algebra OR</td>
<td>3</td>
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<tr>
<td>MGF 1203</td>
<td>Finite Mathematics</td>
<td></td>
</tr>
<tr>
<td>PSY 2013</td>
<td>General Psychology</td>
<td>3</td>
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</table>

**Prerequisites to Junior Internship**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDG 4321</td>
<td>Teaching Strategies</td>
<td>4</td>
</tr>
<tr>
<td>EDF 4214</td>
<td>Classroom Learning Principles</td>
<td>3</td>
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**Junior Internship**

<table>
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<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ESE 3940</td>
<td>Junior Year Student Teaching - Secondary</td>
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</table>

**Additional Professional Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tr>
<td>SSE 3333</td>
<td>Social Science Instructional Analysis</td>
<td>4</td>
</tr>
<tr>
<td>EDF 3603</td>
<td>Analysis of Educational Foundations</td>
<td>3</td>
</tr>
<tr>
<td>EDG 4324</td>
<td>Teaching in Schools</td>
<td>3</td>
</tr>
<tr>
<td>EDF 4214</td>
<td>Classroom Learning Principles</td>
<td>3</td>
</tr>
</tbody>
</table>

**Specialization Requirements**

**Lower Division Requirements:**

<table>
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<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>
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<tr>
<td>ECO 2023</td>
<td>Principles of Economics II</td>
<td>3</td>
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<tr>
<td>EUH 2000</td>
<td>Western Civilization I</td>
<td>3</td>
</tr>
<tr>
<td>EUH 2001</td>
<td>Western Civilization II</td>
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<tr>
<td>AMH 2010</td>
<td>U.S. History: 1492-1877</td>
<td>3</td>
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<tr>
<td>AMH 2020</td>
<td>U.S. History: 1877-Present</td>
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</tr>
<tr>
<td>POS 2041</td>
<td>American National Government</td>
<td>3</td>
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<tr>
<td>PSY 2013</td>
<td>General Psychology OR</td>
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</tr>
<tr>
<td>SYG 2000</td>
<td>General Sociology</td>
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**Upper Division Requirements:**

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<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CPO 3103</td>
<td>Comparative Politics</td>
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<tr>
<td>GEO 3370</td>
<td>Resources Geography</td>
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</tbody>
</table>
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
Restricted Electives (9 hrs.)
American History (Select one)
AMH 3370  American Economic History  3 hours
AMH 4130  American Revolution  3 hours
AMH 4170  Civil War and Reconstruction  3 hours
European History (Select one with approval of advisor.)
AMH 4110  Modern European History  3 hours
Political Science (Select one)
POS 3122  State Government and Public Policy  3 hours
POS 3273  Voting and Elections  3 hours
INR 3002  International Relations-Theory and Practice  3 hours
Senior Internship
ESE 4943  Senior Student Teaching - Secondary  12 hours

Minimum Total Semester Hours Needed  120

Bachelor of Science: Vocational Education and Industry Training

Business Education

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

Preprofessional Requirements
SPC 1600  Fundamentals of Oral Communication  3 hours
MAC 1104  College Algebra OR MGF 1203  Finite Mathematics  3 hours
PSY 2013  General Psychology OR SYG 2000  General Sociology  3 hours

Prerequisites to Junior Internship
Track A: EDG 4321 Teaching Strategies  4 hours
Track B: EVT 3365 General Methods/Testing Evaluation in Vocational Education

Junior Internship
ESE 3940  Junior Year Student Teaching - Secondary  3 hours

Professional Preparation (Select A or B)

A. Area of Emphasis - Public School Teaching
EDF 3603  Analysis of Educational Foundations  3 hours
EDF 4214  Classroom Learning Principles  3 hours
Tech elective approved by advisor

B. Area of Emphasis - Industry Training
EVT 4169  Curriculum Development Techniques for Industry Training  3 hours
ADE 4382  Teaching Adult Learners  3 hours
EME 5054  Instructional Systems: A Survey of Applications  3 hours

Instructional Core (Select A or B)

A. Area of Emphasis - Public School Teaching
EVT 3502  Special Needs of Vocational Students  4 hours
EVT 4065  Principles and Practices of Vocational Education  4 hours
EDG 4324  Teaching in Schools  3 hours

B. Area of Emphasis - Industry Training
EVT 3502  Special Needs of Vocational Students  4 hours
EVT 4065  Principles and Practices of Vocational Education  4 hours
EVT 4368  Advanced Teaching Techniques for Vocation Education  3 hours

Special Methods of Teaching
BTE 4410  Course Construction in Business Education  4 hours

Directed Field Experience
ESE 4943  Senior Student Teaching - Secondary  12 hours

Occupational Specialization
OST 1335  Business Communication  3 hours

169
OST 1110  Intermediate Typewriting  3 hours
OST 2120  Advanced Typewriting  3 hours
OST 2766  Word Perfect  3 hours
ACG 2001  Principles of Accounting I  3 hours
ACG 2011  Principles of Accounting II  3 hours
ECO 2013  Principles of Economics I  3 hours
ECO 2023  Principles of Economics II  3 hours
BUL 2111  Business Law I  3 hours

Nine (9) semester hours of upper division coursework from the College of Business Administration

Minimum Total Semester Hours 120

Bachelor of Science: Vocational Education and Industry Training
Health Occupations

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

Preprofessional Requirements
SPC 1600  Fundamentals of Oral Communication  3 hours
MAC 1104  College Algebra OR  3 hours
MGF 1203  Finite Mathematics  3 hours
PSY 2013  General Psychology OR  3 hours
SYG 2000  General Sociology  3 hours

Professional Preparation (Select A or B)
A. Area of Emphasis - Public School Teaching
EDF 3603  Analysis of Educational Foundations  3 hours
EDF 4214  Classroom Learning Principles  3 hours
Tech elective with advisor approval  3 hours

B. Area of Emphasis - Industry Training
EVT 4169  Curriculum Development Techniques for Industry Training  3 hours
ADE 4382  Teaching Adult Learners  3 hours
Tech elective with advisor approval  3 hours

Instructional Core
EVT 3365  General Methods/Testing Evaluation in Vocation Education  4 hours
EVT 3502  Special Needs of Vocational Students  4 hours
EVT 4065  Principles and Practices of Vocational Education  4 hours
EVT 4368  Advanced Teaching Techniques for Vocation Education  3 hours

Special Methods of Teaching
EVT 3312  Course Construction in Health Occupations Education  4 hours

Directed Field Experience
EDG 4941  Directed Field Experience  12 hours

Specialization (30)
1. 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 accredited educational institutions offering college credit. Credit by examination may be completed by meeting the state or national licensure or registration requirements for the student’s area of specialization. A copy of current licensure/registration is required. Specialization credit must be completed before student is eligible for EDG 4941, Directed Field Experience.

2. Students must provide documentation of at least two years of occupationally related work experience prior to graduation.

Electives (10)
Must be upper division courses.

Minimum Total Semester Hours 120
Bachelor of Science: Vocational Education and Industry Training
Industrial/Technical Occupations

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

Preprofessional Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>SPC 1600</td>
<td>Fundamentals of Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>MAC 1104</td>
<td>College Algebra OR</td>
<td>3</td>
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<tr>
<td>MGF 1203</td>
<td>Finite Mathematics</td>
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<td>General Psychology OR</td>
<td>3</td>
</tr>
<tr>
<td>SYG 2000</td>
<td>General Sociology</td>
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</tbody>
</table>

Professional Preparation (Select A or B)

A. Area of Emphasis - Public School Teaching

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>EDF 3603</td>
<td>Analysis of Educational Foundations</td>
<td>3</td>
</tr>
<tr>
<td>EDF 4214</td>
<td>Classroom Learning Principles</td>
<td>3</td>
</tr>
<tr>
<td>Tech elective with advisor approval</td>
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B. Area of Emphasis - Industry Training

<table>
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<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVT 4169</td>
<td>Curriculum Development Techniques for Industry Training</td>
<td>3</td>
</tr>
<tr>
<td>ADE 4382</td>
<td>Teaching Adult Learners</td>
<td>3</td>
</tr>
<tr>
<td>Tech elective with advisor approval</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Instructional Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVT 3365</td>
<td>General Methods/Testing Evaluation in Vocation Education</td>
<td>4</td>
</tr>
<tr>
<td>EVT 3502</td>
<td>Special Needs of Vocational Students</td>
<td>4</td>
</tr>
<tr>
<td>EVT 4065</td>
<td>Principles and Practices of Vocational Education</td>
<td>4</td>
</tr>
<tr>
<td>EVT 4368</td>
<td>Advanced Teaching Techniques for Vocation Education</td>
<td>3</td>
</tr>
</tbody>
</table>

Special Methods of Teaching

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVT 3371</td>
<td>Course Construction in Industrial Education</td>
<td>4</td>
</tr>
</tbody>
</table>

Directed Field Experience

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDG 4941</td>
<td>Directed Field Experience</td>
<td>12</td>
</tr>
</tbody>
</table>

Specialization (30)

1. 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 accredited educational institutions offering college credit. Credit by examination may be completed by meeting the state or national licensure or registration requirements for the student's area of specialization. A copy of current licensure/registration is required. Specialization credit must be completed before student is eligible for EDG 4941, Directed Field Experience.
2. Students must provide documentation of at least two years of occupationally related work experience prior to graduation.

Electives (10)

Must be upper division courses.

Minimum Total Semester Hours 120
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: SPACE STUDIES

Contact Person: E.R. Hosler, ENGR 381, Phone (407) 823-2416

In response to the needs of the Central Florida space community, UCF offers a multidisciplinary Minor in Space Studies. It is intended for students of all disciplines and includes courses from aerospace engineering, electrical engineering, environmental engineering, instructional programs, physics, physical education, and political science. Program requirements include a grade point average of at least 2.00 and a minimum of 21 credit hours, including three required courses and four elective courses.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST XXXX</td>
<td>Astronomy</td>
</tr>
<tr>
<td>GEO 4140</td>
<td>Remote Sensing of the Environment</td>
</tr>
<tr>
<td>PUP 3510</td>
<td>Introduction to Space Studies</td>
</tr>
</tbody>
</table>

Elective courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAS 3010</td>
<td>Fundamentals of Flight</td>
</tr>
<tr>
<td>EAS 3101</td>
<td>Aerodynamics I</td>
</tr>
<tr>
<td>EAS 3530</td>
<td>Space Systems</td>
</tr>
<tr>
<td>EAS 4505</td>
<td>Orbital Mechanics</td>
</tr>
<tr>
<td>EGN 4830</td>
<td>Telecommunications</td>
</tr>
<tr>
<td>GEO 1200</td>
<td>Physical Geography</td>
</tr>
<tr>
<td>GEO 3370</td>
<td>Resources Geography</td>
</tr>
<tr>
<td>GEO 4414</td>
<td>Geographic Information Systems</td>
</tr>
<tr>
<td>INR 4404</td>
<td>Space Law</td>
</tr>
<tr>
<td>PET 4551</td>
<td>Applied Exercise and Human Physiology</td>
</tr>
<tr>
<td>PUP 4510</td>
<td>Space Policy</td>
</tr>
<tr>
<td>SCE 5825</td>
<td>Space Science for Educators</td>
</tr>
</tbody>
</table>

Completion of the Minor in Space Studies may involve course work in addition to the minimum requirements of some major programs. Students should consult with their academic advisors to confirm that all of the departmental and college degree requirements for their majors are being met.

Formal enrollment should occur before nine credit hours have been completed. To obtain information and to enroll in the Minor, students should contact Dr. E. R. Hosler, Associate Chair, Department of Mechanical and Aerospace Engineering, Engr 381, (407) 823-2416.
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:

- EGN 4033: Technology and Social Change
- EGN 4813: Science in History
- EGN 4814: Technology in History
- EGN 4818: Technology in North America
- EGN 4823: Topics in Urban Development
- EGN 4824: Energy and Society
- EGN 4830: Telecommunications
- EGN 4825: Environment and Society
- EGN 4832: Computers, Cybernetics and Society
- EGN 4843: Systems Modeling
- EGN 4844: Man and Machine
- ARH 3060: History of Architecture
- GEO 3370: Resource Geography
- LIT 3313: Science Fiction
- LIT 4433: Survey of Technical and Scientific Literature
- PUP 3204: Environmental Politics
- PUP 4503: Government and Science
- PUP 4510: Space Policy

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</th>
<th>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&lt;sup&gt;2,3&lt;/sup&gt;</td>
<td>4</td>
</tr>
</tbody>
</table>

<sup>1</sup>Includes portions of the General Education Program.

<sup>2</sup>Consult Department Chair for specific course required in option.

<sup>3</sup>Students 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 3048</td>
<td>Physics For Engineers and Scientists I(^4)</td>
<td>3 hours</td>
</tr>
<tr>
<td>PHY 3049</td>
<td>Physics For Engineers and Scientists II</td>
<td>3 hours</td>
</tr>
<tr>
<td>PHY 3048L or PHY 3049L or CHM 2046L</td>
<td>Laboratory Elective(^2)</td>
<td>1 hour</td>
</tr>
<tr>
<td>MAC 3311,3312,3313</td>
<td>Calculus and Analytic Geometry</td>
<td>12 hours</td>
</tr>
<tr>
<td>MAP 3302</td>
<td>Differential Equations</td>
<td>3 hours</td>
</tr>
<tr>
<td>Biological or Earth Science Elective(^6)</td>
<td>3 hours</td>
<td></td>
</tr>
</tbody>
</table>

**ENGINEERING CORE**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGN 3420</td>
<td>Engineering Analysis(^5)</td>
<td>3 hours</td>
</tr>
<tr>
<td>EGN 3310</td>
<td>Engineering Analysis - Statics</td>
<td>3 hours</td>
</tr>
<tr>
<td>EGN 3321</td>
<td>Engineering Analysis - Dynamics</td>
<td>3 hours</td>
</tr>
<tr>
<td>EGN 3613</td>
<td>Engineering Economic Analysis</td>
<td>2 hours</td>
</tr>
<tr>
<td>EGN 3704</td>
<td>Engineering and the Environment</td>
<td>2 hours</td>
</tr>
<tr>
<td>EGN 3365C</td>
<td>Structure and Properties of Materials</td>
<td>3 hours</td>
</tr>
<tr>
<td>EGN 3373</td>
<td>Principles of Electrical Engineering</td>
<td>4 hours</td>
</tr>
<tr>
<td>EGN 3343</td>
<td>Thermodynamics(^2)</td>
<td>3 hours</td>
</tr>
<tr>
<td>EGN 3358</td>
<td>Thermo-Fluids Heat Transfer(^2)</td>
<td>3 hours</td>
</tr>
<tr>
<td>EGN 4624</td>
<td>Engineering Administration</td>
<td>3 hours</td>
</tr>
<tr>
<td>PHY 3101</td>
<td>Modern Physics(^7)</td>
<td>3 hours</td>
</tr>
<tr>
<td>STA 3032</td>
<td>Probability and Statistics for Engineers</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

**DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING**

Chair: A.E. Radwan, ENGR 307. Phone (407) 823-2841
Faculty: Block, Carroll, Cooper, Dietz, Hartman, Head, Jenkins, Kunnath, 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, for water, land and air 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
   - CES 4102 Structural Engineering Analysis 3 hours
   - CES 4130L Structures Lab 1 hour
   - CES 4605 Structural Steel Design 3 hours
   - or CES 4702 Structural Concrete Design
   - CEG 4101C Geotechnical Engineering I 4 hours
   - EGN 3331 Mechanics of Materials 3 hours
   - EGN 3353 Fluid Mechanics 3 hours
   - CGN 4300 C.E. Systems 3 hours

\(^4\) Students without one secondary school unit of Physics should enroll in PHY 2053C prior to taking PHY 3048.

\(^5\) 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
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:
- EES 4202C Chemical Process Control 3 hours
- EES 4111C Biological Process Control 3 hours
- EGN 3331 Mechanics of Materials 3 hours
- EGN 3353 Fluid Mechanics 3 hours
- EGN 4703 Systems Analysis and Control 3 hours
- ENV 4121C Air Pollution 3 hours
- ENV 4341 Solid and Hazardous Waste 3 hours
- CWR 4101C Hydrology 3 hours
- CWR 4201C Hydraulics 3 hours
- ENV 4433 Environmental Engineering Process Design 2 hours
- ENV 4561 Environmental Engineering Process Design 2 hours

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 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 Computer 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 3000L 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. 3 hours

Total Semester Hours Required 132

DEPARTMENT OF ELECTRICAL ENGINEERING
Chair: N. S. Tzannes, ENGR 407, Phone (407) 823-2786
Faculty: Alsaka, Batarseh, Bass, Belkerdid, Boreman, Brown, Christodoulou, Dixon, Georgioupolous, Guenther, Harden, Harris, Harvey, Johnson, Kasparis, Liou, Malocha, Mathews, Mikhail, R. Miller, Moharam, Mortazawi, R. Phillips, Qu, Richie, Solleau, Sundaram, Sznaier, Wahid, 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
   EEL 3306 Semiconductor Devices 3 hours
   EEL 3307C Electronics I 4 hours
   EEL 3342C Introduction to Digital Circuits and Systems 4 hours
   EEL 3470 Electromagnetic Fields 3 hours
   EEL 3552C Signal Analysis and Communications 4 hours
   EEL 4012C Senior Electrical Design 4 hours
   EEL 4309C Electronics II 4 hours
   ECM 4508C Computer System Design I 3 hours
   EEL 3657 Linear Control Systems 3 hours
   EEL XXXX EEL Elective 3 hours
   EEL XXXX EEL Elective 3 hours

4. Electives
None

Total Semester Hours Required 132
DEPARTMENT OF INDUSTRIAL ENGINEERING & MANAGEMENT SYSTEMS

Chair: W. Swart, ENGR 307, Phone (407) 823-2204
Faculty: Armacost, Biegel, Elshennawy, Hosni, Lee, Mollaghasemi, Morse, Mullans, 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
   - EIN 3314C Work Measurement and Design 3 hours
   - EIN 3XXX Principles of Cost Engineering 3 hours
   - EIN 4116C Information Systems Analysis and Design 3 hours
   - EIN 4118C Industrial Engineering Applications of Computers 3 hours
   - EIN 4333C Industrial Control Systems 3 hours
   - EIN 4364C Industrial Facilities Planning and Design 3 hours
   - EIN 4391C Manufacturing Engineering 3 hours
   - EIN 4891C Senior Design Project 3 hours
   - ESI 4234 Quality Engineering 3 hours
   - ESI 4312 Operations Research 3 hours
   - ESI 4523C Systems Simulation 3 hours
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.
   - 9 hours
5. Electives
   - None
   - Total Semester Hours Required 132

DEPARTMENT OF MECHANICAL AND AEROSPACE ENGINEERING

Chair: D. W. Nicholson, ENGR 381, Phone (407) 823-2416
Faculty: Anderson, J. Beck, R. Byers, Bishop, Chew, Desai, Eno, Grogan, Gunnerson, Hagedoorn, Hosler, Kassab, 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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAS 3010</td>
<td>Fundamentals of Flight</td>
<td>4</td>
</tr>
<tr>
<td>EAS 3101</td>
<td>Aerodynamics</td>
<td>3</td>
</tr>
<tr>
<td>EAS 3800</td>
<td>Junior Aerospace Laboratory I</td>
<td>2</td>
</tr>
<tr>
<td>EAS 3810</td>
<td>Junior Aerospace Laboratory II</td>
<td>2</td>
</tr>
<tr>
<td>EGN 3331</td>
<td>Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>EAS 3530</td>
<td>Space Systems</td>
<td>3</td>
</tr>
<tr>
<td>EML 4312</td>
<td>Feedback Control Design</td>
<td>3</td>
</tr>
<tr>
<td>EAS 4105</td>
<td>Flight Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>EAS 4200</td>
<td>Flight Structures</td>
<td>3</td>
</tr>
<tr>
<td>EAS 4134</td>
<td>High Speed Aerodynamics</td>
<td>3</td>
</tr>
<tr>
<td>EAS 4300</td>
<td>Aerothermodynamics of Propulsion Systems</td>
<td>3</td>
</tr>
<tr>
<td>EAS 4700</td>
<td>Aerospace Design I</td>
<td>4</td>
</tr>
<tr>
<td>EAS 4710</td>
<td>Aerospace Design II</td>
<td>4</td>
</tr>
</tbody>
</table>

4. Restricted Electives
Technical electives are chosen from courses normally taught by the department with the prefixes EAS, EML, and EMA. Students who wish to enroll in a 5xxx course should have a minimum UCF GPA of 2.8 and consent of the instructor.

Total Semester Hours Required 136

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGN 3331</td>
<td>Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>EGN 3353</td>
<td>Fluid Mechanics I</td>
<td>3</td>
</tr>
<tr>
<td>EML 3101</td>
<td>Thermodynamics of Mechanical Systems</td>
<td>3</td>
</tr>
<tr>
<td>EML 3262</td>
<td>Kinematics of Mechanisms</td>
<td>3</td>
</tr>
<tr>
<td>EML 3500</td>
<td>Machine Design and Analysis</td>
<td>3</td>
</tr>
<tr>
<td>EML 4142</td>
<td>Heat Transfer</td>
<td>3</td>
</tr>
<tr>
<td>EML 4220</td>
<td>Vibration Analysis</td>
<td>3</td>
</tr>
<tr>
<td>EML 4304C</td>
<td>Measurements Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>EML 4312</td>
<td>Feedback Control Design</td>
<td>3</td>
</tr>
<tr>
<td>EML 4501C</td>
<td>Engineering Design I</td>
<td>3</td>
</tr>
<tr>
<td>EML 4502C</td>
<td>Engineering Design II</td>
<td>3</td>
</tr>
<tr>
<td>EML 4703</td>
<td>Fluid Mechanics II</td>
<td>3</td>
</tr>
</tbody>
</table>

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.

Total Semester Hours Required 132
DEPARTMENT OF ENGINEERING TECHNOLOGY

Chair: J. D. McBrayer, ENGR 207, Phone (407) 823-2268
Faculty: W. Byers, Debo, Denning, Dixon, Gregg, McBrayer, Osborne, Queen, 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 presently offered in the Engineering Technology degree program are:

- Computer Engineering Technology
- Design Engineering Technology
- Electronics Engineering Technology
- Information Systems Engineering Technology
- Operations Engineering Technology

Major curricula revisions are presently being evaluated. Prospective students should contact the department at (407) 823-2268 for current information.

The engineering technology core courses are available at both the Orlando and the Brevard campuses.

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.

*aThis option is available only at the Orlando campus.
*bThis option is available only at the Orlando campus and at the Brevard Area campus.
*cThis 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. 2-21 hours
      See areas of specialization below.
   C. Engineering Technology Core
      –MAC 1104 College Algebra 3 hours
      –MAC 1114 College Trigonometry 3 hours
      –MAC 2311/MAC 3311 or MAC 3253 Calculus I 3 hours
      –MAC 2312/MAC 3312 or MAC 3254 Calculus II 3 hours
*May be taken at a community college
MAP 3401 Problem Analysis 3 hours
*PHY 2053C/PHY 3053C College Physics I (with lab) 4 hours
*CHM 1xxxC General Chemistry (with lab) 4 hours
*COP 1200, *COP 2500, CGS 3422 3 hours
ETG 3541 Applied Mechanics 4 hours
ETI 3651C Computer Applications 4 hours
ETI 3671 Technical Economic Analysis 2 hours
ETI 4110 Industrial Quality Control 3 hours
ETM 4331 Applied Thermodynamics and Fluid Mechanics 4 hours
*May be taken at a community college

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 emphasizes microcomputer and microprocessor based system hardware and system level software.” 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 (17 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>3 hours</td>
</tr>
<tr>
<td>EET 1xxxC</td>
<td>AC Circuits with lab</td>
<td>3 hours</td>
</tr>
<tr>
<td>CET 2xxxC</td>
<td>Digital Circuits with lab</td>
<td>3 hours</td>
</tr>
<tr>
<td>CET 2xxxC (3123C)</td>
<td>Intro. Microprocessors lab</td>
<td>3 hours</td>
</tr>
<tr>
<td>ENC 1xxxC</td>
<td>Technical Writing</td>
<td>3 hours</td>
</tr>
<tr>
<td>EGS 1xxx</td>
<td>Drafting</td>
<td>2 hours</td>
</tr>
<tr>
<td>COP 1xxxC</td>
<td>High level language pgming (in core)</td>
<td>(3 hours)</td>
</tr>
</tbody>
</table>

*Actual hours for these courses may vary depending upon course transferred.

Upper Level Technical Required Courses (17 semester hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CET 3144C</td>
<td>Applied Microprocessor Technology</td>
<td>4 hours</td>
</tr>
<tr>
<td>CET 3303</td>
<td>Microcomputer Technology I</td>
<td>3 hours</td>
</tr>
<tr>
<td>CET 4188</td>
<td>Microcomputer Technology II</td>
<td>4 hours</td>
</tr>
<tr>
<td>CET 4915</td>
<td>Senior Design Project</td>
<td>2 hours</td>
</tr>
<tr>
<td>CET 3198C</td>
<td>Digital Systems</td>
<td>4 hours</td>
</tr>
</tbody>
</table>

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).

<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 hours</td>
</tr>
<tr>
<td>CET 4333C</td>
<td>Applied Computer Systems I</td>
<td>4 hours</td>
</tr>
<tr>
<td>CET 4334C</td>
<td>Applied Computer Systems II</td>
<td>4 hours</td>
</tr>
<tr>
<td>CET 4931</td>
<td>Current Topics in Technology</td>
<td>3 hours</td>
</tr>
<tr>
<td>CET 3364</td>
<td>Systems Applications in C</td>
<td>3 hours</td>
</tr>
<tr>
<td>EET 3716</td>
<td>Network Analysis</td>
<td>3 hours</td>
</tr>
<tr>
<td>ETI 4186</td>
<td>Applied Reliability</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

Approved electives to bring total to 128 semester hours (10 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 1xxx C Engineering Drawing/Drafting/Graphics 5 hours

Upper-Level Technical Required Courses (25 semester hours)
CET 3123 C Microprocessor Electronics I 3 hours
EET 3035 C Electricity and Electronics 4 hours
EST 4502 C Electro-Mechanical Design 3 hours
ETG 4530 C Strength of Materials 4 hours
ETG 4950 Senior Design Project 2 hours
ETI 3421 Materials and Processes 3 hours
ETM 4403 C Applied Kinematics 3 hours
ETM 4512 C 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 4241 C Construction Methods, Contracts & Specs. 4 hours
ETC 4414 C Applied Structural Design I 3 hours
ETC 4415 C Applied Structural Design II 3 hours
CET 4131 C Microprocessor Electronics II 4 hours
ETI 4522 C Applied Automated Systems 3 hours
ETM 4755 Applied Air Conditioning 3 hours
ETM 4220 Applied Energy Systems 2 hours
ETD 3350 C 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)
EET 1xxx C DC Circuits with lab 4 hours
EET 1xxx C AC Circuits with lab 4 hours
EET 1xxx C (3143 C) Electronic Devices and Circuits with lab 4 hours
CET 2xxx C (3123 C) Microprocessor Electronics I with lab 3 hours
CET 2xxx C Digital Fundamentals with lab 3 hours
ENC 2xxx (3241) Technical Report Writing 3 hours

* Actual hours for these courses may vary depending upon course transferred.

Upper-Level Technical Required Courses (22 semester hours)
CET 3303 Microcomputer Technology I 3 hours
CET 3198 C Digital Systems 4 hours
EET 3716 Network Analysis 3 hours
EET 4158 C Linear Integrated Circuits 3 hours

183
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<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)

- CET 4131C Microprocessor Electronics II 4 hours
- CET 4333C Applied Computer Systems I 4 hours
- CET 4381 Digital Signal Processing 3 hours
- CET 4931 Current Topics in Technology 3 hours
- CET 4915 Senior Design Project 2 hours
- EET 4393C Antennas & Propagation 3 hours
- EET 4389C Satellite Communications 3 hours
- EET 4548 Power Transmission 3 hours
- ETI 4186 Applied Reliability 3 hours

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)

- COP 1xxx Pascal Programming 3 hours
- COP 1xxx Pascal Programming - Advanced 3 hours
- COP 2xxx Cobol Programming 3 hours
- COP 2xxx Cobol Programming - Advanced 3 hours
- COP 1xxx Fortran Programming (in core) (3 hours)
- COP 1xxx Fortran Programming - Advanced 3 hours
- COP 2xxx Assembler Programming 3 hours
- ENC 2xxx (3241) Technical Report Writing 3 hours

1Actual hours for these courses may vary depending upon course transferred.

Upper-Level Technical Required Courses (27 semester hours)

- CET 3123C Microprocessor Electronics I 3 hours
- CET 3303 Microcomputer Technology I 3 hours
- CET 3323C Computer Organization Technology 3 hours
- CET 3383 Applied Systems Analysis I 3 hours
- CET 4427 Applied Database Systems 3 hours
- CET 4505 Applied Microcomputer Operating Systems 3 hours
- 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)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETD 1xxxC</td>
<td>Engineering Drawing/Drafting/</td>
<td>2 hours</td>
</tr>
<tr>
<td></td>
<td>Graphics</td>
<td></td>
</tr>
</tbody>
</table>

Upper Level Technical Required Courses (26 semester hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CET 3123C</td>
<td>Microprocessor Electronics I</td>
<td>3 hours</td>
</tr>
<tr>
<td>CET 4131C</td>
<td>Microprocessor Electronics II</td>
<td>4 hours</td>
</tr>
<tr>
<td>EET 3035C</td>
<td>Electricity and Electronics</td>
<td>4 hours</td>
</tr>
<tr>
<td>ETG 4950</td>
<td>Senior Design Project</td>
<td>2 hours</td>
</tr>
<tr>
<td>ETI 3421</td>
<td>Materials and Processes</td>
<td>3 hours</td>
</tr>
<tr>
<td>ETI 4186</td>
<td>Applied Reliability</td>
<td>3 hours</td>
</tr>
<tr>
<td>ETI 4661</td>
<td>Applied Facilities Planning and Design</td>
<td>3 hours</td>
</tr>
<tr>
<td>ETI 4640</td>
<td>Process Planning and Work Measurement</td>
<td>4 hours</td>
</tr>
</tbody>
</table>

Upper-Level Technical Electives (5 semester hours) (other technical electives may be selected with approval of the program coordinator).

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EST 4502C</td>
<td>Electro-Mechanical Design</td>
<td>3 hours</td>
</tr>
<tr>
<td>ETC 4241C</td>
<td>Construction Methods, Contracts, and Specifications</td>
<td>4 hours</td>
</tr>
<tr>
<td>ETI 3690</td>
<td>Technical Sales</td>
<td>2 hours</td>
</tr>
<tr>
<td>ETI 4522C</td>
<td>Applied Automated Systems</td>
<td>3 hours</td>
</tr>
<tr>
<td>ETI 4700</td>
<td>Occupational Safety</td>
<td>2 hours</td>
</tr>
<tr>
<td>ETM 4220</td>
<td>Applied Energy Systems</td>
<td>2 hours</td>
</tr>
<tr>
<td>ETM 4755</td>
<td>Applied Air Conditioning</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

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)
- Legal Studies (BA)
- Medical Laboratory Sciences (BS)
- Medical Record Administration (BS)
- Molecular Biology and Microbiology (BS)
- Nursing (BSN)
- Public Administration (BA)
- Physical Therapy (BS)
- 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)
- Social Work (MSW)

OTHER PROGRAMS
- Gerontology Certification Program

*See the Graduate Studies catalog for information.
COLLEGE OF HEALTH AND PUBLIC AFFAIRS

Dean: Belinda R. McCarthy, HP 214, Phone (407) 823-2352
Associate Dean: Wendell C. Lawther, HP 215
Associate Dean: M. Jo Edwards, HP 214

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, Nursing, Physical Therapy, Public Administration, and Social Work.

ADVISEMENT
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. Julius F. Charba, BL 331, Phone (407) 823-5932

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.

See also: Pre-Health Professions Advising.

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, Physical Therapy, 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, Molecular Biology/Microbiology, and Public Administration; and the Programs in Cardiopulmonary Sciences and Health Service Administration.

DEPARTMENT OF COMMUNICATIVE DISORDERS
Interim Chair: TBA, 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 professional 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.

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 4710</td>
<td>Foundations of Language</td>
<td>3</td>
</tr>
<tr>
<td>LIN 4710L</td>
<td>Foundations of Language Lab</td>
<td>1</td>
</tr>
<tr>
<td>SPA 3002</td>
<td>Introduction to Communicative Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SPA 3050</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 4011</td>
<td>Speech and Hearing Science</td>
<td>3</td>
</tr>
<tr>
<td>SPA 4032</td>
<td>Audiology I</td>
<td>3</td>
</tr>
<tr>
<td>SPA 4130</td>
<td>Augmentative Communication Systems</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 4251</td>
<td>Organic Speech Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SPA 4251L</td>
<td>Organic Speech Disorders Lab</td>
<td>1</td>
</tr>
<tr>
<td>SPA 4310</td>
<td>Audiology II</td>
<td>3</td>
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<tr>
<td>SPA 4321</td>
<td>Aural Habilitation-Rehabilitation</td>
<td>4</td>
</tr>
<tr>
<td>SPA 4402</td>
<td>Communicative Disorders-Language</td>
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</tr>
<tr>
<td>SPA 4402L</td>
<td>Communicative Disorders-Language Lab</td>
<td>3</td>
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</table>

4. Statistics Requirement

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

5. Restricted Elective

A course at the 3000 or 4000 level related to the Major (e.g., education, psychology, sociology, computer, etc.) selected in consultation with the academic advisor. 3 hours

6. Other Electives

Students who wish to obtain a Teacher’s Certificate for the State of Florida must include the necessary course work as electives. See your academic advisor.

7. B.A./B.S. Option.

Students pursuing the B.A. degree must demonstrate proficiency in a foreign language equivalent to one year while students pursuing the B.S. degree must complete six credit hours of science courses approved by the Department.

8. Students must achieve a grade of C in required courses in the Department.

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, B.J. McCarthy, B.R. 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.

Legal Studies Minor
The Legal Studies Minor consists of 18 or more semester hours. Required courses: PLA 3013 plus a minimum of 12 semester hours of legal studies courses and 3 semester hours of law-related courses selected with the aid of an advisor.

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 3273 The Law of Torts
   - PLA 3308 Criminal Procedure
   - PLA 4020 Law and Society
   - PLA 4408 The Law of Contracts
   - PLA 4483 Administrative Law
   - PLA 4700 Professional Ethics and Liability
   - 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 (18 semester hours)
   - CCJ 3020 Criminal Justice System 3 hours
   - CCJ 3010 Crime in America 3 hours
   - CCJ 3290 Prosecution and Adjudication 3 hours
4. Restricted Electives
   a. 21 additional semester hours of upper division CCJ coursework. 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.
   b. 15 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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>CCJ 3300</td>
<td>Corrections and Penology</td>
<td>3</td>
</tr>
<tr>
<td>CCJ 4481</td>
<td>Police and Society</td>
<td>3</td>
</tr>
<tr>
<td>CCJ 4701</td>
<td>Research Methods in Criminal Justice</td>
<td>3</td>
</tr>
</tbody>
</table>

**DEPARTMENT OF HEALTH SCIENCES**

Chair: TBA, HPB 220 (407) 823-2972  
Faculty: Aciero, Barr, Bergner, Crittenden, Douglass, Drumheller, M.J. Edwards, T. Edwards, Hitchcock, Lylte, 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 Department of Health Sciences requires a minimum overall GPA of 2.5 for admission to and graduation from its Limited Access programs. In addition, a minimum grade of "C" is required for prerequisite courses and required courses within the major.

**Departmental core requirements:** HSC 3640 Health Law; HSC 4550 Pathophysiologic Mechanisms HSA 4193 Health Data Processing; HSA 4243 Analysis of Instruction in the Health Professions.

**MINOR**

The Department of Health Sciences offers a minor consisting of a minimum of 18 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 Health Sciences course work.

**Required Courses:** HSA 4121, HUN 3011, HSC 3110 and a minimum of 9 hours of upper-division courses in the Health Science Department. Majors may not count courses presently required in a department program.

**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:

- **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

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 of 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 408.

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

**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 4193** Health Data Processing 3 hours
   - **HSA 4700** Health Sciences Research Methods 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  
Total Semester Hours Required  122 hours  

Directed Field Experience  
All students must complete an area of health specialization through:  
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.  

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  
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  
Implementation of this option is on temporary hold.  

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  
   HSC 4700  Health Sciences Research Methods  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 3210  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 4220  Long Term Care Patient Management  3 hours  
   HSC 3640  Health Law  3 hours  
   HSC 4500  Pathophysiological Mechanisms  3 hours  
   HSC 4500  Epidemiology  3 hours  
   HSC 4564  Health Care Needs of the Elderly  3 hours
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 Health Information Management 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 introductory course in finance or accounting.

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 Health Information Management 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>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSC 3531</td>
<td>Medical Terminology</td>
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</tr>
<tr>
<td>HUN 3011</td>
<td>Human Nutrition</td>
<td>3</td>
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<tr>
<td>MAN 3301</td>
<td>Personnel Management</td>
<td>3</td>
</tr>
<tr>
<td>MAR 3023</td>
<td>Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MRE 4420</td>
<td>Health Legislation</td>
<td>3</td>
</tr>
<tr>
<td>PCB 3703C</td>
<td>Human Physiology</td>
<td>4</td>
</tr>
<tr>
<td>SOW 4644</td>
<td>Social Services for the Elderly</td>
<td>3</td>
</tr>
<tr>
<td>SYP 4730</td>
<td>Sociology of Aging</td>
<td>3</td>
</tr>
<tr>
<td>ZOO 3733C</td>
<td>Human Anatomy</td>
<td>3</td>
</tr>
<tr>
<td>HSA 4941</td>
<td>Internship - Nursing Home Administration</td>
<td>6</td>
</tr>
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</table>

**Total Semester Hours: 132**
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, Winter Haven and Rockledge. It may be necessary for the student to relocate to any of these areas for this period. A minimum 2.5 overall GPA is required for clinical assignment.

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 with Lab 3 hours
     - MLS 3305C Hematology 4 hours

**Program in Medical Laboratory Sciences**

**Director: D. Hitchcock, HP 105, Phone (407) 823-2359**
Clinical Practice I, II, III, IV, & V 20 hours
Clinical Pathogenic Microbiology 4 hours
Advanced Clinical Chemistry I & II 10 hours
Hemostasis 2 hours
Clinical Immunohematology 4 hours
Clinical Mycology 1 hour
Clinical Parasitology 2 hours
Immunodiagnostics 2 hours
Health Sciences Research Methods 3 hours
Medical Technology Seminars 1 hour
Analysis of Instruction in Health Professions 3 hours
Health Law 3 hours
Pathophysiological Mechanisms 3 hours
Organization and Management for Health Agencies 3 hours
Health Data Processing 3 hours

Program in Radiologic Sciences
Director: T. J. Edwards III, Phone (407) 823-2747

The University of Central Florida offers the only accredited Bachelor of Science in Radiologic Sciences degree program in Florida. The Radiologic Sciences Program offers students the opportunity to specialize in either Radiography or Radiation Therapy. Radiographers and Radiation Therapists are integral members of the health care team dedicated to providing high quality patient care. Graduates are prepared to function as clinically competent Radiographers or Radiation Therapists and, with experience, advance to leadership positions in their profession. Employment opportunities in both fields are excellent.

The primary role of Radiographers is to perform medical imaging procedures for the diagnosis of disease and injury. The Radiographer enjoys an interesting and challenging variety of examinations/procedures which may include conventional radiography, fluoroscopy, vascular imaging, computed tomography and magnetic resonance imaging. Employment opportunities are available in hospitals, imaging centers, and private physician offices. Career advancement opportunities include positions in administration, education, quality assurance, and public health physics.

Radiation Therapists work closely with physicians to deliver high energy radiation for the treatment of cancer. The Radiation Therapist delivers the prescribed amount of radiation to the precise tumor site while assessing and reporting patient progress throughout the course of treatment. Employment opportunities are available in hospitals and treatment centers. Career advancement opportunities include positions in radiology administration, education, quality assurance, and dosimetry.

The program works in conjunction with Central Florida Regional Hospital, Sanford; Jewett Orthopaedic Clinic, Winter Park; Halifax Medical Center, Daytona Beach; South Seminole Community Hospital, Longwood; and Winter Park Memorial Hospital, Winter Park.

The programs in Radiography and Radiation Therapy Technology are accredited by the Committee on Allied Health Education and Accreditation (CAHEA) in cooperation with the Joint Review Committee on Education in Radiologic Technology (JRCERT). Graduates are eligible to apply for admission to the certification exam administered by the American Registry of Radiologic Technologists (ARRT). The University of Central Florida is the sponsoring institution for the Radiography program. Halifax Hospital Medical Center is the sponsoring institution of the Radiation Therapy program.

The application deadline for admission to the upper-division, limited access phase of the program is February 1 of the year in which admission is sought. Students considering a career in radiologic technology are encouraged to enroll in the Introduction to Radiologic Sciences course (RTE 1002). This course may be completed prior to admission to the limited access phase of the program.
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.

Bachelor of Science: Radiologic Sciences

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

**Prerequisites**

<table>
<thead>
<tr>
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<th>Hours</th>
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<tr>
<td>CGS 1060</td>
<td>Introduction to Computer Science</td>
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</tr>
<tr>
<td>MAC 1104</td>
<td>College Algebra</td>
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<td>PCB 3703C</td>
<td>Human Physiology</td>
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<td>PHY 3053C</td>
<td>College Physics I</td>
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<td>PHY 3054C</td>
<td>College Physics II</td>
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<tr>
<td>ZOO 3733C</td>
<td>Human Anatomy</td>
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</table>

**Professional Phase**

Radiography Program of Study

**JUNIOR LEVEL**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>RTE 1002</td>
<td>Introduction to Radiologic Sciences</td>
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</tr>
<tr>
<td>RTE 3123</td>
<td>Introduction to Patient Care</td>
<td>2</td>
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<tr>
<td>RTE 3528C</td>
<td>Radiographic Procedures I</td>
<td>3</td>
</tr>
<tr>
<td>RTE 3412C</td>
<td>Principles of Radiographic Exposure I</td>
<td>3</td>
</tr>
<tr>
<td>RTE 3806</td>
<td>Clinical Education I</td>
<td>4</td>
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<tr>
<td>RTE 3549C</td>
<td>Radiographic Procedures II</td>
<td>3</td>
</tr>
<tr>
<td>RTE 3457C</td>
<td>Principles of Radiographic Exposure II</td>
<td>3</td>
</tr>
<tr>
<td>RTE 3684</td>
<td>Physics of Image Production</td>
<td>2</td>
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<tr>
<td>HSC 3640</td>
<td>Health Law</td>
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<tr>
<td>RTE 3387</td>
<td>Medical Physics</td>
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<td>RTE 3564</td>
<td>Special Radiographic Procedures</td>
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<tr>
<td>RTE 3816</td>
<td>Clinical Education II</td>
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<tr>
<td>STA 3023</td>
<td>Statistical Methods I</td>
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<tr>
<td>HSC 4550</td>
<td>Pathophysiologic Mechanisms</td>
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**SENIOR LEVEL**

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<tr>
<td>RTE 4826</td>
<td>Clinical Education III</td>
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<tr>
<td>RTE 4566</td>
<td>Advanced Imaging Modalities</td>
<td>3</td>
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<tr>
<td>RTE 4876</td>
<td>Clinical Education IV</td>
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<tr>
<td>RTE 4362</td>
<td>Radiobiology</td>
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<tr>
<td>RTE 4207</td>
<td>Methods of Radiology Management</td>
<td>3</td>
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<tr>
<td>RTE 4843</td>
<td>Clinical Education V</td>
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<td>RTE 4156</td>
<td>Radiographic Pathology</td>
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<td>RTE 4569</td>
<td>Quality Assurance</td>
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<tr>
<td>RTE 4720</td>
<td>Anatomy for the Medical Imager</td>
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</tr>
<tr>
<td>HSC 4243</td>
<td>Analysis of Instruction in the Health Professions</td>
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</tr>
<tr>
<td>HSC 4193</td>
<td>Health Data Processing</td>
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**Electives:**

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<th>Hours</th>
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<tbody>
<tr>
<td>RTE 4209</td>
<td>Radiological Administrative Practice</td>
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</tr>
<tr>
<td>RTE 4256</td>
<td>Directed Study in Clinical Education</td>
<td>2</td>
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</table>

Total Semester Hours required: 196 hours
Radiation Therapy 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 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
- 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
- RTE 3387 Medical Physics 3 hours
- RTE 3564 Special Radiographic Procedures 2 hours
- HSC 4243 Analysis of Instruction in the Health Professions 3 hours

HSC 3640 Health Law 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
- RTE 4876 Clinical Education IV 6 hours
- STA 3023 Statistical Methods I 3 hours
- RTE 4720 Anatomy for the Medical Imager 3 hours
- HSA 4193 Health Data Processing 3 hours
- Electives: RTE 4843 Clinical Education V 6 hours
- RTE 4256L Directed Study in Clinical Education 2 hours
- Total Semester Hours Required 138

Program In Cardiopulmonary Sciences

Director: O.J. Drumheller, 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).

At the time of publication of this catalog the program in cardiopulmonary sciences was undergoing major curriculum revisions. Students should seek advisement from the program director for up-to-date information on this program.

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 overall GPA is required for admission to and graduation from the program. Students must meet all university undergraduate degree, special college and/or departmental requirements, and program requirements in order to graduate.

Bachelor of Science: Cardiopulmonary Sciences

Degree Requirements
1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Prerequisites
   - STA 3023 Statistics 3 hours

197
MAC 1104 College Algebra 3 hours
BSC 2010C General Biology 4 hours
MCB 3013C General Microbiology 5 hours
ZOO 3733 Human Anatomy 4 hours
PCB 3703C Human Physiology 4 hours
CHM 1032 General Chemistry 3 hours
CHM 2045L Chemistry Fund Lab 1 hour
PHY 3053C College Physics I 4 hours

4. Professional curriculum
Contact program director for up-to-date information on professional curriculum.
Total Semester Hours Required 144 hours

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 APB 3342.
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 minimum 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

General Education Program (Communication, C&H, and Soc. Sci.) [27]

II. Departmental Requirements

A. Core Curriculum [65-66]

Life Sciences
- BSC 2010C General Biology (4)
- BOT or ZOO 2010C General Botany or General Zoology (3 or 4)
- MCB 3013C General Microbiology (5)
- PCB 3063, 3063L Genetics + Genetics Lab (4)
- PCB 3233, 3233L Immunology + Immunology Lab (4)
- PCB 3523, 4524 Molecular Biology I, II (6)
- APB 3342C Quantitative Biological Methods (3)

Chemistry
- CHM 2045, 2046, 2046L General Chemistry I, II, + Lab (8)
- CHM 3210, 3211, 3211L Organic Chemistry I, II, + Lab (8)
- BCH 4053 Biochemistry I (3)

Math and Stat\(^{(1)}\)
- MAC 1104, 1114 College Algebra, College Trigonometry (6)
- STA 3023 Statistical Methods I (3)

Physics\(^{(1)}\)
- PHY 3053C, 3054C College Physics I, II (8)

B. Restricted Electives (Select 6 courses in consultation with advisor) [17-26]

- APB 5236 Applied Microbiology (3)
- BCH 4054 Biochemistry II (3)
- BCH 4103L Biochemical Methods (2)
- MCB 3203, 3203L Pathogenic Microbiology + Lab (4)
- MCB 4114C Microbial Systematics and Diagnostics (4)
- MCB 4404 Microbial Metabolism (3)
- MCB 4603 Environmental Microbiology (3)
- MCB 5205 Infectious Process (2)
- MCB 5505C Virology (3)
- PCB 3703C Human Physiology (4)
- PCB 5235C Immunopathology (4)
- PCB 5806C Endocrinology (3)
- ZOO 3733C Human Anatomy (4)
- ZOO 4603C Vertebrate Embryology (5)
- ZOO 4753C Vertebrate Histology (5)
- ZOO 5745C Essentials of Neuroanatomy (4)

III. Unrestricted Electives

Total Credits Required for Degree 128

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, Giovinco, Hennig, Judkins, Koch, Noll, Peragallo, 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.

**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
     - MCB 3013C General Microbiology 5 hours
     - ZOO 3733C Human Anatomy 4 hours
     - PCB 3703C Human Physiology 4 hours
     - CHM 2205 Introduction to Organic/Biochemistry 5 hours
     - STA 2014 or 3023 Principles of Statistics 3 hours
     - SOW 3104 Human Growth and Development 3 hours
     - DEP 3004 Developmental Psychology 3 hours
     - HUN 3011 Human Nutrition 3 hours
   - Upper-Division Professional Phase
     - HSC 4550 Pathophysiologic Mechanisms 3 hours
     - NUR 3119 Introduction to Baccalaureate Nursing 3 hours
     - NUR 3748C Concepts Basic to Nursing Practice (Generic Students) 6 hours
     - NUR 3066 Health Assessment 3 hours
     - NUR 3166 Critical Inquiry 3 hours
     - NUR 3809 Transitional Concepts in Nursing (RN Students) 6 hours
     - *NUR 3749C Scientific Theories of Nursing I 6 hours
     - *NUR 3795C Scientific Theories of Nursing II 6 hours
     - *NUR 3755C Scientific Theories of Nursing III 5 hours
     - *NUR 3796C Scientific Theories of Nursing IV 5 hours
     - *NUR 4756C Scientific Theories of Nursing V 6 hours
     - NUR 4758C Scientific Theories of Nursing VI 6 hours
     - NUR 4757C Scientific Theories of Nursing VII 6 hours
     - NUR 4797 Professional Development and Issues 3 hours
     - NUR 4941 Selected Nursing Practicum 3 hours
   - 4. Restricted Electives: One course in nursing
   - 5. Electives: None
   - Total Semester Hours Required 131

*Students who are Registered Nurses in Florida must pass examinations for credit for these courses prior to enrollment in NUR 3809.
*NUR 3809 Transitional Concepts in Nursing (RN Students)*

**DEPARTMENT OF PHYSICAL THERAPY**

Chair: P. Yarbrough, HP 220, Phone (407) 823-5040
Faculty: R. J. Laird

The physical therapy program at the University of Central Florida is an entry-level curriculum leading to a Bachelor of Science in Physical Therapy degree. Graduates will be eligible to take the state licensure examination in any state in the United States, or comparable examination in foreign countries with practice acts regulating the practice of health professionals. Graduates of entry-level programs are prepared to practice in an ethical, legal, safe, caring and effective manner in a variety of acute, community, rehabilitative,
or private health care settings, providing both physical and psychosocial intervention. Graduates are able to screen individuals to determine the need for physical therapy examination or for referral to other health professionals. They can determine in any patient with physical dysfunction a diagnosis that is within the scope of physical therapy. They can design and manage a comprehensive physical therapy plan of care that includes a comprehensive treatment plan, appropriate delegation to and supervision of other support personnel, accurate and thorough documentation of the delivery, and quantified results of, the plan of care, and participation in discharge planning and follow-up care. Graduates are also prepared to pursue graduate studies in and out of physical therapy, and/or specialty training and certification in all recognized physical therapy specialties.

The entry-level professional curriculum is a full-time program. It is seven consecutive semesters in length, including clinical practicums and internships ranging from one week to six months long. A new entering class begins the program in May of each year. Acceptance to the University, however, does not constitute admission to this upper-division, limited access program. Separate application must be made directly to the Department of Physical Therapy at UCF by January 1st of the year in which admission is sought. Complete information regarding application procedures is also available from that office.

Admission Requirements

A. UCF Students:
1. Completion of all GEP requirements.
2. Satisfaction of CLAST requirement.
3. Completion of, with no grade lower than 'C', all courses used to satisfy Prerequisite Requirement (see Section D, below).

B. Transfer Students:
1. A.A. degree from a state supported community college or State University System of Florida institution, or bachelor's degree from any accredited senior college in the United States or Canada.
2. Completion at an accredited institution in the United States or Canada, and with no grade lower than 'C', all courses used to satisfy Prerequisite Requirement (see Section D, below).

C. All Students:
1. Courses strongly recommended but not required:
   PHI 1100 Critical Thinking (3)
   All courses not selected in Section D.1.b. below (3)
2. Overall GPA of at least 2.8, and a minimum GPA of 2.8 in all courses used to satisfy the Prerequisite Requirement (see Section D, below).
3. A minimum of 200 documented clock hours experience working, volunteering or shadowing in a physical therapy facility; or otherwise compelling evidence of significant interest and inquiry into the profession of physical therapy or experience in a health care setting.
4. Demonstrated interpersonal abilities and potential for leadership.
5. Competence in the use of a personal computer.
7. Completion of no fewer than twenty four credits of the Prerequisite Requirement in the Natural Sciences by the end of the 1992 Fall semester (see Section D, below).

D. Prerequisite Requirement:
1. Behavioral Sciences (a minimum of one course in each category):
   a. General Psychology
   b. Advanced Psychology, e.g., Developmental or Abnormal Psychology, or Personality Theory
2. Natural Sciences (a minimum of one year of courses in each category)
   a. Biology - General Biology, Microbiology or Zoology courses, with labs, acceptable toward a major in a biological science.
   b. Chemistry - General Chemistry, with lab, for chemistry majors, or a one-year survey sequence of General Chemistry and Organic/Biochemistry.
   c. Math - a course in College Algebra; and the first course in Statistics for science majors.
   d. Physics - College Physics (algebra based), or University Physics (calculus based), with labs.
Bachelor of Science: Physical Therapy

Degree Requirements
1. See Undergraduate Degree Requirements.
2. Departmental Requirements: to be eligible for a baccalaureate degree in physical therapy, a student must complete all academic and clinical education courses prescribed in the professional curriculum, as shown in Section 4 below, with no grade less than 'C', and be recommended for the degree by the academic and clinical faculty.
3. Preprofessional Curriculum:
   A. Prerequisite Requirements (The following is an example of a selection of courses that may be used to satisfy the Prerequisite Requirement)

<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>
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</tr>
<tr>
<td>CHM 1032</td>
<td>General Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHM 2205</td>
<td>Organic/Biochemistry</td>
<td>5</td>
</tr>
<tr>
<td>MAC 1104</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2013</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>CLP 3143</td>
<td>Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PCB 3703C</td>
<td>Human Physiology</td>
<td>4</td>
</tr>
<tr>
<td>PHY 3053C</td>
<td>College Physics I</td>
<td>4</td>
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<tr>
<td>PHY 3054C</td>
<td>College Physics II</td>
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<tr>
<td>STA 2023</td>
<td>Statistical Methods I</td>
<td>3</td>
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B. Remaining General Education Program
   (24)

4. Professional Curriculum:
   A. First Professional Year

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>PHT 3200C</td>
<td>Introduction to Caring for Patients</td>
<td>3</td>
</tr>
<tr>
<td>PHT 3110C</td>
<td>Clinical Gross Anatomy</td>
<td>6</td>
</tr>
<tr>
<td>PHT 3002C</td>
<td>Foundations of Physical Therapy I</td>
<td>2</td>
</tr>
<tr>
<td>PHT 3003C</td>
<td>Foundations of Physical Therapy II</td>
<td>2</td>
</tr>
<tr>
<td>PHT 3120C</td>
<td>Clinical Kinesiology</td>
<td>4</td>
</tr>
<tr>
<td>PHT 3216C</td>
<td>Theory and Procedures of Physical Therapy I</td>
<td>3</td>
</tr>
<tr>
<td>PHT 3222C</td>
<td>Therapeutic Exercise I</td>
<td>2</td>
</tr>
<tr>
<td>PHT 3170</td>
<td>Functional Histology</td>
<td>2</td>
</tr>
<tr>
<td>PHT 3821</td>
<td>Clinical Education I</td>
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</tr>
<tr>
<td>PHT 3142C</td>
<td>Clinical Neuroscience</td>
<td>4</td>
</tr>
<tr>
<td>PHT 3223C</td>
<td>Therapeutic Exercise II</td>
<td>2</td>
</tr>
<tr>
<td>PHT 3217C</td>
<td>Theory and Procedures of Physical Therapy II</td>
<td>2</td>
</tr>
<tr>
<td>PHT 3350</td>
<td>Medical Science and Pharmacology I</td>
<td>2</td>
</tr>
<tr>
<td>PHT 3600</td>
<td>Introduction to Clinical Research</td>
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</tr>
<tr>
<td>PHT 3155C</td>
<td>Physiology of Therapeutic Exercise</td>
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   B. Second Professional Year

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<th>Course Title</th>
<th>Hours</th>
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<tr>
<td>PHT 4822</td>
<td>Clinical Education II</td>
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</tr>
<tr>
<td>PHT 4232C</td>
<td>Therapeutic Exercise III</td>
<td>2</td>
</tr>
<tr>
<td>PHT 4320C</td>
<td>Pedontology (Child Growth &amp; Development)</td>
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<tr>
<td>PHT 4300</td>
<td>Medical Science and Pharmacology II</td>
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<tr>
<td>PHT 4XXX</td>
<td>Psychological Aspects of Disability</td>
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<tr>
<td>PHT 4233C</td>
<td>Therapeutic Exercise IV</td>
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<tr>
<td>PHT 4310C</td>
<td>Orthopedic Problems in Physical Therapy</td>
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</tr>
<tr>
<td>PHT 4311C</td>
<td>Neurological Problems in Physical Therapy</td>
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</tr>
<tr>
<td>PHT 4610</td>
<td>Clinical Research Problems I</td>
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</tr>
<tr>
<td>PHT 4822</td>
<td>Clinical Education III</td>
<td>1</td>
</tr>
<tr>
<td>PHT 4004C</td>
<td>Foundations of Physical Therapy III</td>
<td>2</td>
</tr>
<tr>
<td>PHT 4410C</td>
<td>Teaching and Learning in Physical Therapy</td>
<td>3</td>
</tr>
<tr>
<td>PHT 4001</td>
<td>Professional Issues</td>
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</tr>
<tr>
<td>PHT 4370C</td>
<td>Cardiopulmonary Problems in Physical Therapy</td>
<td>2</td>
</tr>
<tr>
<td>PHT 4372</td>
<td>Gerontology in Physical Therapy Practice</td>
<td>2</td>
</tr>
<tr>
<td>PHT 4510</td>
<td>Management of Physical Therapy Services</td>
<td>3</td>
</tr>
<tr>
<td>PHT 4620</td>
<td>Clinical Research Problems II</td>
<td>1</td>
</tr>
<tr>
<td>PHT 4831</td>
<td>Clinical Internship I</td>
<td>2</td>
</tr>
<tr>
<td>PHT 4832</td>
<td>Clinical Internship II</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Semester Hours Required for Degree 139
Pre-Health Professions—See Pre-Health Professions Advising.

Department of Public Administration
Interim Chair: R. Denhardt, PH 102, Phone (407) 823-2604
Faculty: Aristigueta, Colby, K. Denhardt, R. Denhardt, Jurie, Lawther, Rosell, Shapek

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)
   - PAD 3003 Introduction to Public Administration 3 hours
   - PAD 4034 Administration of Public Policy 3 hours
   - PAD 4104 Administrative Theory 3 hours
   - PAD 4204 Fiscal Management 3 hours
   - PAD 4414 Public Personnel Administration 3 hours
   - POS 2041 American National Government 3 hours
   - ECO 2013 Principles of Economics I 3 hours
   - CGS 1060 Introduction to Computer Science or
     CGS 3000 Computer Fundamentals for Business Application 3 hours
   - STA 2014 Principles of Statistics or
   - STA 3023 Statistical Methods I or
   - PAD 4270 Survey Research or
     a course in social science research with an emphasis on statistical methods 3 hours
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

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.

Applications to the limited access program may be obtained at the Department of Social Work. For acceptance into the program students must have a 2.0 overall GPA. Personal qualifications include intelligence, initiative, social concern, appreciation for human diversity, dependability, humanitarian interests in helping people and in improving human services, and college-level reading and writing skills. Student qualifications are reviewed initially and on an ongoing basis.

To qualify for graduation and for entry into field education (SOW 4510), a student must have a 2.5 GPA in the major. Students also must complete 30 credit hours in social work at UCF to graduate from the program.

**Bachelor of Social Work**

**Degree Requirements**

1. See Undergraduate Degree Requirements
2. See special college and/or department requirements
3. Required Courses
   - UCF general education requirements, or AA degree from a Florida state community college
   - Pre-professional courses, to be completed prior to admission to the major:
     - Biology (BSC 1020C or 1030C) 3 hours
     - Computer Science (CGS 1060C) 3 hours
     - American Government (POS 2041) 3 hours
     - Psychology (PSY 2013) 3 hours
     - Sociology (SYG 2000) 3 hours
   - Professional foundation requirements (45 hours)
     - SOW 3104 Assessing Human Development 3 hours
     - SOW 3111 Assessing Human Systems 3 hours
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<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>
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<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>
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<tr>
<td>SOW 4510</td>
<td>Field Education</td>
<td>9</td>
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<tr>
<td>SOW 4522</td>
<td>Field Education Seminar</td>
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<td>4. Social Work Elective</td>
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<td></td>
<td>Total Semester Hours Required</td>
<td>120</td>
</tr>
</tbody>
</table>

**Social Welfare Enhancement Option**

See Gerontology Certificate Program

The Department will require that all social work majors either meet the requirements of the UCF foreign language policy for the BA degree or complete two courses in foreign culture or cultural diversity. Specific details are available from the department.
CENTER FOR CONTINUING EDUCATION

Director: Thomas A. Shostak, Research Pavilion, Suite 220, Phone (407) 249-6100
Assistant Director: Dale A. Badger

The Center for Continuing Education 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 various 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. Credit courses are conducted in cooperation with external sponsors for nontraditional students who wish to complete baccalaureate degree requirements, recertification requisites or professional licensure mandates. Professional level noncredit programs 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. Registration in Center for Continuing Education courses does not require admission to the University, nor does it imply acceptance.

The Center for Continuing Education administers the Center for Multilingual Multicultural Studies which is located on the main campus.

Center for Multilingual Multicultural Studies
Director: Consuelo Stebbins, PC 617, 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 English for special purposes for international business.
HIV-AIDS EDUCATION INFORMATION AND RESEARCH INSTITUTE

The HIV-AIDS Education Information and Research Institute is an interdisciplinary organization established in the College of Health and Public Affairs to facilitate the promotion of HIV-AIDS information and to serve as a principal coordinator in cooperation with local, regional, and state organizations, for HIV-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 HIV-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.

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 and state-of-the-art optic facilities. Laboratories include the following:

- Femtosecond Lab
- Nanosecond YAG Laboratory
- Analysis Laboratory
- Optics Laboratory
- Propagation Laboratory
- Turbulence 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

Academic Program

Physics and Electrical Engineering are two major academic disciplines of CREOL. The academic program involves students from various science and engineering departments and reflects the diverse interests of the multi-national student/faculty population. Degrees offered include: Master of Science in Engineering (MSE), MS in Electrical Engineering and Sciences, PhD in Engineering; Master's and PhD degrees in Physics. Specialized graduate course work in Optics includes Wave Optics, Optical Design, Laser Principles, Fourier Optics, Statistical Optics, Electro-Optics, Fiber Optics, Infrared Systems, Nonlinear Optics, Thin Film Optics and Optics Laboratory.

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)

The Institute for Simulation and Training (IST) is an internationally recognized research institute which focuses on technology advancement in training and training systems, education, and simulation and modeling.
IST was established in 1982 at the University of Central Florida and is located in the Central Florida Research Park, adjacent to the UCF campus. The Naval Training Systems Center, the Army Project Manager for Training Devices, and the Defense Training and Performance Data Center are also located in the Research Park. Additionally, more than 140 training and simulation companies have maintained a presence in the immediate Orlando area, causing the State of Florida to pass a resolution recognizing this area as the Center of Excellence for Simulation and Training technology.

The Institute serves this simulation and training community by providing a wide range of research services and working with university faculty to help develop curriculum and degree programs in simulation and training disciplines. UCF is the first university in the nation to offer a master’s degree in simulation systems.

IST’s research staff consists of scientists, engineers, and students. Program Managers and Principal Investigators have complete freedom to tailor interdisciplinary research teams to specific research projects. Several faculty members and graduate students have presented award winning papers at major conferences throughout the country.

IST researchers conduct basic and applied research for a broad range of training devices and programs. IST research areas include: simulation 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. Laboratories, work space and administrative offices comprise nearly 30,000 square feet of total floor space. Major laboratories include: Language Technology Lab, Networking Communications Lab, Visual Systems Lab, Team Training Lab, Low Cost Flight Trainer Lab, Mathematics Simulation Lab, and the Advanced Learning Technology Transfer Center.

In its role as a leader in the simulation and training community, IST 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 markets, and the communication of research results through seminars, publications, and workshops.

**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, Technical 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 end uses, solar water heating, 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 L. 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 State of Florida. The purpose of the Institute is to create and foster educational, commercial, cultural and social exchanges between Canada and Florida. The Institute offers such programs as the Canadian Speakers Series and 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.
FLORIDA-USSR INSTITUTE (Name change pending)

The Florida-USSR Institute is hosted by the University of Central Florida and Lake-Sumter Community College for the Florida International Affairs Commission. The purpose of the Institute is to create and foster educational, commercial, cultural and social exchanges between the USSR and Florida.

Contact Person: Dr. Henry Kennedy, Director, PC-42, Room 115. 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: Aloyce 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 tourism and hospitality industry organizations and enterprises such as 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) 823-5641

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.

INTERNATIONAL CENTER FOR MANAGEMENT AND 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: Management Development Series, Train-the-Trainer, Purchasing Policies and Practices, Effective Nursing Management, CPA Review, and Tax and Accounting Conference.

Contact Person: TBA, Director, Phone (407) 823-2446.
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 OCB-013 (lecture only)
Marine Biology OCB-013L (lab only)
Marine Biology OCB-013C (lecture & lab combined)

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 Comparative Psychology & Animal Behavior
BTE Business Teacher Education
BUL Business Law
CAP Computer Applications
CBH Comparative Psychology & Animal Behavior
CCE Civil Construction Engineering
CCJ Criminology & Criminal Justice
CDA Computer Design/Architecture
CEG Civil Geotechnical Structures
CES Civil Engineering Structures
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
EDE Education: Foundation
EDG Education: General
EDH Education: Higher
EDM Education: Middle School
EDP Education: Psychology
EDS Education: Supervision
EED Education: Early Childhood
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

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<td>PEQ</td>
<td>Physical Education Acts (PROFNL)-Water, Snow, Ice</td>
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<tr>
<td>PET</td>
<td>Physical Education Theory</td>
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<tr>
<td>PGY</td>
<td>Photography</td>
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<tr>
<td>PHH</td>
<td>Philosophy, History of</td>
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<tr>
<td>PHI</td>
<td>Philosophy</td>
</tr>
</tbody>
</table>

214
PHM Philosophy of Man & Society
PHS Physics-Specialized
PHT Physical Therapy
PHY Physics
PHZ Physics Continued
PLA Paralegal/Legal Assst./Legal Admin.
POS Political Science
POT Political Theory
PPE Psychology of Personality
PSB Psychobiology
PSC Physical Sciences
PSY Psychology
PUP Public Policy
PUR Public Relations
RAT Radiation Therapy
REA Reading
RED Reading Education
REE Real Estate
REL Religion
RET Respiratory Therapy
RMI Risk Management & Insurance
RTE Radiological Sciences
RTV Radio-Television
RUS Russian Language
SCE Science Education
SED Speech Education
SLS Student Life Skills
SOP Social Psychology
SOW Social Work
SPA Speech Pathology & Audiology
SPC Speech Communication
SPN Spanish Language
SPS School Psychology
SPW Spanish Literature (Writings)
SSE Social Studies Education
STA Statistics
STD Student Development
SUR Surveying
SYA Sociology Analysis
SYD Sociology of Demography and Area of Studies
SYG Sociology, General
SYO Sociology--Social Organizations
SYP Sociology--Social Processes
TAX Taxation
THP Theatre
TPA Theatre Production & Administration
TPP Theatre Performance & Performance Training
UPT Transportation & Traffic Engineering
UPR Urban and Regional Planning
VIC Visual Communication
ZOO Zoology

COURSES NUMBERED 0-999
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.

Directed Independent Studies
Directed Independent Research
Special Topics/Seminars
Internships, Practicums, Clinical Practice
Directed Independent Research
Cooperative Education (COE)\(^1\)
Honors Undergraduate Thesis

These courses may be assigned variable credit. Some may be repeated upon approval.

\(^1\)The Special Graduate Courses are primarily for graduate students, but may be taken by advanced seniors with the consent of their deans.

\(^2\)Enrollment is limited to those students who are fully admitted to the Graduate Program.

\(^3\)Enrollment 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:
Analytical Chemistry I: CHM 3120C carries 5 hours credit but requires 9 contact hours; 3 in class and 6 in laboratory or field work. It is scheduled to be offered in the College of Arts and Sciences.

College designation: AS = Arts and Sciences; BA = Business Administration; ED = Education; EN = Engineering; HPA = Health and Public Affairs; US = Undergraduate Studies

AVAILABILITY OF COURSES
The University does not offer all of the courses listed in the catalog each year. The Class Schedule should be consulted for those courses offered each semester.

ACG 2001 BA 3(3,0)

ACG 2023 BA 6(6,0)
Principles of Accounting I and II: PR: Junior standing and MAC 1104 or equivalent. Same as 2001, 2301. Credits may not be earned in both ACG 2023 and the ACG 2001, 2071 sequence.

ACG 2301 BA 3(3,0)
Principles of Managerial Accounting: PR: ACG 2001 and MAC 1104 or equivalent. The purpose of this class is to thoroughly familiarize the student with the various uses of accounting information for planning and control.

ACG 3103 BA 3(3,1)
Financial Accounting I: PR: Junior standing and MAC 1104, ECO 2013, ECO 2023; and ACG 2071 or ACG 2023 or its equivalent with a grade of "C" in the accounting course. The accounting process, content and analysis of financial statements, and framework of accounting theory.

ACG 3113 BA 3(3,0)
Financial Accounting II: PR: ACG 3103 with a grade of "C" or better. A continuation of ACG 3103.

ACG 3301 BA 3(3,0)
Management Accounting: PR: C.I. and Junior standing. To thoroughly familiarize the student with the various uses of accounting information for planning and control.

ACG 3361 BA 3(3,0)
Cost Accounting I: PR: Junior standing, MAC 1104, ECO 2013, and ECO 2023, and ACG 2071 with a grade of "C" in ACG 2071, completion of or concurrent enrollment in ACG 3103. Cost concepts, cost of goods manufactured, job order costing, process costing, standard costing, relevant cost analysis, and overhead/joint cost allocations.

ACG 3501 BA 3(3,0)
Financial Accounting for Governmental and Nonprofit Organizations: PR: ACG 3103 with a grade of "C" or better, or C.I. Accounting for governments and other nonprofit organizations, with emphasis on financial reporting issues and problems.

ACG 4123 BA 3(3,0)
Financial Accounting III: PR: ACG 3113 with a grade of "C" or better. Specialized financial accounting topics.

ACG 4203 BA 3(3,0)
Financial Accounting IV: PR: ACG 3113 with a grade of "C" or better. Accounting for business combinations, consolidations.

ACG 4401 BA 3(3,1)
Accounting Information Systems I: PR: ACG 3103 and CGS 3000, ACG 3113 and ACG 3361 with a grade of "C" or better. An introduction to manual and computer-based accounting information systems.

ACG 4651 BA 3(3,0)
Auditing: PR: ACG 3113 and ACG 4401 with a grade of "C" or better. The standards, practices, and procedures followed in the audit function.

ACG 5005 BA 3(3,0)
Financial Accounting Concepts: PR: Acceptance into the graduate program. (Not open for Accounting majors.) The conceptual background for financial statements.

ACG 5206 BA 3(3,0)

ACG 5255 BA 3(3,0)
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.
AMH 2010
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 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 3540
Military History: A survey of US military history from the European background of the colonial period through the contemporary military experience.
AMH 3560
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 3610
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 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>AMH 4231</td>
<td>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.</td>
</tr>
<tr>
<td>AMH 4270</td>
<td>United States History: 1945-Present: PR: AMH 2010 and 2020 or C.I. Contemporary America from World War II.</td>
</tr>
<tr>
<td>AMH 4311</td>
<td>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.</td>
</tr>
<tr>
<td>AMH 4313</td>
<td>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.</td>
</tr>
<tr>
<td>AMH 4510</td>
<td>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.</td>
</tr>
<tr>
<td>AMH 4511</td>
<td>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.</td>
</tr>
<tr>
<td>AMH 5116</td>
<td>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.</td>
</tr>
<tr>
<td>AMH 5137</td>
<td>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.</td>
</tr>
<tr>
<td>AMH 5149</td>
<td>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.</td>
</tr>
<tr>
<td>AMH 5169</td>
<td>Colloquium Age of Jackson: PR: Senior Standing or C.I. Intensive reading and class discussion on selected topics of the Jacksonian age.</td>
</tr>
<tr>
<td>AMH 5176</td>
<td>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.</td>
</tr>
<tr>
<td>AMH 5219</td>
<td>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.</td>
</tr>
<tr>
<td>AMH 5290</td>
<td>Colloquium in 20th Century U.S.: PR: Senior Standing or C.I. Reading and class discussion on selected topics in 20th-century U.S.</td>
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<tr>
<td>AMH 5391</td>
<td>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.</td>
</tr>
<tr>
<td>AMH 5407</td>
<td>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.</td>
</tr>
<tr>
<td>AMH 5446</td>
<td>Colloquium in U.S. Frontier: PR: Senior Standing or C.I. Reading and class discussion of the literature on selected topics of frontier history.</td>
</tr>
<tr>
<td>AMH 5515</td>
<td>Colloquium in U.S. Diplomatic History: PR: Senior Standing or C.I. A survey of the historical literature of American foreign policy.</td>
</tr>
<tr>
<td>AMH 5566</td>
<td>Colloquium: Women in American History: Intensive reading and class discussion on selected topics of Women in American History from colonial time to the present.</td>
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<tr>
<td>AML 3031</td>
<td>American Literature I: PR: ENC 1102. Major American writers from beginning through Whitman.</td>
</tr>
<tr>
<td>AML 3051</td>
<td>American Literature II: PR: ENC 1102. Major American writers from Twain to present.</td>
</tr>
<tr>
<td>AML 4261</td>
<td>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.</td>
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</tbody>
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AML 4321  

ANT 2003  
General Anthropology: An introductory survey of the four major subfields of anthropology: Social Anthropology, Physical Anthropology, Linguistics, and Archaeology.

ANT 3122  
Archaeological Method and Theory: A survey of archaeological field and laboratory techniques, including the interpretation of written archaeological reports.

ANT 3141  
The Emergence of Civilizations: The emergence of high civilizations in Europe, Africa, Asia, and the ancient Americas.

ANT 3142  
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  
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  
Archaeology of Complex Society: Theoretical perspectives on ancient hierarchies of power.

ANT 3163  
Mesoamerican Archaeology: An introduction to the prehistory of Mexico, Guatemala, and upper Central America from earliest times through the Spanish conquest.

ANT 3211  
Archaeology and Human Culture: The evolution of human society from foraging and hunting groups to the earliest cities and states.

ANT 3241  
Magic, Ritual, and Belief: Patterns in religious behavior in various societies, with primary emphasis on myth, rite, taboo, and festival social phenomena.

ANT 3282  

ANT 3271  
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  
Sex, Gender and Culture: The traditional and changing roles of women and men viewed in a cross-cultural perspective.

ANT 3311  
Indians of the Southeastern United States: A study of the social and cultural history of the Indians of the Southeast.

ANT 3312  
Ethnology of North American Indians: A survey of the aboriginal cultures of North America, with emphasis on the pre-contact cultural condition.

ANT 3313  

ANT 3328  
Maya Archaeology: An examination of the Prehistoric Maya culture focusing on both the archaeology and current issues in the field.

ANT 3332  
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  
Peoples of the Far East: A survey of the peoples of China, Japan, and Korea from the anthropological perspective.

ANT 3363  
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  
Cultural Anthropology (Anthropology II): An introduction to human diversity as exemplified among various cultures and ethnic groups.

ANT 3422  

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 3511
The Human Species: Human biological variation in an evolutionary perspective. AS 3(3,0)

ANT 3541
Biobehavioral Anthropology: An introduction to the study of human behavior in terms of mutual interaction between human biology and cultural environments. AS 3(3,0)

ANT 3610
Language and Culture: PR: Sophomore standing. The study of language in a non-western setting; language and behavior; language and perception. AS 3(3,0)

ANT 4084
Anthropological Method and Theory: Method, theory, research design and field techniques in the anthropological endeavor. AS 3(3,0)

ANT 4124
Advanced Archaeological Fieldwork: Supervised archaeological fieldwork. Students admitted only with permission of instructor. AS 9(9,0)

ANT 4180
Seminar in Laboratory Analysis: The processing of archaeological finds from excavation through publication. AS 3(1,4)

ANT 4462
Medical Anthropology: The therapeutic environment examined in a cross-cultural perspective. The implications of the comparative approach to health care in the industrialized world. AS 3(3,0)

APA 3471
Accounting for Engineers: General Accounting principles and practice, cost accounting, budgeting, and control techniques. Not usable for BSBA degree credit. BA 3(3,0)

APB 3342C
Quantitative Biological Methods: PR: BSC 2010, MCB 3013, CHM 2046. A laboratory course which presents modern methods and instrumentation used in quantitative biological experimentation. HPA 3(1,4)

APB 3600
Introduction to Pharmacology: Review of terminology and regulations. Study of drug types and usage. HPA 3(3,0)

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. HPA 2(2,0)

APB 4652
Medical Pharmacology II: PR: APB 4651 or C.I. Drugs used in cardiovascular disorders. Includes inotropic, chronotropic agents, beta blocker drugs, calcium channel antagonists. HPA 2(2,0)

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. AS 3(3,0)

ARE 3550
Introductory to Art Therapy: A survey of the literature, theories and practices of art therapy. AS 3(3,0)

ARE 3554
Art Therapy Methods: This course presents methodologies used by the Art Therapists and demonstrates how Art Therapy is put into practice. AS 3(3,0)

ARE 3662
Community Arts I: A Survey of the basic theoretical issues related to community arts programming. AS 3(3,0)

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. AS 3(3,0)

ARE 3944
Community Arts Practicum: A supervised experience for students to facilitate art programming in a variety of community settings. AS 3(2,3)

ARE 4262
Methods in Art Administration: PR: ARH 3820. Theories and methodologies for designing, implementing and administrating art programs for a variety of populations. AS 3(3,0)

ARE 4351
Methodology for Teaching K-12 Art Education I: Methods and curriculum materials for teaching art in elementary and secondary schools. ED 2(2,0)

ARE 4352
Methodology for Teaching K-12 Art Education II: Continuation of ARE 4143. ED 2(2,0)

ARE 4313
Art in the Elementary School: Basic principles, purposes, scope and sequence; organization for instruction; evaluation of activities; selected art experiences. ED 3(2,1)

ARE 4945
Community Arts Internship: An on-site in-depth experience for community arts majors with a concentration in administration, education, or therapeutic experience. AS 12(0,12)

ARE 5251
Art for Exceptionalities: Concepts, principles, and methods of integrating art processes into the education of the physically, emotionally, and mentally handicapped. ED 3(2,1)
ARE 5255  ED 3(2,1)
Arts in Recreation: Art activities and experiences appropriate for use in playground, leisure services, occupational orientation and other recreational areas.

ARE 5454  ED 3(3,0)
Found Arts: PR: C.I. Materials available for instruction in the public schools will be explored in depth in relation to their appropriateness and productive qualities.

ARE 5648  ED 3(3,0)
Contemporary Visual Arts Education: PR: C.I. Continued study of current programs and innovations in public school Visual Arts Programs.

ARH 2050  AS 3(3,0)
The History of Art I: Painting, sculpture and architecture from the Prehistoric Era through the Renaissance period.

ARH 2051  AS 3(3,0)
The History of Art II: Painting, sculpture and architecture from the Baroque through the 20th century.

ARH 2051H AS 3(3,0)
Honors History of Art II: Same as ARH 2051 with honors-level content.

ARH 3060  AS 3(3,0)
History of Architecture: History of Architecture - Survey of Western architectural styles.

ARH 3456  AS 3(3,0)
Art After 1945: A seminar for upper-level art students to examine historically the art of Post WWII.

ARH 3520  AS 3(3,0)
African Art: Teach the continuatives between African, Afro-Caribbean and Afro-American Arts.

ARH 3530  AS 3(3,0)
Asian Art: History of visual arts of China, Japan, India, and other Eastern cultures.

ARH 3683  AS 3(3,0)
Southern Folk Arts: History of Folk Architecture, Ceramics, Painting, Sculpture, Textiles and Toys in three main Southern ethnic cultures: EuroAmerican, Afro-American, and American Indian.

ARH 3710  AS 3(3,0)
History of Photography: The development of still photography in terms of historical, aesthetic and social content from 1839 to the present.

ARH 3720  AS 3(3,0)
History of Prints: History of printmaking in the Western world, surveying works by the "great printmakers."

ARH 3802  AS 3(3,0)
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.

ARH 3820  AS 3(3,0)
Visual Arts Administration: Vitas; grant applications; Personnel; copyright laws; museum practices, etc.

ARH 4071  AS 4(4,0)
Symbolism in the Visual Arts: A study of the origin, migration, and transmutation of signs, symbols and images in art history.

ARH 4170  AS 3(3,0)
Greek & Roman Art: A study of the art and architecture of the ancient civilizations of the Mediterranean, comprising Greece, Etruria, and Rome.

ARH 4310  AS 3(3,0)
Early Italian Renaissance Art: A survey of Italian Art and Architecture from 1300 to 1500.

ARH 4312  AS 3(3,0)
Later Italian Renaissance Art: A survey of Art in Italy, from the High Renaissance through Mannerism.

ArH 4350  AS 3(3,0)
Baroque Art: A study of European Art in the 17th and 18th centuries.

ARH 4430  AS 3(3,0)
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.

ARH 4450  AS 3(3,0)
20th Century Art: PR: ARH 2051. A survey of the art from Fauvism, Futurism, Cubism to the art of the present.

ARH 4458  AS 3(3,0)
Women and Art in 20th Century America: A course on women artists, feminist aesthetics, and women's artistic cultures, focusing on 20th century America.

ARH 4655  AS 3(3,0)
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.

ARH 4690  AS 1(1,0)
Mexican Art—Fieldwork: A field trip in connection with ARH 4655.

ARH 4730  AS 4(4,0)
Environmental Art: Analysis of aesthetic design factors related to city planning, architecture, product design, and experimental environmental arts.
ARH 4800

ARH 4892
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
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 5478
Contemporary Women Artists: PR: 6 credits of art courses or C.I. An in-depth study on contemporary women artists from a feminist perspective.

ARH 5933
Critical Perspectives on Women Artists: The cultural forces influencing women artists, and how those artists have been constrained or misrepresented by the language of art or by art history.


ART 2201C
Design Fundamentals I: Materials, processes, form. Emphasis on two-dimensional design problems, including problems in black and white and basic color theory.

ART 2202C
Design Fundamentals II: Continuation of color theory and basic three-dimensional design using the various sculptural media.

ART 2300C
Drawing Fundamentals I: Drawing as a means of formal organization. Introduction to problems in drawing methods and media. Emphasis on description techniques.

ART 2301C
Drawing Fundamentals II: Continuation of ART 2300C.

ART 2600C
Introduction to Computer Graphics: The principles underlying the generation and display of graphical pictures by computer. Topics include graphical software packages and graphics systems.

ART 3110C
Ceramics: Basic concepts of ceramic design, experience in processes of forming, decorating, glazing, and firing pottery.

ART 3133C
Fibers & Fabrics: Design and production training in surface design, floor loom weaving and fiber sculpture.

ART 3204C

ART 3230C

ART 3232C
Graphic Design II: PR: C.I. Methods, materials, and processes related to perceptual studies in graphic design.

ART 3239C

ART 3281C
Type & Design: A survey of type, calligraphy and letter forms and their appropriate use as subject matter for graphic design and publication.

ART 3330C
Intermediate Drawing I: PR: Six semester hours of Drawing Fundamentals or C.I. Intermediate problems in drawing, with emphasis on the human form.

ART 3331C
Intermediate Drawing II: PR: C.I. Continuation of Intermediate Drawing I.

ART 3400C
Printmaking: PR: ART 2201C, 2202C, and three semester hours of Drawing Fundamentals or C.I.

ART 3510C
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 3610C
ART 3701C  AS 3(2,3)
Sculpture: PR: Six semester hours in Design Fundamentals, to include three semester hours in three-dimensional work, or C.I.

ART 4108C  AS 3(2,3)
Advanced Three-Dimensional Design: PR: ART 3100C. May be repeated for credit. Advanced problems in three-dimensional materials, processes, forms.

ART 4111C  AS 3(2,3)
Advanced Ceramics: PR: ART 3110C. May be repeated for credit.

ART 4130C  AS 3(3,0)
Fibers, Fabrics, Textiles and Synthetics: Textile design and production, including non-loom weaving processes. May be repeated for credit.

ART 4138C  AS 3(3,0)
Advanced Fiber & Fabrics: Textile design and production, including non-loom weaving processes. May be repeated for credit.

ART 4198C  ED 3(2,3)

ART 4235C  AS 3(3,2)
Advanced Graphic Design: PR: ART 3280C, ART 3232C, or C.I. Practical studio problems, with emphasis on organization of visual design elements.

ART 4237C  AS 3(3,2)
Special Problems in Graphic Design: PR: ART 3232C or C.I. Advanced problems in visual design and reproduction. May be repeated for credit.

ART 4320C  AS 3(2,2)
Advanced Drawing: PR: ART 3331C. May be repeated for credit.

ART 4402C  AS 3(2,3)
Advanced Printmaking: PR: ART 3400C. May be repeated for credit.

ART 4483C  AS 3(2,3)

ART 4530C  AS 3(2,3)
Advanced Painting: PR: ART 3510C. May be repeated for credit.

ART 4703C  AS 3(2,3)
Advanced Sculpture: PR: ART 3701C. May be repeated for credit.

ASH 4404  AS 3(3,0)
China in 19th and 20th Centuries: PR: EUH 2000 and 2001 or C.I. The Mongols in China; coming of the Europeans; social structure; Communist movement; Japanese aggression.

ASH 4442  AS 3(3,0)
Modern Japan, 19th and 20th Centuries: PR: EUH 2000 and 2001 or C.I. A survey of the Tokugawa Shogunate; Western contact in the 19th century; World War I; Japanese militarism; World War II; and U.S. occupation.

AVM 4510  US 3(3,0)
Airline Management: PR: HFT 1000. The trends, operation, practices, and procedures of the airline industry. Special emphasis on ticketing, scheduling, marketing, and terminal management.

BCH 4053  AS 3(3,0)

BCH 4054  AS 3(3,0)
Biochemistry II: PR: BCH 4053. Continuation of BCH 4053.

BCH 4103L  AS 2(0,6)
Biochemical Methods: PR: BCH 4053. A laboratory course stressing the application of the chemical arts to the separation, identification, and quantification of materials of biological significance.

BES 3512  AS 2(0,6)
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.

BOT 1000C  AS 4(3,2)
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.

BOT 2010C  AS 4(2,4)
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.

BOT 3154C  AS 3(1,4)
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.
BOT 3800
Ethnobotany: PR: C.I. Historical and modern uses of plants economically important in various cultures. Designed for majors and non-majors.

BOT 3820
Plants and the Urban Environment: PR: C.I. The selection, placement, propagation and care of ornamental plants in residential and industrial areas. Designed for majors and non-majors.

BOT 4223C
Plant Anatomy: PR: BOT 2010C. A study of development, structure and function of the principal organs and tissue of vascular plants.

BOT 4303C
Plant Kingdom: PR: BOT 2010C. A survey of the plant kingdom utilizing comparative morphology, structure and functions to demonstrate relationships among extant and extinct forms.

BOT 4503C
Plant Physiology: PR: PCB 3023 or C.I. A study of mechanisms used by plants to cope with the environment.

BOT 4623C
Plant Geography and Ecology: PR: 8 hours Botany or C.I. The major climatic plant formations of the world, historical and contemporary plant geography, and ecology.

BOT 4713C
Plant Taxonomy: PR: BOT 2010C. An introduction to systematic classification and identification of vascular plants, with emphasis on the flora of peninsular Florida.

BOT 5495C
Bryology: 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.

BOT 5705C
Plant Biostatistics: PR: Graduate standing or C.I. Evolutionary processes among plant taxa and populations utilizing cytology, morphology, biochemistry, breeding systems and co-evolution.

BSC 1020C
Biological Principles: A study of various biological factors which affect the health and survival of man in modern society. Designed for non-majors.

BSC 1030C
Botany: Biological implications of the interaction among human society, population, and technology in relation to the environment and natural systems. Designed for non-majors.

BSC 2010C
General Biology: PR: High school biology or C.I. Basic principles, unifying concepts, and facts of modern biology. Introduction to quantitative biological experimentation. For biological sciences, allied health sciences, and preprofessional majors.

BSC 2010H
General Biology Honors: PR: Eligibility for Honors Program. Basic principles and unifying concepts of modern biology. Introduction to quantitative experimentation using intensive, open-ended labs.

BSC 4034
Biology and Society: PR: An introductory course in biology or C.I. Biological concepts applied to current human problems - food production, pollution, diseases, energy, life support systems, natural ecosystems. Suitable for majors or non-majors.

BSC 4103
History of Biology: PR: C.I. People and events involved in the development of major biological concepts and disciplines. Suitable for majors and non-majors.

BTE 3402

BTE 4410
Course Construction in Business Education: PR: EVT 3365 or C.I. An overview and examination of business curriculum and methodology integrated into the vocational frameworks. Planning and preparation of materials, managing the laboratory and involvement in vocational student organizations.

BUL 3111
Legal Environment of Business: PR: Junior standing. Analysis of the law as a dynamic social and political institution in the business environment, including ethical considerations. (Not open to Accounting majors).

BUL 3112

BUL 3121
Business Law II: 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.

BUL 5125 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.


CAP 5410 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.


CAP 5635 Artificial Intelligence and Prolog: PR: CAP 4630. Analysis of deductive databases, applications of logic programming to knowledge representation and "expert systems."

CAP 5636 Advanced Artificial Intelligence: PR: CAP 4630. AI theory of knowledge representation, "expert systems;" memory organization, problem solving, learning, planning, vision, and natural language.

CCE 3003 Comparative Psychology: PR: PSY 2013. A study of comparative behaviors of lower animals.

CCE 4004 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.


CCE 4031 Construction Scheduling: Project planning, scheduling and cost management for building construction.

CCE 4101 Construction Materials: Structural steels, concrete mixes, wood, masonry, concrete reinforcement, steel decks, formwork, insulation, and interior finish materials.

CCE 5005 Construction Engineering II: PR: CCE 4004 or C.I. Construction planning, equipment, and methods used in heavy construction.

CCE 5035 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.

CCE 3010 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.

CCE 3020 Criminal Justice System: An examination of the components and of their interdependence in light of their traditional autonomy.

CCE 3210 Criminal Law in Action: Basic concepts of criminal law: elements of major crimes, criminal responsibility, defenses, and parties to crime.

CCE 3250 Prosecution and Adjudication: PR: CCE 3020 or PLA 3013 or C.I. Examination of structures and goals of offices and prosecution and criminal trial courts, and of the processes of charging, adjudicating, and sentencing defendants.

CCJ 3341: Community-Based Corrections: PR: CCJ 3020 and CCJ 3300 or C.I. An overview and analysis of correction interventions and treatment programs in the community.

CCJ 3451: Justice System Technology: PR: CCJ 3020 or C.I. 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: The Criminal Justice Manager: PR: CCJ 3020 or 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: Labor Relations in Criminal Justice: PR: CCJ 3020 and CCJ 3452 or C.I. 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: Justice Agency Operations: PR: CCJ 3020 and CCJ 3452 or C.I. Elements, functions, and processes essential to the continuing management of various criminal justice agencies, institutions and court systems.


CCJ 4540: Delinquency Control: PR: CCJ 3020 and CCJ 3290 or C.I. Examination of programs and institutions including juvenile court process, intake services, and remedial procedures and practices.

CCJ 4630: Comparative Justice Systems: PR: CCJ 3020 and CCJ 3290 or C.I. A survey of contemporary foreign criminal justice and differences emerging from various political, cultural and legal systems.

CCJ 4640: Organized Crime: An examination of organized crime, including structures, history and activities, and of issues surrounding efforts to define and control it.

CCJ 4661: Terrorism: PR: CCJ 3020 and CCJ 4105 or C.I. An examination of competing ideologies of a variety of social and political conflicts (both international and domestic) that give rise to terrorism and of the implications for the criminal justice system.

CCJ 4670: 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: 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: 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: Research and Technology Implementation: Changing roles of social and physical sciences as related to the objectives and administration of public safety agencies.

CCJ 5466: 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: 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: 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: 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
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
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
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
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 compactor; 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
Geotechnical Engineering I: 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 4812
Historical Developments in Civil Engineering: Seminar covering major historical developments in civil engineering.

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 5016
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

CDA 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.

CDA 4608
Steel Design: PR: CDA 4605. Project course on design of steel structures using steel and structural analysis methodologies.
CET 4427 EN 3(3,0) Applied Database I: PR: CET 3363. Design and implementation of data base systems within the concept of central administration, structured data storage. Programming project.

CET 4429 EN 3(3,0) Applied Database II: PR: CET 4427. Continuation of CET 4427—Study of Hierarchical database system. Programming project is required.
CET 4505  EN 3(3,0)
Applied Operating Systems I: PR: COP 2001. 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.
CET 4523  EN 3(3,0)
Applied Systems Analysis II: PR: CET 3383. 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.
CET 4527  EN 3(3,0)
Applied Operating Systems II: PR: CET 4505. Continuation of CET 4505, with emphasis on multitasking.
Multi-users environmental programming project is required.
CET 4915  EN 2(0,4)
Senior Design Project: PR: Computer, Electronics, or Information Systems Engineering Technology
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.
CET 4931  EN 3(3,0)
Current Topics in Technology: PR: C.I. 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.
CGN 3501  EN 3(2,3)
Civil Engineering Materials: PR: C.I. The characterization of materials used in civil engineering
works to include concrete, soils, bituminous, polymers and composite materials.
CGN 4300  EN 3(3,0)
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.
CGN 5320  EN 3(2,2)
Geographic Information systems: Programming theory and application of Geographic Information
Systems to Civil Engineering projects.
CGN 5504  EN 3(2,2)
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.
CGN 5506  EN 3(2,2)
Asphalt Concrete Mix Design: PR: CEG 4101. Properties of asphalt, aggregate and asphalt mixtures,
Marshall mix design, Hveem mix design, pavement rehabilitation.
CGS 1060C  AS 3(2,2)
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.
CGS 3000C  AS 3(2,1)
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.
CGS 3061  AS 3(3,0)
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.
CGS 3100  AS 3(3,0)
Business Applications Programming: PR: CGS 3000 or equivalent. Basic programming concepts and
techniques, algorithm design, documentation, programming for selected business applications using
BASIC. Programming projects. Not open to Computer Science majors.
CGS 3262  AS 3(3,0)
file structures, file maintenance, operating systems, utility programs, and architecture. Not open to
Computer Science majors.
CGS 3300  AS 3(3,0)
Survey of Software: PR: CGS 3262. Introduction to the fundamentals of information systems develop-
ment and systems requirements. Evaluation and use of current software. System design case studies.
Not open to Computer Science majors.
CGS 3422  AS 3(3,0)
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.

CHI 1120
Elementary Chinese Language and Civilization I: Designed to initiate the student to the major language skills: listening, speaking, reading and writing.

CHI 1121
Elementary Chinese Language and Civilization II: PR: CHI 1120 or equivalent.

CHM 1020
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.

CHM 1032
General Chemistry: PR: MAC 1104, MGF 1203 or equivalent. An introductory study of the fundamental concepts of chemistry, primarily oriented toward Biology Education COH and PA and Engineering Technology majors.

CHM 1032L
General Chemistry Laboratory: CR: CHM 1032. An introductory study of physical and chemical properties of elements and compounds.

CHM 2045
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.

CHM 2045H
Honors Chemistry Fundamentals I: PR: Admission to University, Honors Program and high school chemistry. Same as CHM 2045 with honors-level content.

CHM 2046
Chemistry Fundamentals II: PR: CHM 2045. Continuation of CHM 2045.

CHM 2046L
Chemistry Fundamentals Laboratory: PR: CHM 1032 or CR: CHM 2046. Illustration of chemical principles and introduction to the techniques of inorganic and physical chemistry.

CHM 2046H
Honors Chemistry Fundamentals II: PR: 2045H. Same as CHM 2046 with honors-level content.

CHM 2205
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 2045, 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 3210

CHM 3211

CHM 3211L
Organic 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
Organic Laboratory Techniques II: PR: CHM 3211 and 3211L. Open-end laboratory to develop synthesis 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 3411
Physical Chemistry II: PR: CHM 3410. Continuation of CHM 3410.

CHM 3411L
Physical Chemistry Laboratory: CR: CHM 3411. 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 4220

CHM 4221

CHM 4610

CHM 4610L
Inorganic Chemistry Laboratory: PR: CHM 4610. A study of physical and chemical properties and synthetic techniques in Inorganic Chemistry.

CHM 5235

CHM 5305
Applied Biological Chemistry: PR: CHM 3211. The identification from plants, synthesis, assessment of bioactivity, and design of pharmaceuticals and agrochemicals, as well as the impact of biotechnology in the chemical industry.

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 5580

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).

CHS 3505
Forensic Microscopy: PR: CHM 2046 or C.I. The study of the polarized light microscope and its use in the identification and comparison of trace evidence.

CHS 3511
Trace Evidence: PR: CHS 3505. An advanced study of the techniques used to identify and compare trace evidence.

CHS 3531
Forensic Analysis of Controlled Substances: PR: CHM 3120C. The study of the presumptive tests, isolation, and instrumental techniques used in identification of controlled substances.

CHS 4110
Nuclear and Radiochemistry: PR: CHM 3120C and CR: CHM 3411. A lecture-laboratory course examining theories of fundamental particles, the chemical effects of nuclear transformations and the special uses of isotopes.

CHS 4200
Concepts in Industrial Chemistry: PR: CHM 3410. An introduction to industrial practices, emphasizing the application of chemical principles in the development of a commercial process or product.

CHS 4591
Forensic Science Internship: PR: C.I. Credit for full-time work (15 weeks; 600 hours) for a professional forensic laboratory. This course may be repeated for credit.

CHS 5241
Chemical Dynamics II: PR: CHS 5240. Continuation of CHS 5240.

CHS 5250
Chemical Synthesis I: PR: CHM 3211, and 3411; or equivalent. Survey of chemical synthesis from the standpoint of planning a synthesis, intermediates, special techniques, protection of functional groups, experimental design and optimization of reaction conditions.

CIS 4321
Data Processing Systems Analysis and Design: PR: Computer Science Major or C.I. and COP 3530. Data organization; physical storage; database system architecture. Students participate in the design of a data processing system.
CIS 4322
Data Processing Systems Implementation: PR: Computer Science Major or C.I. and CIS 4321. System implementation project. Students experience the task of implementing a large computing system.

CIS 5101
Computational Techniques in Management Information Systems: PR: COP 4710. Computers in management information systems; analysis, design approaches, processing methods and data management; use of state-of-the-art software in design and development.

CIS 5610
Software Engineering: PR: COP 4020 and knowledge of Ada. Introduction to the design and implementation of software systems. Emphasis is placed on object-oriented methodologies using Ada with application to real-time systems design. A project is required.

CJT 3820
Security Administration: Discussion of modern security administration and the security-law enforcement interface, emphasizing a systems approach and utilizing the design of a security plan for a plant.

CJT 3821
Practical Security Applications: An examination of basic security principles applied to practical specific security situations encountered in the Central Florida area.

CJT 3842
Special Security Problems: Review and application of basic security principles to retail security, transportation/cargo security, utility security, computer security, and other special security situations.

CLA 3850
Classical Mythology: Myths of the Greeks & Romans studied through excerpts from ancient sources and experienced through works of art, literature, and music.

CLA 3851
Comparative Mythology: Common themes found in the myths of various cultures; theories of their origins, meaning and value in human experience.

CLP 3003

CLP 3143

CLP 3302
Clinical Psychology: PR: PPE 3003 or CLP 3143. An overview of approaches to psychopathology, methods of clinical assessment, and various approaches to individual and group counseling.

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 4402C

CLP 5004
Psychology of Adult Adjustment: A survey of situations encountered during adulthood, including marriage, birth, parenthood, trauma, illness, death, etc. Effective adjustment.

CMC 4240
Corporate/Institutional Video: PR: RTV 3200, RTV 3260 (RTV 3260 may be taken concurrently). Preparation of non-broadcast corporate/institutional video programs including planning, budgeting, production, and evaluation.

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.
Communication and Court Room Advocacy: A study of the application of communication theory and practice to the judicial setting.

Computer Science 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.

Computer Science II: PR: COP 2500. Continuation of COP 2500; recursion; simple data structures; program verification; continued experience with a procedure-oriented language.


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.

Pascal Programming Language: Lecture and programming experience in Pascal.

C Programming Language: PR: Knowledge of a procedural high-level programming language. Lecture and programming experience in C.

ADA Programming Language: PR: Knowledge of a procedural high-level programming language. Lecture and programming experience in ADA.

UNIX: PR: Knowledge of the C programming language. Lecture and programming experience in UNIX.

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.


Computer Science III: 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.


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.

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.

Databases: PR: COP 3530. Basic concepts of databases, I/O processing, file organization and access, study of selected database systems, database project.

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.

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.

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 problems, 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 Process: 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.

CRT 4931 Current Topics in Technology: PR: C.I. 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.

CRW 1001 Imaginative Writing for Non-English Majors: An introduction to imaginative writing for non-English majors. Students will explore a variety of traditional and non-traditional forms of imaginative writing.

CRW 2000 Introduction to Creative Writing: PR: ENC 1102. An exploratory course in the several types of creative writing; group analysis of original writing; critical reading of established authors.

Creative Writing Workshop I: PR: C.I. Practice in established forms: essay, short story, and poetry.

Creative Writing Workshop II: PR: CRW 3010 or C.I. Individualized practice in writing in one of the established forms; analytic study of the work of pertinent authors.

Poetry Writing: PR: ENC 1102. Practice in writing poetry; group analysis and criticism of work produced by individual students.


Writing Scripts: PR: ENC 1102 and Grammar Proficiency Exam. Theory and practice of writing scripts for film and TV.


Science Fiction Writing: Study of science fiction literature and writing of original science fiction stories. Workshop format with critique of writing assignments.


Teaching Creative Writing: PR: Senior standing or C.I. Creative writing practicum.

Hydrology: PR: STA 3032; EGN 3353. Hydrological cycle, probabilistic forecasting, rainfall excess, meteorology, groundwater, storm-water runoff, flood routing and design applications.

Hydraulics: PR: EGN 3353. Transmission systems, peak flows, water distribution, wastewater and storm water collection, pipe flow, open channels and pumps with design applications.

Hydraulic Engineering: PR: EGN 3353. Environmental and civil engineering hydraulics application. Pipe and open channel flow, fittings, flow measurements, etc.

Water Resources Engineering: PR: CWR 4101C, CWR 4201C. Systems identification and solution to complex water allocation problems, and other hydraulic engineering designs and operations using economic analysis and operations research techniques.

Theatre Dance I: Fundamentals of Classical Ballet; includes practical class work as well as Dance History lectures.

Theatre Dance: PR: DAA 2200 & 3201 or C.I. Specialized study of Theatre Dance styles of the 1920s to the 1980s. Demonstration and performance of students highlighting segments of Broadway shows. May be repeated for credit.

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.

Theatre Tap Dance: Exploration of form, style, and technique in the basic fundamental movements of tap dance. May be repeated for credit.

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.
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 4(2,5)
Aerospace Design I: PR: EAS 3810. Application of the design process to the team solution of a state-of-the-art problem. Airplanes and space vehicles, systems and devices are considered.

EAS 4710 EN 4(2,5)
Aerospace Design II: PR: EAS 4700. Continuation of the design process in the team building and testing of a prototype/model of an airplane, spacecraft, system or device.

EAS 5302 EN 3(3,0)

ECM 3000L EN 1(0,3)
Introduction to Computer Engineering: PR: EGN 3420. Introduction to the field of computer engineering, including the use of “C” programming for engineering applications.

ECM 4507C EN 3(2,2)
Computer-Aided Design Engineering: PR: ECM 4804 and EEL 3342 or C.I. Review of currently available CAE tools for digital hardware and software design applications.

ECM 4520 EN 3(3,0)
Engineering Data Structures: PR: ECM 3000L. Design of data structures and algorithms, with emphasis on performance analysis; memory organization, stacks, queues, linked lists, trees, graphs, searches, and sorts. Introduction to object-oriented structures.

ECM 4501 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 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 4507C EN 3(2,3)

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 4708C 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 computers.

ECM 4803C EN 3(3,0)
Engineering Systems Software: PR: ECM 4230 and EEL 3342. Introduction to operating systems concepts and facilities for engineering applications, including multiprogramming, resource allocation and management, systems utilities, and operating system implementation.
ECM 4804: Engineering Software Design. PR: COT 3100, ECM 4230. Software systems development life cycle, function and object-oriented methodologies, CASE; Analysis, design, and development of a large software project.

ECM 4910: 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.


ECM 5365: Introduction to Digital Systems. PR: EEL 3342 or equivalent. Analysis and synthesis of combinational, synchronous and asynchronous sequential logic circuits. Introduction to controller design using a digital design language.

ECM 5431: Expert Systems and Knowledge Engineering. PR: ECM 4451 or C.I. Introduction to expert systems in engineering. Expert systems tools and interviewing techniques. This course is hands-on and project-oriented.

ECM 5441: Image Processing. PR: MAP 3302, EGN 3420. Two-dimensional signal processing techniques; pictorial image representation; spatial filtering; image enhancement and encoding; segmentation and feature extraction; introduction to image understanding techniques.

ECM 5453: Pattern Recognition. PR: MAP 3302, EGN 3420. Graph-theoretic and syntactic methods of pattern analysis. Decision functions; optimum decision criteria; training algorithms; feature extraction; unsupervised learning; data reduction and potential functions.

ECM 5505C: Microcomputer-based Monitoring and Control Systems. PR: EEL 3342; ECM 4508 or C.I. Machine-language programming; software development aids; systems design; interfacing considerations.

ECM 5506C: Engineering Applications of Computer Graphics. PR: EGN 3420 or C.I. Computer graphics in engineering applications. Laboratory assignments.

ECM 5606: Software Engineering I. PR: EGN 3420, ECM 4230 or C.I. Design, implementation, and testing of computer software for Engineering applications.

ECO 2013H: Principles of Economics I. An introduction to macroeconomics, including an overview of the market economy; national income, employment, and price level determination, stabilization policies, and international economics.

ECO 2013H: Honors Principles of Economics I. PR: Open to Honor Students only. Same as ECO 2013 with honors-level content.

ECO 2023: Principles of Economics II. The determination of prices in a market economy; their role in allocating consumer and producer goods and in distributing incomes, including attempts to improve market efficiency through public policy.


ECO 3401: Mathematical Economics I. PR: ECO 2013 and 2023 and calculus. The study of economic processes expressed as equations and economic systems as mathematical models.


**ECO 3703**  

**ECO 4303**  

**ECO 4412**  

**ECO 4504**  
*Economics of the Public Sector*: 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.

**ECO 5005**  
*Economic Concepts*: PR: Acceptance into the graduate program. Introduction to micro and macro economic analysis.

**ECO 5415**  
*Statistics for Business and Economics*: 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.

**ECP 3004**  

**ECP 3203**  
*Contemporary Labor Economics*: 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.

**ECP 3433**  

**ECP 4403**  
*Business, Government, and Industrial Organizations*: 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.

**ECP 4603**  
*Urban and Regional Economic Problems*: PR: ECO 2023 and ECO 2013. Analysis of the location, organization and problems of urban and regional economic activities.

**ECP 4703**  
*Managerial Economics*: 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.

**ECS 4003**  

**ECS 4013**  

**EDE 3942**  
*Junior Student Teaching-Elementary*: 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.

**EDE 3943**  
*Junior Student Teaching-All K-12 Majors*: 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.

**EDE 4943**  
*Senior Student Teaching-Elementary*: PR: EDE 3942 or EDE 3943. Student teaching in an elementary school under the supervision of a certified classroom teacher. Scheduled concurrent seminars.

**EDE 5541**  
*Individualized Instruction in the Elementary School*: 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.

**EDF 2240**  
*Introduction to Applications of Technology in Education*. Classroom applications of instructional media including computers.

EDF 3603 Analysis of Educational Foundations: 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.

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.

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: PR: FLE 3063 or C.I. Study 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 STEP 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 3250
Behavioral Issues of the Emotionally Handicapped: Introduction to functional schema for the field of behavioral disorders. Considerations of theoretical as well as practical-clinical issues.

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

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 magnetic fields and electromagnetic waves.

EEL 3552C

EEL 3657

EEL 4012C
Senior Electrical Design: PR: EEL 4309C, ECM 4508C, and required EEL 3XXX courses. Applications of the design process in the solution of realistic & meaningful problems. Feasibility, design, and testing of teams 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
Electronics II: PR: EEL 3307C, EEL 3342C. Ideal Op-Amps and applications. Introduction to Logic Circuits; Bipolar, MOS and CMOS families; Flip-flops and memory cells, comparators and timing circuits; A/D and D/A converters.

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 4612 EN 3(3,0)
Introduction to Modern and Robust Control: PR: EEL 3657. Classical control theory including differential equations and Laplace transform techniques, stability analysis, and classical frequency domain design.

EEL 4701C EN 4(3,3)
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 EN 4(3,3)
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 EN 3(3,0)

EEL 5173 EN 3(3,0)

EEL 4701 EN 4(3,3)
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 EN 4(3,3)
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 EN 3(3,0)

EEL 5173 EN 3(3,0)

EEL 5255 EN 3(3,0)

EEL 5353 EN 3(3,0)
Semiconductor Device Modeling and Simulation: PR: EEL 3307. Large signal and small signal model development for semiconductor diodes, BJTs, and MOSFETs. Parameter extraction, numerical algorithm, and SPICE simulation are included.

EEL 5355C EN 4(3,3)
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 5370 EN 3(3,0)

EEL 5434 EN 3(3,0)
Microwave Circuits and Devices: PR: EEL 4436 or EEL 5555. Planar transmission lines; passive microwave circuits; active circuit design using Gunn, IMPATT, FETS, RTDS, etc.; microwave integrated circuits.

EEL 5441 EN 3(3,0)
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 EN 3(3,0)
Optical Systems Design: PR: C.I. Design principles of lens and mirror optical systems' evaluation of designs using computer techniques.

EEL 5450C EN 3(2,1)
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 EN 3(1,4)
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 EN 3(3,1)
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 5513 EN 3(3,0)

EEL 5517 EN 3(3,0)
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 5542 EN 3(3,0)
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 5630

EEL 5631

EES 3104C

EES 4111C

EES 4202C
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.

EES 4401C
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.

EES 5415C
Potable Water Treatment: PR: EES 4202C and 4111C. Engineering application of potable water chemistry involving coagulation, softening, filtration, corrosion, disinfection quality and drinking water.

EET 3035C

EET 3143C

EET 3716

EET 4158C

EET 4329C

EET 4339C

EET 4349C
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.

EET 4389C

EET 4508

EET 4548

EEX 2010: Introduction to Special Education - Orientation to the education of exceptional children in the schools. The course includes characteristics, trends, mainstreaming, and other issues.


EEX 3241: 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.


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 4221: Assessment of Exceptional Students - PR: Senior Status. Diagnosis of learning problems of exceptional students; assessing performance and determining appropriate placement and programming.

EEX 4501: Behavioral Management - Study of management techniques based on behavioral management (applied behavioral analysis) principles for modifying the effective behavior of exceptional students.

EEX 4520: Senior Seminar in Special Education - PR: Senior Standing. A seminar for exceptional education majors. Seminar must be taken concurrently with senior student teaching.

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.

EGN 1006: Introduction to the Engineering Profession - Overview of academic and professional requirements in various engineering disciplines.


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.


Principles of Electrical Engineering: PR: PHY 3049; CR: MAP 3302. Fundamental laws of electrical circuits and circuit analysis; fundamentals of electronics and power systems.
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.
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.
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.
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.
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.
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.
Science in History: Examination of the reciprocal relations of science and society from ancient to recent times.
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.
Turning Points in Engineering: Seminar covering major historical developments in engineering.
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.
Topc 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.
Energy and Society: Investigation of available energy forms; energy resources versus requirements in an increasingly complex technological society; possible solutions and future predictions.
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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Prerequisites</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGN 4830</td>
<td>Telecommunications: Telecommunications and its role in contemporary local, national, and international society.</td>
<td></td>
<td>EN 3(3,0)</td>
</tr>
<tr>
<td>EGN 4832</td>
<td>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.</td>
<td></td>
<td>EN 3(3,0)</td>
</tr>
<tr>
<td>EGN 4843</td>
<td>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.</td>
<td></td>
<td>EN 3(3,0)</td>
</tr>
<tr>
<td>EGN 4844</td>
<td>Man and Machine: The influence and interrelationship of invention and technical progress on the evolution of social forms and institutions.</td>
<td></td>
<td>EN 3(3,0)</td>
</tr>
<tr>
<td>EGN 5034</td>
<td>Engineering and Public Works: PR: C.I. The purposes, function, and role of engineering within public works.</td>
<td></td>
<td>EN 3(3,0)</td>
</tr>
<tr>
<td>EGN 5035</td>
<td>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.</td>
<td></td>
<td>EN 3(3,0)</td>
</tr>
<tr>
<td>EGN 5036</td>
<td>Engineering Codes and Standards: PR: C.I. Development, history, and function of engineering codes and standards and their use in protecting public health and safety.</td>
<td></td>
<td>EN 2(2,0)</td>
</tr>
<tr>
<td>EGS 1111C</td>
<td>Engineering Computer Graphics: PR: Trigonometry. Spatial visualization, sketching and graphical presentation as a form of computerized engineering communication. Engineering drawing, descriptive geometry and graphical solution techniques using computer software.</td>
<td></td>
<td>EN 2(1,3)</td>
</tr>
<tr>
<td>EIN 3314C</td>
<td>Work Measurement &amp; Design: PR: EGN 3613, STA 3032. Management standards for evaluation and control of man and man/machine systems. Flow and operations analysis, work measurement, job evaluations. Laboratory assignments.</td>
<td></td>
<td>EN 3(2,2)</td>
</tr>
<tr>
<td>EIN 4116C</td>
<td>Information Systems Analysis and Design: PR: ESI 4312. Systems analysis methodology, information systems models, system requirement, specifications, systems design methodology and decision support. Cost benefit analysis and implementation planning.</td>
<td></td>
<td>EN 3(2,3)</td>
</tr>
<tr>
<td>EIN 4118C</td>
<td>Industrial Engineering Applications of Computers: PR: FORTRAN. Survey of microcomputer methods in industrial engineering practice. Topics include: spreadsheets, databases, expert systems, and project management. Lab exercises.</td>
<td></td>
<td>EN 3(2,3)</td>
</tr>
<tr>
<td>EIN 4114</td>
<td>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.</td>
<td></td>
<td>EN 3(3,0)</td>
</tr>
<tr>
<td>EIN 4315C</td>
<td>Human Engineering: PR: EIN 3315C; Senior standing. Man/machine systems; design and conduct of human engineering studies.</td>
<td></td>
<td>EN 3(2,2)</td>
</tr>
<tr>
<td>EIN 4391C</td>
<td>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.</td>
<td></td>
<td>EN 3(2,3)</td>
</tr>
<tr>
<td>EIN 4391CC</td>
<td>Industrial Control Systems: PR: ESI 4312. Decision rules in industrial environment, including forecasting, scheduling, ordering, quality, and inventory control.</td>
<td></td>
<td>EN 3(2,2)</td>
</tr>
<tr>
<td>EIN 4391C</td>
<td>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.</td>
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<td>EN 3(2,2)</td>
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<tr>
<td>EIN 4391C</td>
<td>Manufacturing Engineering: PR: EIN 3314C, EGN 3363. Introduction to manufacturing engineering, with emphasis on current and emerging technologies in metalworking and electronics.</td>
<td></td>
<td>EN 3(2,2)</td>
</tr>
<tr>
<td>EIN 4411C</td>
<td>Computer-Aided-Manufacturing: PR: EIN 4391C. Computer-Aided-Manufacturing (CAM) including computer numerical control (CNC), robotics, parts classification (GT) and manufacturing resource planning (MRP).</td>
<td></td>
<td>EN 3(2,2)</td>
</tr>
<tr>
<td>EIN 4691C</td>
<td>Industrial Engineering Senior Design Project: PR: Senior standing. Capstone design course; application of IEMS techniques to real-world design applications.</td>
<td></td>
<td>EN 3(2,3)</td>
</tr>
</tbody>
</table>
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.

Ergonomics: PR: C.I. Applications of anthropometry, functional anatomy, mechanics, and physiology of musculoskeletal system concepts in the engineering design of industrial tools, equipments, and workstations.

Training Simulator Engineering: Introduction to significant topics relative to the development and use of simulators for knowledge transfer in the technical environment.

Engineering Logistics: Study of the logistics life cycle involving planning, analysis and design, testing, production, distribution, and support.

Forecasting: PR: STA 5156, ESI 5170 Industrial applications of forecasting methods with emphasis on microcomputer-based packages.


Tool Engineering and Manufacturing Analysis: PR: EIN 4391 or C.I. Tool materials and design, tolerance technology, theory of metal cutting, and machineability.

Expert Systems in Industrial Engineering: Overview of basic concepts, architecture and construction of expert systems, in IE. Intelligent simulation training systems, case studies and problems. Laboratory exercises.

Introduction to Specific Learning Disabilities: PR: Senior standing. Development and practice of appropriate cognitive, affective, and motor strategies for selected categories, levels and degrees of severity of exceptional population.

Program Planning for Specific Learning Disabilities: PR: Senior standing. Development of highly specialized techniques and materials to be used with exceptional students.

Engineering Polymeric, Ceramic, and Composite Materials: PR: EGN 3363 or C.I. Structure, properties, processing of engineering polymeric, ceramic, and composite materials.


Metallurgical Thermodynamics: PR: EGN 3343, EGN 3365C. First and second law treatment, solid state kinetics, and phase diagram representation of metallic and alloy systems.

Surface Science: PR: PHY 3049 and C.I. Methods of chemical and physical analysis of surfaces, with emphasis on ultra-high vacuum spectroscopies utilizing electron, ion and photon probes.


Introduction to Ceramic Materials: PR: EGN 3363. Uses, structure, physical and chemical properties, and processing of ceramic materials. Discussions will include recent developments for high technology applications.
Polymer Science & Engineering: PR: EGN 3363. Molecular structure, physical and chemical properties, preparation and processing of macromolecular materials. Discussions will include recent developments for high technology applications.


Corrosion and Electrochemical Engineering: PR: EGN 3363C. Electrochemical principles and applications to detecting and monitoring corrosion processes. Various forms of corrosion, their causes and control. Application in electric vehicles and electrochemical machining.

Mechanical Metallurgy: PR: EML 3234. Study of the microscopic mechanical behavior of metals and alloys, with emphasis on fracture, fatigue, and creep.

Technologies of Instruction & Information Management: Theories and practices in utilizing instructional media and information technologies. Emphasis on new and emerging technologies and their effects on the school and media program.

Instructional Technology: A Survey of Applications: Applications of instructional technology in settings other than public schools. Survey of facilities, programs, and services in business, industry, religion, government, higher education, and medical settings.

Communication for Instructional Systems—Process: Principles of written and oral communications for instructional technologists; development of assertiveness and interpersonal skills; conducting training programs for employees; creating hard copy materials.

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.

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.

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.

Computer Applications in Instructional Technology. Techniques and skills for the use of computers for productivity and instruction by the instructional technologist.


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.


Structure and Properties of Alloys: PR: EGN 3365C. Relation of properties to microstructure and applications of major ferrous and non-ferrous alloys.

Kinematics of Mechanisms: PR: EGN 3321. Graphical, mathematical, and computer-aided kinematics, analysis, and synthesis of basic mechanisms.


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.

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.

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.

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.

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.

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.

Computer Aided Design: PR: EML 3101, 3500, and CGS 3422 or equivalent. Introduction to computational methods in mechanical and thermal systems design.


HVAC Systems Engineering: Heating, ventilation, air-conditioning, and refrigeration principles and systems design. Psychrometrics, heating and cooling loads, equipment and components, and distribution systems.


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.


Tribology: PR: EGN 3331, EGN 3353, EGN 3355C, or C.I. Principles of fluid film lubrication (liquid and gas, journal and thrust bearings), contact mechanics (rolling element bearings), design of bearings and load bearing surfaces, friction and wear of materials, tribotesting.
EML 5271

EML 5402
Turbo machinery: PR: EAS 4134 or EML 4703 or C.I. Application of the principles of fluid mechanics, thermodynamics, and aerodynamics to the design and analysis of pumps, compressors, and turbines.

EML 5453
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.

EML 5532
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.

EML 5533

EML 5546

EML 5564
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.

EML 5572

EML 5713
Intermediate Fluid Mechanics: PR: EML 4703. CR: EML 5533 or C.I. Fluid Kinematics; Conservation Equations; Navier-Stokes equations; Boundary Layer Flow, Inviscid Flow, Circulation and Vorticity; Induced Drag; Low Reynolds Number Flow; Turbulence.

EMR 4011
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.

EMR 4372
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 and critical thinking. Emphasizing the writing process writing topics are based on selected readings and on student experiences.

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. Extensive writing based on critical analysis of texts, library research, and/or field research. Further exploration of the writing process included, as well as potential for writing across the curriculum.

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

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 3283
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 tone, 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 3942
Journal—Writing Practicum: An interdisciplinary practicum in journal writing as a literary genre and a means of self-expansion.

ENC 4215

ENC 4216
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 4296

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.

ENG 5009
Methods of Bibliography and Research: Bibliographical, library and systematic approaches to research at the graduate level in language and literature.

ENG 5018
Literary Criticism: PR: Graduate standing or C.I. Historical survey of major critics from classical antiquity to the modern era.

ENG 5028
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.

ENL 3010
English Literature I: PR: ENC 1102. Beowulf to 1798.

ENL 3051
English Literature II: PR: ENC 1102. From 1798 to 1914.

ENL 3273
Survey of British Literature Since 1914. PR: ENC 1102

ENL 4101

ENL 4220
English Renaissance Poetry and Prose: The course will examine selected poetry and prose of Wyatt, Sidney, Spenser, Marlowe, Raleigh, Daniel, Shakespeare, Chapman, Lyly & others.

ENL 4241
ENL 4251
The Victorian Age: PR: ENC 1101, ENC 1102. Study of poets and essayists from 1837 to 1890, including Tennyson, the Brownings, Arnold Hopkins, Carlyle, Mill, Newman.
ENL 4311
Chaucer: PR: ENC 1102. The Canterbury Tales, Troilus and Criseyde, and other works.
ENL 4330
Shakespeare Studies: PR: ENC 1102. Reading, analysis, and discussion of Shakespeare's plays. May be repeated for credit.
ENL 4341
Milton and His Age: PR: ENC 1102. Paradise Lost, Paradise Regained, Samson Agonistes, shorter poems and selected prose.
ENL 4353
18th Century Studies: PR: ENC 1102. Reading, analysis, and discussion of literature in English: 1680-1800. May be repeated for credit.
ENL 4373
ENL 5176
Restoration and 18th Century English Drama. PR: Senior standing or C.I.
ENL 5226
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.
ENL 5236
The Age of Dryden and Pope: PR: Senior standing or C.I. Prose, poetry, drama, and literary traditions of British neoclassicism.
ENL 5335
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.
ENL 5347
ENL 5356
Eighteenth Century Studies: Reading, analysis, and discussion of literature in English: 1660-1880.
ENU 4103
Nuclear Engineering: PR: PHY 3101. Introduction to the principles of nuclear engineering, nuclear chain reactions, reactor systems and control, heat physics, radiation shielding, and applications of nuclear energy.
ENV 4121C
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.
ENV 4341
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.
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 4651
Urban Systems Engineering: PR: C.I. Theories and history of city development with administrative, planning, management, and maintenance of municipal services.
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 5071
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 5413
Outdoor Noise Control: PR: C.I. Community noise evaluations and control, legislative standards, instrumentation and measurement, abatement methods, and noise modeling.
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

ENY 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 queuing. 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 queuing theory, simulation, and nonlinear optimization techniques.

ESI 5451
Network Based Project Planning, Scheduling and Control: PR: ESI 4312 or ESI 5316. Probabilistic and deterministic approaches for planning, scheduling, and controlling complex, large scale projects. PERT, CPM, resource leveling, risk analysis.

ESI 5531
Discrete Systems Simulation: PR: STA 3032, CGS 3422. Methods for performing discrete systems simulation, including network modeling will be treated.
Electro-Mechanical Design: PR: EET 3035C and CET 3123C. An introduction to mechanical, electro-mechanical, and pneumatic devices and their various process control applications in industry. The design of fundamental control circuits is presented.


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.

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.

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.

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.

Product Design: Principles of layout and dimensions for production. Consideration of design factors, standards, specifications, and codes, with emphasis on productivity.

Computer Applications: PR: COP 1200 or equivalent. Application of high-level program packages to solve problems in industrial practices.


Technical Sales: Application of technical knowledge to sales and service. Relationship of technical sales organization to production, customers, and competitors.


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.


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.

Applied Facilities Planning and Design: PR: Engineering drawing and senior standing. The design of manufacturing facilities and material handling systems.

Occupational Safety: Accident prevention and the operation of an industrial safety program. Basic requirements of the Occupational Safety and Health Act standards.

ETM 4331
Applied Thermodynamics and Fluid Mechanics: PR: MAC 3253 or equivalent; Chemistry; College Physics. Introduction to energy work, and thermal systems and processes. Flow through pipes, orifices and nozzles.

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, psychometrics, 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 3235
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
English History: 1485-1815: PR: EUH 2000 and 2001 or C.I.

EUH 4502
British History: 1815-Present: PR: EUH 2000 and 2001 or C.I.

EUH 4571
History of Russia to 1801: PR: EUH 2000 and 2001 or C.I. Kievan State; Mongol Yoke; Development of Muscovite Expansion and Absolutism; Time of Troubles; Westernization of Russia under Peter I and Catherine; Role of Orthodox Church.

EUH 4574
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
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 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 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 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 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 5555 Colloquium in Czarian Russia: PR: Senior standing or graduate status. Selected topics on the literature of Russia under the Czars prior to 1917.

EUH 5608 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 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 3062 Professional Role of the Vocational Teacher: PR: EVT 3371 or C.I.

EVT 3312 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 General Methods/Testing Evaluation in Vocational Education: General teaching methods, testing and evaluation. Techniques specific to Vocational Education and Industry Training.

EVT 3367 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 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 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 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.


EVT 4189 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 learning 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 3204C  

EXP 3304  

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 in 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.

EXP 5506  

EXP 5608  

FIL 3100  

FIL 3200  
Beginning Film Production: Introduction to production utilizing video equipment. Basic technical and aesthetic aspects of production.

FIL 3242  
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  
Film Documentary: The uses and analysis of the non-fiction film.

FIL 3400  
History of Motion Pictures: The history of motion pictures as art and industry: from 1895 to the present.

FIL 3410  
History of Animated Films: Survey from early animators to the development of the "cartoon" industry. Television animation included.
FIL 3503
Film Theory: Reading and writing in film theory; major historical and social emergencies in the theoretical approach to film.
FIL 3522
German Film: PR: C.I. Exploration of the form and context of German film during different time periods in relation to other aspects of culture and to sociopolitical structures at the time.
FIL 4102
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
Advanced Screen Writing: PR: FIL 3100, or CRW 3410; FIL 4102, Grammar Proficiency Examination. Accelerated program of screenwriting.
FIL 4104
FIL 4202
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
Advanced Film Production: PR: FIL 3200. Advanced exploration of the aesthetic and technical facets of filmmaking.
FIL 4208
Film Directing: PR: FIL 4201. Principles and practice in directing narrative and documentary motion pictures.
FIL 4220
FIL 4230
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
Computer Animation: PR: FIL 3410, FIL 3242. Mechanics of the moment are analyzed as students prepare animation boards using computer technology.
FIL 4504
Motion Picture Genre/Aesthetics: PR: FIL 3503 Analysis and evaluation of films; major genres, directors, styles, or periods considered in depth.
FIL 4600
The Film Producer: PR: FIL 4208. The role of the producer is examined in the context of theatrical film.
FIL 4601
Production Management: PR: FIL 3200. Preproduction, budgeting, script breakdown, construction of production boards, scheduling, location scouting, and crew procurement.
FIL 4942
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
BA 3(3,0)
Management of Financial Institutions: PR: FIN 3303, FIN 3404, FIN 3504, FIN 3453. Analysis of management policies of financial institutions, including asset, liability, and capital management. The economic and regulatory influence on competition is considered.
FIN 3403
BA 3(3,0)
Business Finance: PR: ACG 2001, ACG 2071, STA 3023. 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
BA 3(3,0)
Intermediate Corporate Finance: PR: FIN 3403. In-depth study of the principles of corporate finance. Investment, financing, and capital decisions are examined.
FIN 3453
BA 3(3,0)
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  

FIN 4127  
Employee Benefits and Retirement Planning: PR: FIN 3303, FIN 3404, FIN 3504, FIN 3453. 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: PR: FIN 3303, FIN 3404, FIN 3504, FIN 3453. 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: PR: FIN 3303, FIN 3404, FIN 3504, FIN 3453. 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 4514. Study of options, futures, forward, and other speculative markets. Investments traded in these markets are examined analytically. Pricing and hedging models are considered.

FIN 4604  
International Financial Management: PR: FIN 3403, FIN 3303, FIN 3404, FIN 3504, FIN 3453, 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 3063  
Foreign Language as Human Behavior: PR: Or CR: LIN 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.

FRE 2201  
Intermediate French Language and Civilization II: PR: FRE 2200 or equivalent. Continuation of FRE 2200 with emphasis on French civilization.

FRE 2240  
Intensive French Conversation: PR: One year of French or equivalent. Practical use of the language, leading toward fluency and correctness in speaking.

FRE 2270  

FRE 3244  
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  
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
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
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
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
French Phonetics and Diction: PR: FRE 3244 or equivalent. French phonology, with emphasis on phonic groupings.

FRW 3100
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
Survey of French Literature II: PR: FRE 2201 or equivalent. Main literary currents and works of the 19th and 20th centuries.

FRW 3370
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
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

FRW 4310
Seventeenth Century French Theatre: PR: FRW 3100. Corneille, Racine, and Moliere. A study of the lives and principal works of the authors.

FRW 4324

FRW 4440

FRW 4532

FRW 4552

FRW 4820
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
Food Production Techniques: PR: HFT 1000. Basic principles of menu planning, food and beverage preparation and service. Laboratory work.

FSS 3120
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
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.

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.

Physical Geography of North America: Analysis of the North American landscape as affected by climate, vegetation, and geomorphology.

Management: PR: Junior standing. The interdisciplinary application of the managerial functions of planning, organizing, leading, and controlling. For Non-Business Majors ONLY.

Business in the International Environment: PR: ECO 2013, 2023, ACG 2071 or 3023, FIN 3403, MAR 3023, MAN 3025. Provides an overall understanding of the nature, magnitude, and importance of the international business sector.

Physical Geography: Basic physical elements of geography, including climate, landforms, soils, natural vegetation, minerals, and their integrated patterns of world distribution.


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.

Resources Geography (Honors): Analysis of human management of global resources and the resulting impact on the world's environment.

World Political Geography: Analysis of factors which affect power relations among nations, including area, location, political styles, ethnic divisions, and the politics of energy.

Remote Sensing of the Environment: PR: GEO 1200 or C.I. Interpretation and application of remote sensor imagery to physical, economic, and urban analysis.

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.

German Diction: This course is especially designed for music and voice students, with an emphasis on musical terms, German songs, and opera libretti.

Basic Review of German: A review of German grammar, vocabulary and civilization. For students with previous instruction in German. Graded S or U.

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.

Elementary German Language and Civilization II: PR: GER 1115, GER 1120 or experience with this language. Continuation of GER 1120.

Intermediate German Language and Civilization I: PR: GER 1121 or equivalent. Development of language skills and cultural knowledge at the intermediate level.

Intermediate German Language and Civilization II: PR: GER 2200 or equivalent. Continuation of GER 2200 with emphasis on German civilization.

Beginning German Conversation: PR: One year of German or equivalent. Practical use of the language, leading toward fluency and correctness in speaking.

Intermediate German Conversation: PR: GER 2201 or equivalent. Development of skills in conversation and comprehension through practice.

Intensive German Composition: PR: GER 2201 or equivalent. Development of skills in composition.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>GER 3440</td>
<td>Business German I: PR: GER 2200. Introduction into German business language and practices.</td>
</tr>
<tr>
<td>GER 3441</td>
<td>Business German II: PR: GER-3440. Continuation of Business German I.</td>
</tr>
<tr>
<td>GER 4510</td>
<td>Life and Culture in Nazi Germany: PR: C.I. Confrontation with the development of national socialist ideas and their realization in everyday life and culture. Given in German.</td>
</tr>
<tr>
<td>GER 4520</td>
<td>Modern German: An introduction to the history of postwar Germany—from the two Germanies to unification and today’s Germany. Given in German.</td>
</tr>
<tr>
<td>GEW 3100</td>
<td>Survey of German Literature I: PR: GER 2201 or equivalent. Main literary currents and works from the Middle Ages through the 19th Century Romanticism.</td>
</tr>
<tr>
<td>GEW 3101</td>
<td>Survey of German Literature II: PR: GER 2201 or equivalent. Main literary currents and works from 19th Century Realism to the present.</td>
</tr>
<tr>
<td>GEW 3370</td>
<td>Short Story: PR: GER 2201 or equivalent. German short prose works of the 19th and 20th centuries.</td>
</tr>
<tr>
<td>GEW 3480</td>
<td>German Post-War Literature: PR: GER 2201. This course examines the work of German, Austrian and Swiss writers after World War II.</td>
</tr>
<tr>
<td>HBR 1120</td>
<td>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.</td>
</tr>
<tr>
<td>HBR 1121</td>
<td>Elementary Modern Hebrew Language and Culture II: PR: HBR 1120 or equivalent. Continuation of HBR 1120.</td>
</tr>
<tr>
<td>HBR 2200</td>
<td>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.</td>
</tr>
<tr>
<td>HBT 3220</td>
<td>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.</td>
</tr>
<tr>
<td>HFT 2252</td>
<td>Introduction to the Hospitality and Tourism Industry: An orientation to the hotel, restaurant, and travel industry, and its history, structure, and operating procedures.</td>
</tr>
<tr>
<td>HFT 2750</td>
<td>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.</td>
</tr>
<tr>
<td>HFT 3313</td>
<td>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.</td>
</tr>
<tr>
<td>HFT 3444</td>
<td>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.</td>
</tr>
</tbody>
</table>
HFT 3700 HPA 3(3,0)
Travel and Tourism Administration: PR: HFT 1000. Foreign and domestic tourism supply and demand, economic impacts, organization of tourism, social and cultural aspects.

HFT 3751 HPA 3(3,0)
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 HPA 1(1,0)
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 AS 1-5(0,1-5)
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 HPA 3(3,0)
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 HPA 3(3,0)
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 HPA 3(3,0)
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 4420 HPA 3(3,0)

HFT 4735 HPA 3(3,0)

HFT 4737 HPA 3(3,0)
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 HPA 3(3,0)
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 HPA 3(3,0)
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 4722 HPA 3(3,0)

HFT 4752 HPA 3(3,0)
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 HPA 3(3,0)
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 HPA 3(3,0)
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 HPA 3(3,0)
Beverage Management: PR: HFT 1000, FSS 2202C, FSS 3223. The origin production, storing, marketing, and control of beverages in the hospitality industry.

HFT 4949 HPA 1-5(0,1-5)
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 AS 3(3,0)

HIS 4150 AS 3(3,0)
History and Historians: PR: C.I. A study of European and/or American historiography. May be repeated once for credit.
HIS 4970
Senior Thesis: Original research paper available to advanced history majors, topics to be selected in consultation with a directing professor.

HLP 4460
Teaching Elementary School Health and Physical Education: PR: Admission to Phase II or C.I. Organization, practice, and conduct of health (including drug abuse) and physical education programs in the elementary school. Includes field experience.

HMW 3200
Readings In Modern Hebrew Literature: PR: 2 years of Hebrew or equivalent.

HSA 3210
Long Term Care Administration: Current financing mechanisms and proposed solution, and the impact of government regulation or the operation of long-term care facilities.

HSA 3122
U.S. Health Care Systems: PR: Major or minor in College of Health or C.I. A survey of the economic, social, and political aspects of the health care system in the United States.

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
Health Data Processing: Analysis and design of computerized systems for health data and health administration.

HSA 4220
Long Term Patient Management: Concepts and process of patient care planning and management in a long term care facility; individual and team roles of medicine, paramedical and supportive personnel, patient and family consideration; long term care facility coordinating.

HSA 4502

HSA 4700
Health Sciences Research Methods: Introduction to research design in the Health Sciences, including design, literature review, testing, analysis and conclusions.

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 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 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 4910 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.

HSC 55595 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 221, from the Renaissance through the Modern World.

HUM 2230H Honors Western Humanities II: PR: HUM 2211 or C.I. Same as HUM 2230 with honors-level content.

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 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-Mycenaeans 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 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.
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.

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.

Human Nutrition: Essentials of nutrition related to the life cycle, including the physiological, psychosocial, and cultural aspects of nutrition and the interrelationship 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.

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.


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.

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.

International Relations-Theory and Practice: Analysis of the fundamental principles and factors affecting interstate relations and their application to contemporary global developments.

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.

American Foreign Policy: Development of American foreign policy, with emphasis on the role and policies of the United States in the contemporary world.

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.

Strategic Weapons and Arms Control: Control of strategic weapons and their impact. Technological and policy aspects, including nuclear proliferation.

Contemporary International Politics of Asia: Examinations of the foreign policies of major and secondary powers in Asia, with particular attention to China and Japan.

The Vietnam War: Background of events leading to America's involvement in Indochina, the course of the Vietnam War, and the lessons which that war imparts.

International Politics of Latin America: Study of contemporary U.S.-Latin American relations, inter-American politics and organization, and the role of Latin America in the world.

Coercion in International Politics: Examination of the role of coercive techniques among states in a nuclear age, ranging from nuclear strategy and deterrence to wars of national liberations and coups.

International Law I: Introduction to the nature, solution, and sources of international law and such subareas as recognition of states and governments, expropriation, nationality, and aliens.
INR 4402 AS 3(3,0)
International Law II: PR: INR 4401 or C.I. Examination of various subareas of international law, including maritime law, laws of the sea and seabed, air law, outer space, neutrality, and laws of war.

INR 4404 AS 3(3,0)
Space Law: Examination of the legal regime of outer space from both international and national perspectives, and the legal problems arising from human activity in space.

INR 4504 AS 3(3,0)
International Organizations: The study of the structure and workings of international organizations of cooperation, including the UN, its affiliates, and various regional organizations.

ISM 3011 BA 3(3,0)

ISM 4090 BA 3(3,0)
Seminar in Management Information Systems: 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.

ISM 4113 BA 3(3,0)
Information Systems Analysis and Design: PR: ISM 4212. Introduction to the fundamentals of management information systems development, needs analysis and systems requirements.

ISM 4130 BS 3(3,0)
Implementing Information Systems: PR: ISM 4113. Study of organizational information needs and systems for planning and control.

ISM 4212 BA 3(3,0)
Data Base Management Systems: 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.

ISM 5021 BA 3(3,0)
Introduction to Management Information Systems: 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.

ISS 4155 AS 3(3,0)
Science Fiction and the Social Sciences: A multi-media examination of note-worthy science fiction from the Social Science perspective.

ITA 1005 AS 1(1,0)
Italian Diction: This course is especially designed for music and voice students, with an emphasis on musical terms, Italian songs, and opera libretti.

ITA 1120 AS 4(4,1)
Elementary Italian Language and Civilization I: Designed to initiate the student to the major language skills: listening, speaking, reading, and writing, in addition to an introduction to Italian culture.

ITA 1121 AS 4(4,1)
Elementary Italian Language and Civilization II: PR: ITA 1120 or equivalent. Continuation of ITA 1120.

ITA 1170 AS 8(16,10)
Elementary Italian Study Abroad: Elementary Italian language and civilization taught in the native environment.

ITA 2200 AS 4(4,0)
Intermediate Italian Language and Civilization I: 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.

ITA 2201 AS 3(3,0)
Intermediate Italian Language and Civilization II: 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.

ITA 2210 AS 3(3,0)
Intensive Italian Conversation: PR: One year of Italian or equivalent. Practical use of the language, leading toward fluency and correctness in speaking.

ITA 2270 AS 8(16,10)
Intermediate Italian Study Abroad: PR: Elementary Italian. Intermediate Italian language and civilization taught in the native environment.

ITA 3240 AS 3(3,0)
Italian Conversation: PR: ITA 2201 or equivalent. Development of skills in conversation and comprehension with an introduction to Italian culture.

ITA 3420 AS 3(3,0)
Italian Composition: PR: ITA 2201 or equivalent. Development of skills in composition, with an introduction to Italian culture.

ITA 4500 AS 3(3,0)
Italian Civilization: PR: ITA 2201. A historical approach to Italian civilization, with particular emphasis on art history.
Survey of Italian Literature I: PR: ITA 2201. Main currents and writers in Italian literature from the 12th through the 15th centuries.

Survey of Italian Literature II: PR: ITA 2201. Main currents and writers in Italian literature from the 15th century to the present.

The Modern Italian Short Story: PR: ITA 2201. A study of the most representative modern Italian short stories.

History of American Journalism: Development of mass media, leading innovators, and the media’s role in the nation’s history.

News Reporting: PR: Grammar Proficiency Examination and departmental typing exam. Development of skills in newsgathering and writing for the mass media. Students must have minimum ability to type and pass the department language proficiency exam.

Advanced Reporting: PR: Grammar Proficiency Examination and departmental typing examination and JOU 3100. Advanced information-gathering and development of newswriting skills.

Editing I: PR: Grammar Proficiency Examination and JOU 3100. Editing copy, writing headlines, managing newsroom operations.


Feature Writing: PR: Grammar Proficiency Examination, Typing Examination, and a minimum grade of "C" in JOU 3100 or PR 3100. Writing feature articles for newspapers and magazines.

Editorial and Column Writing: PR: Grammar Proficiency Examination, departmental typing exam, and a minimum grade of "C" in JOU 3100. Building the editorial page, backgrounding and interpreting the news.

Critical Writing: PR: Grammar Proficiency Examination, departmental typing exam, and a minimum grade of "C" in Jou 3100. Writing reviews of movies, plays, television programs, concerts, books, and other cultural works.

Freelance Writing: PR: Grammar Proficiency Examination, departmental typing exam, and evidence of satisfactory writing skills. A study of the techniques and procedures of freelance writing, including the preparation of several manuscripts.


The Jewish People I: Introduction survey of the history and culture of the Jewish people from the beginnings of Judaism in the biblical era through the Graeco-Roman and rabbinic periods.

The Jewish People II: The life and history of the Jews in the medieval and modern worlds.

Introduction of Modernism into Judaism: The transition from traditional Judaism to modern Judaism in the 18th century, as epitomized by Moses Mendelssohn and writers of the Jewish Enlightenment (in translation).

Literature of the Holocaust: A study of the traumatic experience of the Holocaust in Europe as expressed and depicted in contemporary Jewish and Hebrew Literature.

The Jewish National Movement and Roots of Zionism: Roots of Zionism and Jewish nationalism and their relationship to modern anti-semitism, through analysis of European Jewish history and society.

Modern Hebrew Culture: The Development of the State of Israel: Political and ideological struggle for the establishment of the State of Israel, with emphasis on forces which shaped contemporary Israeli society and politics.

English Instructional Analysis: PR: EDG 4321. Course objectives for a school curriculum and methods and materials which have special application for teaching English.
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.

Language Arts in the Elementary School: PR: Phase I or C.I. Content, principles, materials, and techniques involved in teaching, speaking, listening, writing, and spelling in the elementary school; organizing for instruction.

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.

Methods of Elementary School Language Arts: Principles, procedures, organization and current practices in reading, writing, listening and talking.

English Composition and Literature for Teachers of Advanced Placement:

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.

Children's Literature in Elementary Education: Survey of children's literature: criteria for selection according to literary elements and child development needs. Methods for presenting to children; integrating literature with elementary curricula.


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.

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.

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.

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.

Honors Elementary Latin & Civilization I: Same as LAT 1120 with honors-level content.

Honors Elementary Latin & Civilization II: PR: LAT 1120 or equivalent. Continuation of LAT 1120.

Honors Elementary Latin & Civilization II: PR: LAT 1120H or equivalent. Same as LAT 1121 with honors-level content.


Psychology of Oral Communication: Psychological principles involved in the communicative process, with application to individuals and groups.


Phonetics: PR: ENC 1102. Study of the sounds of language from an articulatory perspective.

Modern English Grammar: PR: ENC 1102 and Sophomore standing. Emphasis upon the analysis and comparison of traditional, structural, and transformational grammar.

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 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 4710  
**Foundations of Language:** This course is designed to explore contributions to language from disciplines of Biology, Neurology, Psychology, and Sociology.  
LIN 4710L  
**Foundations of Language:** Students will have practical experience in analyzing children's language samples.  
LIN 4801  
**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 5805  
**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 inservice 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 4731  
**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  
**Computer Applications in Instructional Technology:** Emphasis on the applications of the computer for the media specialist and instructional technologist.  
LIT 2110  
**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  
**World Literature II:** PR: ENC 1102. Readings from Moliere, Voltaire, Goethe, Pushkin, Balzac, Tolstoy, Ibsen, Mann, Kafka, Camus, and others.  
LIT 2120H  
**World Literature II--Honors:** Same as LIT 2120, with honors-level content.  
LIT 3000  
**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  
**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 Caribbean 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 3383 AS 3(3,0)
Women in Literature: PR: ENC 1102. Fiction, poetry, drama and non-fiction by selected women writers,
such as Emily Dickinson, Jane Austen, George Eliot, Kate Chopin, Zora Neale Hurston, Toni Morrison,
Adrienne Rich, Gwendolyn Brooks.

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 postmodernist 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 4938 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 4374 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 5087 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 5386 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 5387 AS 3(3,0)
The Victorian Age: PR: Senior standing or C.I. Study of poets and essayists from 1837 to 1900,
including Tennyson, the Brownings, Arnold, Hopkins, Carlyle, Mill; emphasizing Dickens, George Eliot,
the Brontes, and Hardy.

MAA 4226 AS 4(4,0)
Advanced Calculus I: PR: MHF 2300 and MAC 3313 or C.I. Limits, sequences, and continuity;
differentiation and integration. Derivatives of integrals. Infinite series and convergence. The Balzano-
Weierstrass Theorem and the Heine-Borel Theorem. Extensions in Euclidian n-space.

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)
Complex Variables: PR: MAC 3313 or C.I. Analytic functions. Integration in the complex plane. Laurent
series and residue calculus. Inversion of Laplace transformations. Conformal mappings. Applications in
engineering and the physical sciences.

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

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

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

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

Applied Calculus II: PR: MAC 3253 or C.I. Continuation of MAC 3253.

MAC 3311

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

Calculus with Analytic Geometry I (Honors): Differential and integral calculus, emphasizing understanding basic concepts and their applications. Students will complete projects on their own. For honors students from all disciplines.

MAC 3312

Calculus with Analytic Geometry II: PR: MAC 3311 or C.I. Continuation of MAC 3311.

MAC 3312H

Calculus with Analytic Geometry II (Honors): Continuation of MAC 3311H.

MAC 3313

Calculus with Analytic Geometry III: PR: MAC 3312 or C.I. Continuation of MAC 3312.

MAC 3313H

Calculus with Analytic Geometry III (Honors): Continuation of MAC 3312H.

MAD 4203

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

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 2XXX

Elementary School Mathematics: PR: MAC 1104 or MGF 120. Mathematics appropriate for the elementary school including the six basic sets of numbers, concepts, learning sequences, algorithms, problem-solving techniques, error patterns, number systems, and geometry.

MAE 3330

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 4326

How Children Learn Mathematics: PR: MAE 2801; 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


MAE 5318

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

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.
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.

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.)

Management of Organizations: PR: Junior standing, ACG 2071 or 3023, ECO 2023, ECO 2013. Introduction to the theory and practice of managing formal organizations, including planning, organization theory, human behavior and control.

Personnel Management: PR: Junior standing, MAN 3025 or C.I. Systematic analysis of personnel functions in organizations.

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.


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.

Managerial Skills in Organizations: PR: MAN 4240. The transference of management theories into practice. This course requires active student involvement in the development and practice of skills necessary to be a successful manager.


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.

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.

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.

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.

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.

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.

International Management: PR: GEB 4351. The course examines issues involved in multinational management of business firms, with special emphasis on comparative management.

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.

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.

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.

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 4307

MAP 4308

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
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
Sales Management: PR: MAR 3023. An overview of the sales management process. Emphasis on sales program formulation and implementation.

MAR 3503
Consumer Behavior: PR: MAR 3023. Analysis of the buying process, the psychological, social, and economic influences affecting consumer choice.

MAR 3613
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
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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAR 4071</td>
<td>Contemporary Marketing Issues</td>
<td>PR: Senior standing, marketing major, C.I. Cultural, social, political, economic, and competitive developments and their effects upon marketing activities.</td>
</tr>
<tr>
<td>MAR 4156</td>
<td>International Marketing</td>
<td>PR: MAR 3023, GEB 4351, or C.I. Investigates strategy, policy and the variables in international marketing decisions.</td>
</tr>
<tr>
<td>MAR 4203</td>
<td>Marketing Channel Systems</td>
<td>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.</td>
</tr>
<tr>
<td>MAR 4231</td>
<td>Retailing Management</td>
<td>PR: MAR 3023. Analysis of the field of retailing. Emphasis on planning for profit through management, inventory control, etc.</td>
</tr>
<tr>
<td>MAR 4453</td>
<td>Industrial Marketing</td>
<td>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.</td>
</tr>
<tr>
<td>MAR 4803</td>
<td>Marketing Strategy</td>
<td>PR: Senior standing and marketing courses completed or C.I. Marketing problems are explored, with emphasis on strategy formulation and integrative marketing decision-making.</td>
</tr>
<tr>
<td>MAR 4831</td>
<td>Product Management</td>
<td>PR: MAR 3023. Components of product management, including analysis, strategy formulation and implementation are examined.</td>
</tr>
<tr>
<td>MAR 4841</td>
<td>Services Marketing</td>
<td>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.</td>
</tr>
<tr>
<td>MAR 4941</td>
<td>Internship</td>
<td>PR: Permission of Dept. Chair. Provides qualified undergraduate marketing majors with educational experience not gained in class setting.</td>
</tr>
<tr>
<td>MAR 5055</td>
<td>Marketing Concepts</td>
<td>PR: Acceptance into the graduate program. Study of functions, institutions, and basic marketing of goods in the U.S. economy.</td>
</tr>
<tr>
<td>MAR 5941</td>
<td>Small Business Consulting</td>
<td>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.</td>
</tr>
<tr>
<td>MAS 3105</td>
<td>Elementary Linear and Matrix Algebra</td>
<td>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.</td>
</tr>
<tr>
<td>MAS 3106</td>
<td>Linear Algebra</td>
<td>PR: MHF 2300 and MAS 3105 or C.I. Abstract vector spaces, linear transformations, isomorphisms, projections, innerproducts, the spectral theorem, Jordon Canonical Form. (Only offered spring semester).</td>
</tr>
<tr>
<td>MAS 3203</td>
<td>Introduction to Number Theory</td>
<td>PR: MHF 2300 or C.I. The course will include the following topics: inductive reasoning, factorization, the division algorithm and congruences.</td>
</tr>
<tr>
<td>MAS 4301</td>
<td>Algebraic Structures</td>
<td>PR: MHF 2300 or C.I. An introduction to groups, rings and fields.</td>
</tr>
<tr>
<td>MCB 3013C</td>
<td>General Microbiology</td>
<td>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.</td>
</tr>
<tr>
<td>MCB 3203</td>
<td>Pathogenic Microbiology</td>
<td>PR: MCB 3013C or C.I. Microorganisms producing disease in man and other animals; means of transmission; protection against disease.</td>
</tr>
<tr>
<td>MCB 3203L</td>
<td>Pathogenic Microbiology Lab</td>
<td>CR: MCB 3203. Laboratory investigation of pathogenic microorganisms, with emphasis on isolation and identification of pathogenic microorganisms.</td>
</tr>
</tbody>
</table>
MCB 4404 Microbial Metabolism: PR: MCB 3013C and BCH 4054. Interrelationship between cellular structure function 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.


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.

MF 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.


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/defensive 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.

MIS 4421 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.

MIS 4430 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.

MLS 3220 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.

MLS 3220L Clinical Microscopy Lab: Analysis of body fluids both chemically and microscopically with special emphasis on correlation to disease states.

MLS 3305 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.
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.

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.

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.

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.

Immunodiagnostics: PR: PCB 3233. Theory and application of clinical serologic and immunologic diagnostic testing, stressing the utilization of monoclonal technology.

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.

Concepts and Applications in Clinical Chemistry: Overview of clinical chemistry theory and principles for the practicing technologist to include instrumention, protein chemistry, enzymology, and organ system physiology.

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.

Advanced Clinical Chemistry I Lab: Practice in laboratory techniques involving spectrophotometry, ISE, and flame enzyme methodology.

Advanced Clinical Chemistry II Lab: Laboratory analysis of lipids, cholesterol, enzymes, bilirubins and overview electrophoretic techniques.

Advanced Clinical Chemistry II: Physiology and Biochemistry of proteins, enzymes, lipids, liver function, hormones, fetal monitoring, toxicology and therapeutic drug monitoring.

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.

Clinical Practice II: PR: Admission to the professional phase of the MLS program or C.I. Continuation of MLS 4830C.

Clinical Practice III: PR: Admission to the professional phase of the MLS program or C.I. Continuation of MLS 4831C.

Clinical Practice IV: PR: Admission to the professional phase of the MLS program or C.I. Continuation of MLS 4832C.

Clinical Practice V: PR: Admission to the professional phase of the MLS program or C.I. Continuation of MLS 4833C.

Clinical Immunology: PR: PCB 3233, MLS 4511 or C.I. Advanced theory and application of immunologic diagnostic testing, stressing the utilization of monoclonal technology.

Mass Communication Law: The legal rights and responsibilities of the mass media.

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.

Mass Media and Popular Culture: An impact of mass media upon American culture past to present.
MRE 3000 HPA 4(4,0)
Introduction to Medical Records: PR: Acceptance into upper-division limited access MRA program. Introduction to profession; POMR; release of information; record analysis.

MRE 3110 HPA 5(5,0)
Medical Record Organization and Management: PR: MRE 3000. Nomenclature/classification systems; health/vital statistics; computer abstracting; MRA’s role in hospital/medical staff organization; accrediting/approving agencies; policy/procedure manuals; job descriptions; indexing.

MRE 3800 HPA 2(0,4)
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.

MRE 3810 HPA 2(0,4)
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.

MRE 4202 HPA 5(3,4)
Coding Procedures: PR: MRE 3432, HSC 3531, or C.I. Principles and mechanics of coding systems for health information retrieval, DRGs.

MRE 4203 HPA 3(3,0)
Coding Procedures II: PR: MRE 4202 or C.I. Continuation of MRE 4202; HCPCS-CPT.

MRE 4304 HPA 2(2,0)
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.

MRE 4312 HPA 4(3,2)
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.

MRE 4400 HPA 4(3,3)
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.

MRE 4420 HPA 2(2,0)

MRE 4500 HPA 4(4,0)
Quality Assessment: PR: MRE 3110. Utilization review; principles and mechanics of medical audit and quality assurance; risk management.

MRE 4830 HPA 2(0,4)
Directed Practice III: PR: MRE 3110; MRE 4202; MRE 3810. Incomplete record control; coding; health/vital statistics; microfilm.

MRE 4832 HPA 2(0,4)
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.

MRE 4835 HPA 5(0,15)
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.

MTG 4212 AS 4(4,0)
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.

MTG 4302 AS 3(3,0)
Introduction to Topology: PR: MHF 2300 or C.I. Metric spaces, topological spaces, limit points, continuity, compactness, and connectedness.

MUC 1101 AS 1(1,1)
Composition I: Creative work in small forms. Open to qualified non-music majors with C.I. May be repeated for credit.

MUC 3104 AS 1(1,0)
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.

MUC 3311 AS 2(2,0)
Digital Synthesis: An introduction to the world of digital technology and its musical applications.

MUE 1440 AS 1(0,2)
String Techniques: Class instruction in beginning string playing techniques.

MUE 3210 ED 3(3,1)
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.
MUE 3450
Woodwind Techniques: Class instruction in beginning woodwind playing techniques. May be repeated for credit.

MUE 3460
Brass Techniques: Class instruction in beginning brass playing techniques. May be repeated for credit.

MUE 3470
Percussion Techniques: Class instruction in beginning percussion playing techniques.

MUE 4311
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.

MUE 4360
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.

MUE 4480
Marching Band Techniques: PR: C.I. Principles of organizing and training marching bands; Planning, charting football shows, rehearsal problems. Guided observations. May be repeated for credit.

MUE 5695
Trends in Arts Education: PR: Initial Certification or C.I. Investigation of current trends in arts education; development of strategies for utilizing understandings of arts education in the total curriculum of elementary students.

MUG 3101
Basic Conducting: Fundamental techniques and practice in conducting.

MUG 3202
Choral Conducting: PR: MUG 3101. Fundamental principles of choral conducting and rehearsal techniques. May be repeated for credit.

MUG 3302
Instrumental Conducting: PR: MUG 3101. Fundamental principles of instrumental conducting and rehearsal techniques. May be repeated for credit.

MUG 4103
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.

MUH 4211
History and Literature I: PR: MUT 2112. In-depth study of the development of Western musical styles from antiquity to present.

MUH 4212
History and Literature II: PR: MUT 3116. Continuation of MUH 4211.

MUH 4218
Review of Music History: PR: C.I. A review of music history from Ancient Greece to the present.

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
Plano Literature I: PR: Major in Music or C.I. Survey of stringed keyboard literature from the 16th century to the present, with emphasis on technical, formal and performance problems.

MUL 3401
Plano Literature II: PR: MUL 3400. Continuation of MUL 3400.

MUL 3600
Song Literature I: PR: Major in Music or C.I. Survey of the development of the art song from the Baroque to the present, with emphasis on technical, formal and performance problems.

MUL 3601
Song Literature II: PR: MUL 3600. Continuation of MUL 3600.

MUN 3113
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  Wind 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  Piano Ensemble: Open to Music Majors or C.I. 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.

MUS 2321  Sophomore Practicum in Recording Arts: Introduction to recording arts; recording engineering, and MIDI music.

MUS 3322  Junior Practicum in Recording Arts: PR: MUS 2320. Sound reinforcement and concert lighting, tapless studio and music video.

MUS 4323  Senior Practicum in Recording Arts: PR: MUS 3330. Music business, advanced recording and production, studio maintenance and troubleshooting.

MUS 4330  Recording Techniques for Classical Music: PR: MUS 2320 or C.I. Concert hall recording techniques for classical music.

MUS 4401  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.

MUS 4905  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.

MUT 1111  Music Theory IA: Open to all students. Writing, performance, analysis of and music of various stylistic periods.
MUT 1112  AS 2(2,1)

MUT 1241  AS 1(0,2)
Ear Training and Sight Singing IIA: Aural and visual/oral comprehension of elements of music—rhythm, melody, harmony, form. Intended to be taken with MUT 1111.

MUT 1242  AS 1(0,2)
Ear Training and Sight Singing II: PR: MUT 1241. Continuation of MUT 1241. Intended to be taken with MUT 1112.

MUT 2116  AS 2(2,1)
Music Theory IIIA: PR: MUT 1112. Continuation of MUT 1111-1112; writing, performance, and analysis of music of various stylistic periods.

MUT 2117  AS 2(2,1)

MUT 2246  AS 1(0,2)
Ear Training and Sight Singing IIIA: PR: MUT 1242. Continuation of MUT 1242. Intended to be taken with MUT 2116.

MUT 2247  AS 1(0,2)
Ear Training and Sight Singing IIIB: PR: MUT 2246. Continuation of MUT 2246. Intended to be taken with MUT 2117.

MUT 3248  AS 1(0,2)
Ear Training and Sight Singing IIIC: PR: MUT 2247. Continuation of MUT 2247. Intended to be taken with MUT 3561.

MUT 3353  AS 1(0,2)
Jazz Skills I: PR: C.I. Elements of jazz improvisation. Emphasis on listening, harmony, basic arranging and jazz forms.

MUT 3354  AS 1(0,2)
Jazz Skills II: PR: MUT 3353 or C.I. Continuation of Jazz Skills I.

MUT 3561  AS 2(2,1)
Music Theory III: PR: MUT 2117. Continuation of MUT 2116-2117; writing, performance, and analysis of music of various stylistic periods.

MUT 4031  AS 1(1,0)
Review of Music Theory: PR: C.I. A comprehensive review of harmonic and analytic skills. May be repeated for credit.

MUT 4344  AS 1(1,0)

MUT 5381  AS 3(3,0)

MVB 1211  AS 1(0,1)

MVB 1212  AS 1(0,1)

MVB 1213  AS 1(0,1)

MVB 1214  AS 1(0,1)

MVB 1215  AS 1(0,1)
Secondary Tuba: PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in tuba. Intended for non-music majors. May be repeated for credit.

MVB 1411  AS 2(1,1)
Trumpet I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVB 1412  AS 2(1,1)
French Horn I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVB 1413  AS 2(1,1)
Trombone I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVB 1414  AS 2(1,1)
Baritone I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVB 1415  AS 2(1,1)
Tuba I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVB 2421  AS 2(1,1)
Trumpet II: PR: MVB 1411 and competence determined by faculty jury. Continuation of MVB 1411. May be repeated for credit.
MVB 2422 AS 2(1,1) French Horn II: PR: MVB 1412 and competence determined by faculty jury. Continuation of MVB 1412. May be repeated for credit.

MVB 2423 AS 2(1,1) Trombone II: PR: MVB 1413 and competence determined by faculty jury. Continuation of MVB 1413. May be repeated for credit.

MVB 2424 AS 2(1,1) Baritone II: PR: MVB 1414 and competence determined by faculty jury. Continuation of MVB 1414. May be repeated for credit.

MVB 2425 AS 2(1,1) Tuba II: PR: MVB 1415 and competence determined by faculty jury. Continuation of MVB 1415. May be repeated for credit.

MVB 3431 AS 2(1,1) Trumpet III: PR: MVB 2421 and competence determined by faculty jury. Continuation of MVB 2421. May be repeated for credit.

MVB 3432 AS 2(1,1) French Horn III: PR: MVB 2422 and competence determined by faculty jury. Continuation of MVB 2422. May be repeated for credit.

MVB 3433 AS 2(1,1) Trombone III: PR: MVB 2423 and competence determined by faculty jury. Continuation of MVB 2423. May be repeated for credit.

MVB 3434 AS 2(1,1) Baritone III: PR: MVB 2424 and competence determined by faculty jury. Continuation of MVB 2424. May be repeated for credit.

MVB 3435 AS 2(1,1) Tuba III: PR: MVB 2425 and competence determined by faculty jury. Continuation of MVB 2425. May be repeated for credit.

MVB 3436 AS 2(1,1) Trumpet IV: PR: MVB 3431 and competence determined by faculty jury. Continuation of MVB 3431. May be repeated for credit.

MVB 4441 AS 2(1,1) French Horn IV: PR: MVB 3432 and competence determined by faculty jury. Continuation of MVB 3432. May be repeated for credit.

MVB 4442 AS 2(1,1) Trombone IV: PR: MVB 3433 and competence determined by faculty jury. Continuation of MVB 3433. May be repeated for credit.

MVB 4443 AS 2(1,1) Baritone IV: PR: MVB 3434 and competence determined by faculty jury. Continuation of MVB 3434. May be repeated for credit.

MVB 4444 AS 2(1,1) Tuba IV: PR: MVB 3435 and competence determined by faculty jury. Continuation of MVB 3435. May be repeated for credit.

MVK 1111 AS 1(0,2) Class Piano I: Class instruction for beginning piano students. Not open to music majors whose major performing medium is piano.

MVK 1121 AS 1(0,2) 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 AS 1(0,2) Class Piano III: PR: MVK 1121 or C.I. Continuation of MVK 1121.

MVK 1141 AS 1(0,2) Class Piano IV: PR: MVK 1131 or C.I. Continuation of MVK 1131.

MVK 1211 AS 1(0,1) Secondary Piano: PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in piano. Intended for non-music majors. May be repeated for credit.

MVK 1213 AS 1(1,1) Secondary Organ: PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in organ. Intended for non-music majors. May be repeated for credit.
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  
**Secondary Recorder:** PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in recorder. Intended for non-music majors. May be repeated for credit.

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 5250  
**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  
**Secondary Percussion:** PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in percussion. Intended for non-music majors. May be repeated for credit.

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: C.I.

MVS 1211  
**Secondary Violin:** PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in violin. Intended for non-music majors. May be repeated for credit.

MVS 1212  
**Secondary Viola:** PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in viola. Intended for non-music majors. May be repeated for credit.
MVS 1213
MVS 1214
MVS 1215
Secondary Harp: Instruction in beginning harp playing.
MVS 1216

MVS 1411
Violin I: PR: Major in music or consent of chair; audition. May be repeated for credit.
MVS 1412
Violin II: PR: MVS 1411 and competence determined by faculty jury. Continuation of MVS 1411. May be repeated for credit.
MVS 1414
Cello II: PR: MVS 1413 and competence determined by faculty jury. Continuation of MVS 1413. May be repeated for credit.
MVS 1415
Bass II: PR: MVS 1414 and competence determined by faculty jury. Continuation of MVS 1414. May be repeated for credit.
MVS 1416
Guitar II: 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 III: PR: MVS 2422 and competence determined by faculty jury. Continuation of MVS 2422. May be repeated for credit.
MVS 2422
Viola III: PR: MVS 2423 and competence determined by faculty jury. Continuation of MVS 2423. May be repeated for credit.
MVS 2423
Cello III: PR: MVS 2424 and competence determined by faculty jury. Continuation of MVS 2424. May be repeated for credit.
MVS 2424
Bass III: PR: MVS 2425 and competence determined by faculty jury. Continuation of MVS 2425. May be repeated for credit.
MVS 2425
Harp III: PR: MVS 2426 and competence determined by faculty jury. Continuation of MVS 2426. May be repeated for credit.
MVS 2426
Guitar III: PR: MVS 2427 and competence determined by faculty jury. Continuation of MVS 2427. May be repeated for credit.
MVS 2826
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 IV: PR: MVS 3432 and competence determined by faculty jury. Continuation of MVS 3432. May be repeated for credit.
MVS 3432
Bass IV: PR: MVS 3437 and competence determined by faculty jury. Continuation of MVS 3437. May be repeated for credit.
MVS 3433
Violin V: PR: MVS 3438 and competence determined by faculty jury. Continuation of MVS 3438. May be repeated for credit.
MVS 3434
Cello V: PR: MVS 3439 and competence determined by faculty jury. Continuation of MVS 3439. May be repeated for credit.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVS 4442</td>
<td>Viola IV</td>
<td>PR: MVS 3432 and competence determined by faculty jury. Continuation of MVS 3432. May be repeated for credit.</td>
</tr>
<tr>
<td>MVS 4443</td>
<td>Cello IV</td>
<td>PR: MVS 3433 and competence determined by faculty jury. Continuation of MVS 3433. May be repeated for credit.</td>
</tr>
<tr>
<td>MVS 4444</td>
<td>Bass IV</td>
<td>PR: MVS 3434 and competence determined by faculty jury. Continuation of MVS 3434. May be repeated for credit.</td>
</tr>
<tr>
<td>MVS 4445</td>
<td>Harp IV</td>
<td>PR: MVS 3435 and competence determined by faculty jury. Continuation of MVS 3435. May be repeated for credit.</td>
</tr>
<tr>
<td>MVS 4446</td>
<td>Guitar IV</td>
<td>PR: MVS 3436 and competence determined by faculty jury. Continuation of MVS 3436. May be repeated for credit.</td>
</tr>
<tr>
<td>MVS 5451</td>
<td>Violin V</td>
<td>PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in voice. Intended for non-music majors. May be repeated for credit.</td>
</tr>
<tr>
<td>MVS 5452</td>
<td>Viola V</td>
<td>PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in voice. Intended for non-music majors. May be repeated for credit.</td>
</tr>
<tr>
<td>MVS 5453</td>
<td>Cello V</td>
<td>PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in voice. Intended for non-music majors. May be repeated for credit.</td>
</tr>
<tr>
<td>MVS 5454</td>
<td>Bass V</td>
<td>PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in voice. Intended for non-music majors. May be repeated for credit.</td>
</tr>
<tr>
<td>MVS 5455</td>
<td>Harp V</td>
<td>PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in voice. Intended for non-music majors. May be repeated for credit.</td>
</tr>
<tr>
<td>MVS 5456</td>
<td>Guitar V</td>
<td>PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in voice. Intended for non-music majors. May be repeated for credit.</td>
</tr>
<tr>
<td>MVS 5451</td>
<td>Violin V</td>
<td>PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in voice. Intended for non-music majors. May be repeated for credit.</td>
</tr>
<tr>
<td>MVS 5452</td>
<td>Viola V</td>
<td>PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in voice. Intended for non-music majors. May be repeated for credit.</td>
</tr>
<tr>
<td>MVS 5453</td>
<td>Cello V</td>
<td>PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in voice. Intended for non-music majors. May be repeated for credit.</td>
</tr>
<tr>
<td>MVV 1111</td>
<td>Class Voice</td>
<td>PR: Major in music or consent of chair; audition. May be repeated for credit.</td>
</tr>
<tr>
<td>MVV 1411</td>
<td>Voice I</td>
<td>PR: Major in music or consent of chair; audition. May be repeated for credit.</td>
</tr>
<tr>
<td>MVV 2421</td>
<td>Voice II</td>
<td>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.</td>
</tr>
<tr>
<td>MVV 3431</td>
<td>Voice III</td>
<td>PR: MVV 2421 and competence determined by faculty jury. Continuation of MVV 2421. May be repeated for credit.</td>
</tr>
<tr>
<td>MVV 4441</td>
<td>Voice IV</td>
<td>PR: MVV 3431 and competence determined by faculty jury. Continuation of MVV 3431. May be repeated for credit.</td>
</tr>
<tr>
<td>MVV 4640</td>
<td>Voice Pedagogy I</td>
<td>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.</td>
</tr>
<tr>
<td>MVV 4641</td>
<td>Voice Pedagogy II</td>
<td>PR: C.I. Continuation of MVV 4640. Intermediate to advanced levels. May be repeated for credit.</td>
</tr>
<tr>
<td>MVV 5451</td>
<td>Voice V</td>
<td>PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in voice. Intended for non-music majors. May be repeated for credit.</td>
</tr>
<tr>
<td>MVW 1211</td>
<td>Secondary Flute</td>
<td>PR: Consent of Music Chair. CR: Performing ensemble. 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 of Music Chair. CR: Performing ensemble. Advanced instruction in oboe. Intended for non-music majors. May be repeated for credit.</td>
</tr>
<tr>
<td>MVW 1214</td>
<td>Secondary Bassoon</td>
<td>PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in bassoon. Intended for non-music majors. May be repeated for credit.</td>
</tr>
</tbody>
</table>
MVW 1411
Flute I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVW 1412
Oboe I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVW 1413
Clarinet I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVW 1414
Bassoon I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVW 1415
Saxophone I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVW 2421
Flute II: PR: MVW 1411 and competence determined by faculty jury. Continuation of MVW 1411. May be repeated for credit.

MVW 2422
Oboe II: PR: MVW 1412 and competence determined by faculty jury. Continuation of MVW 1412. May be repeated for credit.

MVW 2423
Clarinet II: PR: MVW 1413 and competence determined by faculty jury. Continuation of MVW 1413. May be repeated for credit.

MVW 2424
Bassoon II: PR: MVW 1414 and competence determined by faculty jury. Continuation of MVW 1414. May be repeated for credit.

MVW 2425
Saxophone II: PR: MVW 1415 and competence determined by faculty jury. Continuation of MVW 1415. May be repeated for credit.

MVW 3431
Flute III: PR: MVW 2421 and competence determined by faculty jury. Continuation of MVW 2421. May be repeated for credit.

MVW 3432
Oboe III: PR: MVW 2422 and competence determined by faculty jury. Continuation of MVW 2422. May be repeated for credit.

MVW 3433
Clarinet III: PR: MVW 2423 and competence determined by faculty jury. Continuation of MVW 2423. May be repeated for credit.

MVW 3434
Bassoon III: PR: MVW 2424 and competence determined by faculty jury. Continuation of MVW 2424. May be repeated for credit.

MVW 3435
Saxophone III: PR: MVW 2425 and competence determined by faculty jury. Continuation of MVW 2425. May be repeated for credit.

MVW 4441
Flute IV: PR: MVW 3431 and competence determined by faculty jury. Continuation of MVW 3431. May be repeated for credit.

MVW 4442
Oboe IV: PR: MVW 3432 and competence determined by faculty jury. Continuation of MVW 3432. May be repeated for credit.

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.  
HPA 3(3,0)

NUR 3168  
Critical Inquiry: PR: NUR 3066, 3119, 3748C or Florida RN license. A study of approaches to problemmatic situations in nursing. Selected experiences in investigating, analyzing, and interpreting nursing research.  
HPA 3(3,0)

NUR 3748C  
Concepts Basic to Nursing Practice: PR: Admission to the nursing program and completion of prerequisites. Beginning principles and concepts of nursing theory and practice utilizing the nursing process in selected clinical settings.  
HPA 6(3,3)

NUR 3748C  
HPA 6(3,3)

NUR 3795C  
Scientific Theories of Nursing III: PR: NUR 3749C, 3795C, 3166. CR: NUR 3796. Theories and practice applicable to the nurse's role in care of the family from conception through delivery. Focus is on family system.  
HPA 6(4,2)

NUR 3795C  
HPA 5(3,2)

NUR 3796C  
HPA 5(3,2)

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.  
HPA 6(6,0)

NUR 3905  
Independent Study: Directed Study.  
HPA 1-3(1-3,0)

NUR 4196  
Crisis Intervention: Crisis theory and techniques; recognition and intervention in crisis events. Applicable to all areas of nursing and all helping professions.  
HPA 3(3,0)

NUR 4297  
Introduction to Cardiovascular Nursing: Nursing management of cardiac disorders as they affect adaptation of individuals and family.  
HPA 3(3,0)

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.  
HPA 6(3,3)

NUR 4757C  
HPA 6(3,9)

NUR 4758C  
Scientific Theories of Nursing VII: PR: NUR 3755C, 3795C or C.I. Theories and principles of comprehensive nursing care of individuals and families in critical care settings.  
HPA 6(3,3)

NUR 4995C  
Professional Development and Issues: PR: NUR 4756C & NUR 4758C or C.I. CR: NUR 4757C. Diagnoses of professional development and issues relating to the baccalaureate graduate entering professional nursing practice.  
HPA 3(3,0)

NUR 4996  
Introduction to Critical Care Nursing: PR: NUR 3749C and NUR 3795C or C.I. Theories and principles of comprehensive nursing care of individuals and families in critical care settings.  
HPA 3(3,0)

NUR 4996  
Nursing Independent Study: PR: NUR 4756C. An opportunity for in-depth study in an area of special interest to the student.  
HPA 1-10

NUR 4996  
Independent Study: Directed Study.  
HPA 1-3(1-3,0)

NUR 4941  
Selected Nursing Practicum: PR: NUR 4756C and 4758C. An opportunity for an in-depth clinical study in an area of special interest to the student.  
HPA 3(0,9)

OST 4335  
Business Correspondence: Originating written business correspondence to include letters, memoranda, and business forms. (Typewriting skill recommended.)  
ED 3(3,0)

PAD 3003  
Public Administration: An examination of the basic environment, culture, and organization of public administration in the United States.  
HPA 3(3,0)
The Administration of Public Policy: Problems of values, interests, and objectives and their impact on the administration of public programs, stressing the interplay between social values, policies and administration.

Administrative Theory: A review of the behavioral aspects of the administrative process, its impact on organizational goal achievement and on supervisory strategies. Some social and structural pathologies affecting administrative practice.

Intergovernmental Administration: Various approaches to studying and explaining the American Intergovernmental system. Emphasis on interorganizational activities, i.e., negotiation, cooperation, and coordination within the legal setting.

Public Sector Project Management: Various approaches to managing projects, including using scheduling techniques such as GANTT, CPM, and PERT, as well as team building, facilitating, and leadership skills.

Fiscal Management: PR: C.I. Analysis of methods of securing public funds, the process of budget making, and techniques of management used in managing public funds.

Public Personnel Administration: The history, operating components, structural characteristics, and increasing impact of laws and related sanctions on personnel practices of public agencies.

Survey Research in Public Administration: Introduction to the concepts, design, methodology, computer applications, and data analysis in applied research in the public sector.

Public Administration Internship: PR: C.I. Internship in municipal, county, state, or federal government, including assignments in such fields as personnel, planning, budget, and fiscal, procurement, and public safety.

Ethics and Values in Public Administration: Examination of ethics in the public sector. Public concerns, past patterns, and individual/social aspects of ethical behavior are explored.

Introduction to Urban Planning: Issues of urbanization, regional development, land use and comprehensive planning, environmental planning, and social planning.

Urban Design: Planning techniques such as planned unit developments, capital improvements planning, and growth management, and planning methods, including needs assessment and graphic design.

Land Use and Planning Law: Review of national and local aspects of the legal underpinnings of urban planning aspects such as zoning, growth management, and environmental regulation.

Labor Relations in the Public Sector: Current trends and developments in employment relations in the public sector, especially employee organization, negotiations, and the collective bargaining process.

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.

Principles of Ecology Laboratory: CR: PCB 3043. Field and laboratory investigations of natural ecosystems, with emphasis on current methodology in ecology.

Genetics: PR: BSC 2010C. Basic principles of heredity as applied to prokaryotes and eukaryotes.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCB 3063L</td>
<td>Genetics Laboratory: CR: PCB 3063. Introduction to laboratory techniques of genetics.</td>
<td>AS 1(0,3)</td>
</tr>
<tr>
<td>PCB 3233</td>
<td>Immunology: PR: BSC 2010C. Basic principles of immune reactions, antigen antibody interactions, cell mediated immunity, tumor immunology, and immuno therapy.</td>
<td>HPA 3(3,0)</td>
</tr>
<tr>
<td>PCB 3233L</td>
<td>Immunology Laboratory: CR: PCB 3233. Introduction to laboratory techniques in immunology.</td>
<td>HPA 1(0,3)</td>
</tr>
<tr>
<td>PCB 3301C</td>
<td>Aquatic Biology: PR: C.I. An introduction to the plant and animal components of freshwater environments.</td>
<td>AS 4(3,3)</td>
</tr>
<tr>
<td>PCB 3523</td>
<td>Molecular Biology I: PR: CHM 4053. The general principles governing the structure and function of both procaryotic and eucaryotic genes.</td>
<td>HPA 3(3,0)</td>
</tr>
<tr>
<td>PCB 3703C</td>
<td>Human Physiology: PR: BSC 2010C or equivalent. The physiology and interrelationships of organ systems of the human body.</td>
<td>HPA 4(3,3)</td>
</tr>
<tr>
<td>PCB 4012C</td>
<td>Limnology I: PR: PCB 3043 or C.I. Introduction to limnology and methods for freshwater ecology, with respect to physical, chemical and biological parameters.</td>
<td>AS 4(2,6)</td>
</tr>
<tr>
<td>PCB 4030C</td>
<td>Limnology II: PR: PCB 4302C or C.I. Primary and secondary productivity and interaction among factors such as nutrients, pollutants, temperature radiation, turbidity, and seasons.</td>
<td>AS 4(2,6)</td>
</tr>
<tr>
<td>PCB 4524</td>
<td>Molecular Biology II: PR: PCB 3523. The processes regulating gene function in procaryotes and eucaryotes; specialized genetic aspects underlying multicellular existence, DNA evolution.</td>
<td>HPA 3(3,0)</td>
</tr>
<tr>
<td>PCB 4863</td>
<td>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.</td>
<td>AS 4(4,0)</td>
</tr>
<tr>
<td>PCB 4723</td>
<td>Animal Physiology: PR: PCB 3023 or C.I. Functions of body processes occurring in animals, with emphasis on vertebrate physiology.</td>
<td>AS 4(4,0)</td>
</tr>
<tr>
<td>PCB 5044C</td>
<td>Ecosystems of Florida: PR: PCB 3043, PCB 3043L or equivalent. Ecosystems of Florida will be discussed to include geography, geology, climate, energetics, nutrient cycling, community structure and conservation.</td>
<td>AS 5(3,2)</td>
</tr>
<tr>
<td>PCB 5045C</td>
<td>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.</td>
<td>AS 4(3,2)</td>
</tr>
<tr>
<td>PCB 5046C</td>
<td>Advanced Ecology: PR: Ecology, statistics and 2 years of biological science. Population and community ecology with emphasis on growth, regulation, species interactions, succession, and community classification.</td>
<td>AS 5(3,4)</td>
</tr>
<tr>
<td>PCB 5235</td>
<td>Immunopathology: PR: PCB 3233. In-depth overview of diseases due to deficiencies or over-reactivity of the immune system.</td>
<td>HPA 3(3,0)</td>
</tr>
<tr>
<td>PCB 5675C</td>
<td>Evolutionary Biology: PR: PCB 3043 and PCB 3063 or C.I. Review of concepts in evolutionary biology. Emphasis on evolution at and below the species level; consideration of genetic and ecological factors in divergence and speciation.</td>
<td>AS 4(3,2)</td>
</tr>
<tr>
<td>PCB 5721</td>
<td>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.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>PCB 5806</td>
<td>Endocrinology: PR: PCB 4723 and BCH 4053 or C.I. Mechanisms of action of hormones; interrelationship between the nervous and endocrine systems.</td>
<td>HPA 3(3,0)</td>
</tr>
<tr>
<td>PCO 4203</td>
<td>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.</td>
<td>AS 4(3,2)</td>
</tr>
<tr>
<td>PEL 2021</td>
<td>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.</td>
<td>ED 2(2,1)</td>
</tr>
<tr>
<td>PEL 2121</td>
<td>Beginning Golf: Performance and application of basic skills, rules, and etiquette. Physiological and social values accruing from this lifetime sport.</td>
<td>ED 2(2,1)</td>
</tr>
<tr>
<td>PEL 2122</td>
<td>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.</td>
<td>ED 2(2,1)</td>
</tr>
<tr>
<td>PEL 2320</td>
<td>Basic Volleyball and Softball: The analysis of offensive and defensive alignment, techniques, and strategies.</td>
<td>ED 2(2,1)</td>
</tr>
</tbody>
</table>
Beginning Tennis: Performance and application of basic skills, rules, and etiquette. Physiological and social values accruing from this lifetime sport.

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.

Basic Football and Basketball: The analysis of offensive and defensive alignment, techniques, and strategies.

Body Development: An in-depth study of individual physical (musculo-skeletal, neuromuscular, cardio-respiratory) fitness. Emphasis on individual diagnosis, principles, procedures, and conduct of related exercise programs.

Personal Fitness: Study of personal fitness concepts, with opportunities to develop individual optimal level of fitness and an improved lifestyle through high-level wellness.

Strength Resistance Training: Study of fitness and strength development through resistance exercise.

Aerobic Dancing: Appropriate rhythmical muscle toning movements that develop aerobic fitness; concepts taught include warm-up, flexibility, stretching, cool down, and heart rate.

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.

Elementary Swimming: For non-swimmers and beginning swimmers. Development and study of technique in the basic skills of water safety and swimming.

Advanced Sports Analysis: Advanced analysis of sports for the purpose of teaching and coaching.

Family Sports: PR: Admission to Junior Middle School (K-8); or C.I. Curricular and instructional considerations for teaching elementary and middle school physical education.

Physical Education Professional Development: (Unsatisfactory/Satisfactory grading). The development in the profession of physical education, and action participation in current activities.

Sports Psychology: A review of principles of psychology related to the enhancement of satisfaction and performance in sports.

Games for the Elementary School Physical Education Program: The understanding, designing, and teaching of low-organizational game-activities for the elementary school child.

Gymnastics: This course is designed to develop skill proficiency and instructional strategies in gymnastics.

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.

Physical Education Professional Development: (Unsatisfactory/Satisfactory grading). The development in the profession of physical education, and action participation in current activities.

Sports Psychology: A review of principles of psychology related to the enhancement of satisfaction and performance in sports.

Games for the Elementary School Physical Education Program: The understanding, designing and teaching of the low-organizational game-activities for the elementary school child.


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 4604  
Sports Medicine Field Application: Demonstration and Application of the treatment for various sports injuries.  

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: 18 credits of the art core requirement. Beginning photography, technical and aesthetic basis. Designed for upper division art majors with studio skills. Recommended for art majors.  

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  

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PGY 3680  AS 3(3,0)
Photography Editing: Assignment selection, picture and copy editing, cropping, picture desk management, and ethics of photojournalism, and the new technological advances.

PGY 4440C  AS 3(2,3)

PGY 4450C  AS 3(2,3)
Special Problems in Photography: PR: ART 2201C, 2202C, and PGY 3401C. Designed for upper division art majors with photography concentration. A series of directed photographic problems of a research nature.

Special Problems in Film Design: A series of exercises in craft, techniques, and design for film production, including animation.

PHH 3100  AS 3(3,0)
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  AS 3(3,0)
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  AS 3(3,0)

PHH 3131  AS 3(3,0)
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  AS 3(3,0)
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  AS 3(3,0)
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  AS 3(3,0)
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  AS 3(3,0)
Honors Introduction to Philosophy: Same as PHI 2010 with honors-level content.

PHI 3011  AS 3(3,0)
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  AS 3(3,0)
Formal Logic I: A study of sentence and predicate logics, with introduction to modal, epistemic, deontic, multi-valued, and indeterminate logics.

PHI 3131  AS 3(3,0)
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  AS 3(3,0)
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 3400  AS 3(3,0)
Philosophy of Law: Study of the nature of, and justifications for, law and punishment. Examination of the concepts of legal personhood, rights and responsibilities.

PHI 3600  AS 3(3,0)
Ethics: An examination of the nature of moral problems, judgements 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.

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PHI 3700  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  Aesthetics: An investigation into the nature of human artistic experience, with special reference to questions of form, perception, and style.

PHI 3803  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 4220  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  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  Philosophy of Science: An examination of the conceptual foundations and methodology of modern science.

PHI 4420  Philosophy of Social Science: An examination of the objectives, methods and guiding norms of the social sciences and their role in the development of human knowledge.

PHI 4500  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  Freedom and Justice: Philosophical analysis and evaluation of selected issues arising from the interaction of the individual, society, and the state; includes topics such as freedom, equality, and justice.

PHM 3350  Introduction to Marxism: A study of the basic principles of Marxism, formulated and developed by Marx and Engels.

PHM 4123  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.

PHP 3786  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.

PHT 3002C  Foundations of Physical Therapy I: The role of the therapist in the health care team. Professionalism, professional communication and care-giving skills and attitudes are emphasized.

PHT 3003C  Foundations of Physical Therapy II: A continuation of Foundations I. Focus will be on establishing effective helping relationships and interpersonal competence.

PHT 3110C  Clinical Gross Anatomy: An in-depth study of human morphology emphasizing musculoskeletal, neuromuscular, cardiovascular and respiratory systems. Regional cadaver dissection. Surface anatomy and developmental considerations will be integrated.

PHT 3120C  Clinical Kinesiology: A multidisciplinary consideration of normal and abnormal human movement, including recognition, measurement, evaluation and characterization from musculoskeletal, neurological and pathological perspectives.

PHT 3142C  Clinical Neuroscience: An integrated study of normal and disturbed neuromorphology and behavioral sequelae. Focus on motor and sensory functioning and related assessment skills.

PHT 3155C  Physiology of Therapeutic Exercise: PR: PCB 3703C. Principles of exercise physiology in conditioning and deconditioning integrated into assessment and treatment plans for healthy patients and those with cardiopulmonary musculoskeletal neurological or selected metabolic disease.

PHT 3170  Functional Histology: A rigorous treatment of the histology of primary tissues followed by musculoskeletal, neuromuscular, cardiovascular and respiratory systems. Structural interrelationships relative to function will be emphasized.

PHT 3200C  Introduction to Caring For Patients: Basic skills of patient care; evaluation, intervention strategies, gait training, massage, and medical terminology. Includes on week of supervised orientation in a clinical facility. CPR certification required.
**Clinical Teaching and Learning in**

therapy services within a **planning**

**PHT** Management of **PHT**

legislative **patient's**

Gerontology and acute cardiopulmonary **g) . Examination of the**

provide the **optimum regimen in treating**

**PHT** clinical applications .

**Neurological Problems**

**PHT 4311 C HPA 2(1 ,2)**

pathology

Orthopedic

**PHT 4233C HPA 2(1 ,3)**

Medical**

PHT 4232C HPA 2(1 ,3)

**PHT 4004C**

**PHT**

practice .

manifestations of various **PHT**

disabilities .

**Theory and Procedures of**

hydrotherapy in the **PHT 3216C**

**PHT 3217C**

**PHT 3821 HPA 1**

Therapeutic Exercise

**PHT**

of courses **PHT**

**PHT 3222C**

**PHT 3223C**

**PHT 3233C**

**PHT 3217C**

**PHT 3216C**

**PHT 3215C**

**PHT 3214C**

**PHT 3213C**

**PHT 3212C**

**PHT 3211C**

**PHT 3210C**

**PHT 3209C**

**PHT 3208C**

**PHT 3207C**

**PHT 3206C**

**PHT 3205C**

**PHT 3204C**

**PHT 3203C**

**PHT 3202C**

**PHT 3201C**

**PHT 3190C**

**PHT 3180C**

**PHT 3170C**

**PHT 3160C**

**PHT 3150C**

**PHT 3140C**

**PHT 3130C**

**PHT 3120C**

**PHT 3110C**

**PHT 3100C**

**PHT 2000C**

**PHT 1000C**

**Research**

**PHT**

Exploration of the **CLINICAL PROBLEMS**

of the **PHT 3000C**

Clinical Education I: Three weeks of supervised education in clinical facilities. Application of objectives of courses previously completed.

PHT 4001

Professional issues: Current issues on professionalism in physical therapy practice. Student presentations.

PHT 4004C

Foundations in Physical Therapy III: Philosophical and theoretical bases of health and illness, health promotion and prevention, the role of physical therapy and the health care delivery system.

PHT 4232C

Therapeutic Exercise III: Development of care plans for patients with brain/brain stem pathology: Introduction to the theoretical applications for Bobath, Brunnstrom, Rood and Voss.

PHT 4233C

Therapeutic Exercise IV: Application of prosthetic and orthotic components, alignment, fabrication and fitting, with emphasis on the lower extremity. Includes gait analysis and exercise programs.

PHT 4300

Medical Science and Pharmacology II: The impact on movement and posture of various orthopedic and neurological disorders; drugs used in their management. Relates neuropathology and orthopedic pathology to the study of movement.

PHT 4310C

Orthopedic Problems in Physical Therapy: Critical study of physical therapy examination, assessment and treatments for pain and stress management related to musculoskeletal system.

PHT 4311C

Neurological Problems in Physical Therapy: Analysis of selected neuromotor theories and their clinical applications. Advanced evaluation and treatment procedures. The use of research to determine optimum regimen in treating neurological patients.

PHT 4320

Pedodontogy: PR: PSY 2013, PTH 3XXXC (Clinical Neuroscience) and PTH 3XXXC (Clinical Kinesiology). Examination of the psychosocial, gross morphological and neurodevelopmental sequences that provide the baseline for pediatric clinical assessment of individuals from birth to twenty one years of age.

PHT 4370C


PHT 4372


PHT 4410C

Teaching and Learning in Physical Therapy: Educating the patient and caregiver concerning the patient’s disability, and treatment regimen and goals. The role of the patient and caregiver in the planning and implementation.

PHT 4510

Management of Physical Therapy Services: Planning, organizing, delivering and evaluating physical therapy services within a health care system, including quality assurance, third party payers, DRG’s and legislative impact.

PHT 4610

PHT 4620
Clinical Research Problems II: Continuation of Clinical Problems I.

PHT 4822
Clinical Education II: Six weeks of supervised clinical education in a general hospital setting. All previous education objectives apply and are accumulative.

PHT 4823
Clinical Education III: Clinical practicum in a long-term care setting. Emphasis on gerontology. Supervised by a licensed physical therapist, the student will integrate and apply all previous coursework.

PHT 4831
Clinical Internship I: Full-time residence at selected facilities where, under supervision of a licensed therapist, the student may practice and integrate the skills and knowledge from his previous courses.

PHT 4832
Clinical Internship II: Continuation of Clinical Internship I.

PHY 3014C
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
Physics for Engineers and Scientists I: PR: MAC 3311, or equivalent. Mechanics, special relativity, fluids.

PHY 3048H
Honors Physics for Engineers & Scientists I: PR: MAC 3311 or equivalent. Same as PHY 3048 with honors-level content.

PHY 3048L
Physiology Laboratory for Engineers and Scientists I: CR: PHY 3048. Laboratory experiments covering selected topics in physics related to PHY 3048.

PHY 3048H
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
Physics for Engineers and Scientists II: PR: PHY 3048 or PHY 3048H. Electricity and magnetism.

PHY 3049H
Honors Physics for Engineers and Scientists II: PR: PHY 3048H or PHY 3049. Same as PHY 3049 with honors-level content.

PHY 3049L
Physics Laboratory for Engineers and Scientists II: CR: PHY 3049. Laboratory experiments covering selected topics in physics related to PHY 3049.

PHY 3049H
Honors Physics for Engineers and Scientists II: PR: PHY 3048H, MAC 3312. Same as PHY 3049 with honors-level content.

PHY 3053C
College Physics I: PR: MAC 1104 and MAC 1114 or equivalent or C.I. Mechanics, waves, thermodynamics.

PHY 3054C
College Physics II: PR: PHY 3053C. Fluids, electricity and magnetism, optics, x-rays, radioactivity.

PHY 3101
Physics for Engineers & Scientists III: PR: PHY 3049 or PHY 3049H. Thermodynamics, oscillations, modern physics.

PHY 3110H
Honors Physics for Engineers & Scientists III: PR: PHY 3049 or PHY 3049H. Same as PHY 3101 with honors-level content.

PHY 3221
Mechanics I: PR: PHY 3048 or PHY 3048H. Particle dynamics, rigid bodies, Lagrangian formulation of mechanics; Hamilton’s equations.

PHY 3323

PHY 3454
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
Thermal & Statistical Physics: PR: PHY 3101 or PHY 3101H or C.I. Thermodynamics, kinetic theory, elements of statistical mechanics.

PHY 3722C

PHY 3752C
PHYSICS LABORATORY: PR: PHYS 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.

PHYS 4222
Mechanics II: PR: PHYS 3221. Hamiltonian dynamics, continuum mechanics, special relativity, special topics.

PHYS 4324
Electricity & Magnetism II: PR: PHYS 3323. Dielectrics, magnetic materials, electromagnetic waves, reflection, complex impedance, static solutions to Laplace's Equation, radiation from an accelerated charge & antennae, special relativity.

PHYS 4424
Optics: PR: PHYS 3101 and PHYS 3323. Wave optics, absorption, stimulated emission, lasers, transforms, coherence, holography.

PHYS 4424L
Optical Physics Laboratory: A laboratory course on geometric optics, interference, diffraction, materials and modern optics.

PHYS 4604

PHYS 4805

PHYS 4803L

PHYS 4942C
Practicum in Physics: PR: C.I. Physics laboratories and demonstrations, and the study of recent research on the learning of physics.

PHYS 5015C

PHYS 5081C

PHYS 5100
Topics in Contemporary Physics for Teachers: PR: C.I. The study of recent findings in a selected area such as particle physics, surface physics, planetary atmospheres, lasers, geophysics, etc.

PHYS 5200C
Newtonian Mechanics for Teachers: PR: C.I. A lab, lecture, demonstration course studying selected topics in classical mechanics.

PHYS 5240

PHYS 5300C
Electricity for Teachers: PR: C.I. Circuits, multimeters, oscilloscopes, circuit elements.

PHYS 5302C

PHYS 5346
Electrodynamics I: PR: PHYS 3320, MAP 3302, or C.I. Boundary value problems in electrostatics and magnetostatics. Maxwell equations. EM fields in matter, wave generation and propagation; wave guides, resonant cavities.

PHYS 5401C
Optics for Teachers: PR: C.I. Geometrical and physical optics, spectrometers and lasers.

PHYS 5431

PHYS 5446
Laser Principles: PR: PHYS 3101, MAP 3302, PHYS 4424. Classical introduction to the basic principles of laser gain media, properties of resonators and modes, description of specific laser systems.

PHYS 5500C
Thermal Physics for Teachers: PR: C.I. Engines, heat pumps, kinetic theory, phase changes, radiation, weather.
PHY 5524 AS 3(3,0)

PHY 5601 AS 1(1,0)

PHY 5606 AS 3(3,0)
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.

PHZ 3151 AS 3(3,0)

PHZ 3271 AS 3(3,0)
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.

PHZ 5150C AS 1(0.5,1.5)
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.

PHZ 5301C AS 1(0.5,1.5)
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.

PHZ 5304 AS 3(3,0)
Nuclear Physics: PR: PHY 4604. Nuclear forces, structure, models, reactions, radioactivity, fission, fusion, strange particles.

PHZ 5405 AS 3(3,0)

PHZ 5505 AS 3(3,0)
Plasma Physics: PR: PHY 4220, PHY 3320, or C.I. Introduction to theory and experimental basis of 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 3XX (pending) HPA 3(3,0)
Criminal Law: Basic concepts of substantive criminal law. The course includes examination of elements of major crimes, criminal responsibility, legal defenses, and parties to crime.

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 CCI 3020 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
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
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
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
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
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
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
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 4583
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 4584
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 4585
Estate Administration: PR: PLA 4603. Study of the laws and procedures applicable to administration of estates.

PLA 4603

PLA 4623
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.

PLA 4700
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 4763
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.

PLA 5546

PLA 5937

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

POS 3173
Southern Politics: PR: POS 2041 or C.I. Study of southern politics past and present. Emphasis on factors effecting changes in the region and the states. Southern and national relationship examined.
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.

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.

Contemporary Revolution and Political Violence: Theories and cases of revolutionary change and political violence in the contemporary world.

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.

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.

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.

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 roles.

Scope and Methods of Political Science: Introduction to the scope and methodology of political analysis. Extensive examination of the discipline, research design and methodology.

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.

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.

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.

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.

Judicial Process & Politics: Study of the formal and informal judicial process. Legal culture, bureaucratic model, judicial recruitment and outputs, comparative judicial behavior.

Presidential Campaigning: PR: C.I. Introduces the process of candidate selection, convention behavior, actual campaign process and the transition of power.

Comparative Political Parties: The study of political party systems and processes. The course may include U.S., Canada, and other political systems.

American Constitutional Law: PR: POS 2041 or C.I. Development of American federalism and national power, commerce clause, and nationalization of the economy.

American Constitutional Law II: PR: POS 2041 or C.I. Development of civil liberties and civil rights in the American federal system.

Politics and Civil Rights: Examination of development and issues of civil rights in the second reconstruction. Course emphasis process and analysis of policy.

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.

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.

American Political Thought: From its sources to the 20th century, including liberalism, puritanism, the Federalist, the rise of industrialism, resulting social movements, modern variations.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>POT 3302</td>
<td>Modern Political Ideologies: A study of modern ideologies since the French Revolution including liberalism, conservatism, capitalism, nationalism, fascism and anarchism.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>POT 4003</td>
<td>Political Theory: PR: POS 2041 or C.I. Examination of various normative approaches to the study of political science, stressing contemporary developments in the field.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>POT 4025</td>
<td>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.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>POT 4054</td>
<td>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).</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>POT 4066</td>
<td>Contemporary Political Theory: Introduction to the contemporary debate about the status of rights, utilitarianism, and liberalism, and communitarian marxist, libertarian, and feminist critiques of liberalism.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>POT 4314</td>
<td>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.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>POT 4414</td>
<td>Marxist Political Theory: Survey of Marx &amp; Engels and other thinkers, exposing the theoretical underpinnings of nations and groups who have adapted marxist principles for governance.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>PPE 3003</td>
<td>Personality Theory: PR: PSY 2013. A survey of theory and research on the development of personality characteristics.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>PPE 5055</td>
<td>Personality Theories: PR: G.A. or C.I. Critical theoretical models of personality development with applications to counseling, psychotherapy and psychological assessment.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>PSB 3002</td>
<td>Physiological Psychology: PR: PSY 2013. A survey of the physiological basis of behavior, emphasizing the relationship between the nervous system and behavior. Lecture and demonstration/lab.</td>
<td>AS 4(4,0)</td>
</tr>
<tr>
<td>PSB 3442</td>
<td>Drugs and Behavior: PR: PSY 2013. Effects of certain drugs upon the nervous system, behavior, and society. Causes of drug abuse and impact on mental health.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>PSB 3542</td>
<td>Sleep and Dreams: PR: PSY 2013. An overview of the psychological and physiological foundation of sleep and dreams. Concrete facts and disturbances of sleep. Cultural perspectives on, and contemporary applications of dreams.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>PSB 4013C</td>
<td>Introduction to Neuropsychology: PR: PSB 3002. Study of brain function, with particular emphasis on human behavior. Lecture/Lab.</td>
<td>AS 4(2,2)</td>
</tr>
<tr>
<td>PSB 4103C</td>
<td>Biofeedback Applications: PSY 2013, PSB 3002 and C.I. Introduction to theory, instrumentation, research and clinical application of biofeedback. Training in use of biofeedback equipment. Lec./Lab.</td>
<td>AS 3(2,2)</td>
</tr>
<tr>
<td>PSB 5005</td>
<td>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.</td>
<td>AS 3(3,0)</td>
</tr>
<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>
<td>AS 3(3,0)</td>
</tr>
<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>
<td>AS 1(0,2)</td>
</tr>
<tr>
<td>PSY 2013</td>
<td>General Psychology: An introductory survey of the basic principles, theories, and methods of contemporary psychology.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>PSY 2013H</td>
<td>Honors General Psychology: Same as PSY 2013 with honors-level content.</td>
<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 &quot;S&quot; or &quot;U.&quot;</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>
<td>AS 4(3,2)</td>
</tr>
</tbody>
</table>

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.


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.

Undergraduate Field Work: PR: C.I. Placement in a community agency for supervised experience in applications of psychology to community problems.


History and Systems of Psychology: PR: EXP 3404 and PPE 3003. Historical development of psychology, with emphasis on classical theoretical positions.

Environmental Politics: An examination of politics and policy-making concerning issues of conservation, pollution and development of land, air, and water resources.

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.

Introduction to Space Studies: Broad-based multidisciplinary introduction to space studies, providing familiarity with some technical aspects as well as the relationship between technical and public policy considerations.

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.

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.

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.

Government & 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.

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.

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.

Writing for Public Relations: PR: Grammar Proficiency Examination, and typing test. Development of skills in writing for public relations.

Public Relations: Principles and practice of Public Relations including techniques, research, tools, publicity, and management.

Public Relations Campaigns: PR: PUR 4000 or C.I. Planning and execution of public relations campaigns for profit and non-profit organizations.

RAT 3241: Clinical Radiobiology: Application of the principles and theories of radiobiology to the clinical practice of radiation therapy.

RAT 3242: Oncologic Pathology: PR: Acceptance to program. Study of neoplastic diseases, including causative factors, characteristics, histologic grading, staging and treatment.

RAT 3614: Radiation Therapy Physics I: PR: Acceptance to program. Study of radiation production, properties, interactions, measurement, and protection.

RAT 4247: Radiation Oncology I: Methods of radiation therapy treatment of malignant conditions of the skin, oral cavity, pharynx, sinuses, thyroid, digestive and respiratory systems.

RAT 4248: Radiation Oncology II: Methods of treatment of malignant conditions of the nervous system, eye, reproductive system, urinary system, connective tissue, and lympho-reticular system.

RAT 4618C: Radiation Therapy Physics II: PR: RAT 3614. Study of radiation protection techniques, design considerations, modes and characteristics of decay, handling of radionuclides and clinical dosimetry.

RAT 4619C: Radiation Therapy Physics III: PR: RAT 3614. Study of treatment planning principles and techniques, including multiple beam therapy, rotation therapy, arc therapy, and irregular field techniques.

RED 3012: Basic Foundations of Reading: PR: Junior Standing or C.I. Introduction to reading: principles, procedures, and current practices. Study of specific techniques and materials for word attack and comprehension.

RED 4519: Diagnostic and Corrective Reading Strategies: PR: RED 3012 or C.I. and admission to Phase II. An investigation of the needs of individual learners in reading instruction. Organization and techniques for promoting optimum reading growth. Concurrent school experiences required.

RED 5147: Developmental Reading: Principles, procedures, organization, and current practices in the elementary reading program. Materials and methods of instruction.

RED 5514: Classroom Diagnosis and Development of Reading Proficiencies: PR: RED 5147 or equivalent. Classroom diagnosis and corrective teaching in reading; instructional materials. Case study required.

REE 3043: Fundamentals of Real Estate: PR: Junior standing. Emphasis placed upon the application of basic tools of economics, finance, and marketing to solve private and public sector real estate problems.

REE 4103: Real Estate Appraisal & Valuation: PR: FIN 3403, FIN 3303, FIN 3404, FIN 3504, FIN 3453. Focus on the fundamentals of real estate valuation utilizing tools of financial and economic analysis.

REE 4204: Real Estate Finance: PR: FIN 3403, FIN 3303, FIN 3404, FIN 3504, FIN 3453. Focus on the fundamentals of real estate finance utilizing tools of financial and economic analysis.

REE 4903: Real Estate Investment: PR: FIN 3403, FIN 3303, FIN 3404, FIN 3504, FIN 3453. Focus on real estate decision-making in the private sector utilizing tools of financial and economic analysis.

REL 2300: World Religions: Basic features and historical background on Confucianism, Taoism, Hinduism, Buddhism, Judaism, Christianity, and Islam.

REL 3600: Studies in Judaism: An inquiry into the foundations and development of Jewish thought in various parts of the world.

RET 3026C: 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.

RET 3264C: 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.

RET 3483: 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.
<table>
<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>RTV 3210</td>
<td>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.</td>
</tr>
<tr>
<td>RTV 3223</td>
<td>Lighting for Video: PR: RTV 3200. Basic lighting techniques for both studio and location, single and multiple-camera video production.</td>
</tr>
<tr>
<td>RTV 3231</td>
<td>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.</td>
</tr>
<tr>
<td>RTV 3300</td>
<td>Broadcast Newswriting: PR: Grammar Proficiency Examination and departmental typing exam. The study and practice of writing news for radio and television.</td>
</tr>
<tr>
<td>RTV 3301</td>
<td>Advanced Broadcast Newswriting: PR: RTV 3300. The writing of in-depth news items, including documentaries, features, and investigative materials.</td>
</tr>
<tr>
<td>RTV 3501</td>
<td>Broadcast Copywriting: PR: Grammar Proficiency Examination and departmental typing exam. Preparation of written commercial copy for radio and television and public service.</td>
</tr>
<tr>
<td>RTV 3810</td>
<td>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.</td>
</tr>
<tr>
<td>RTV 3842</td>
<td>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.</td>
</tr>
<tr>
<td>RTV 4206</td>
<td>Television Directing: PR: RTV 3200 and RTV 3260. Preparation and direction of programs, with emphasis on dramatic values of composition.</td>
</tr>
<tr>
<td>RTV 4270</td>
<td>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.</td>
</tr>
<tr>
<td>RTV 4403</td>
<td>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.</td>
</tr>
<tr>
<td>RTV 4404</td>
<td>International Broadcasting: PR: RTV 3000. Comparative analysis of national broadcast systems. World broadcasting as a social, political, and economic force.</td>
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<tr>
<td>RTV 4600</td>
<td>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.</td>
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<tr>
<td>RTV 4700</td>
<td>Regulation of Broadcasting: PR: RTV 3000. Federal, state, local and self-regulatory agencies and practices which govern electronic media.</td>
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<tr>
<td>RTV 4800</td>
<td>Broadcast Management: PR: RTV 4700. Consideration of broadcast management problems in station operations at the local, regional, and national levels.</td>
</tr>
<tr>
<td>RUS 1115</td>
<td>Basic Review of Russian: A review of Russian grammar, vocabulary and civilization. For students with previous instruction in German. Graded S or U.</td>
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<tr>
<td>RUS 1120</td>
<td>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.</td>
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<tr>
<td>RUS 1121</td>
<td>Elementary Russian Language and Civilization II: PR: RUS 1115, RUS 1120, or experience with this language. Continuation of RUS 1120.</td>
</tr>
<tr>
<td>RUS 2210</td>
<td>Intensive Russian Conversation: PR: One year of Russian or equivalent. Practical use of the language, leading toward fluency and correctness in speaking.</td>
</tr>
<tr>
<td>RUS 2230</td>
<td>Intermediate Russian Language and Civilization I: PR: RUS 1121 or equivalent. Development of language skills and cultural knowledge at the intermediate level.</td>
</tr>
<tr>
<td>RUS 2231</td>
<td>Intermediate Russian Language and Civilization II: PR: RUS 2230 or equivalent. Continuation of RUS 2230, with emphasis on Russian civilization.</td>
</tr>
</tbody>
</table>

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RUS 3240 AS 3(3,0)
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 AS 3(3,0)
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 4411 AS 3(3,0)
Advanced Russian Conversation: PR: RUS 3420. An advanced conversation course on directed topics from various domains of public life and disciplines.

RUS 4421 AS 3(3,0)
Advanced Russian Composition: PR RUS 3420. An in-depth study of stylistic and grammatical mechanisms of Russian literary styles.

RUW 3100 AS 3(3,0)
Survey of Russian Literature I: PR: RUS 2231. A survey course of the major Russian writers and poets from Pushkin to Turgeniev.

RUW 3101 AS 3(3,0)
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 AS 3(3,0)

RUW 4330 AS 3(3,0)
Russian Poetry: PR: RUS 2231. A survey of Russian poetry from Zhukovsky to the present.

RUW 4480 AS 3(3,0)

RUW 4481 AS 3(3,0)

SCE 3310 ED 4(4,0)
Teaching Science in Elementary School: PR: Junior standing or C.I. Selected concepts; organizing for instruction; techniques; evaluation procedures.

SCE 3330 ED 4(3,2)
Science Instructional Analysis: PR: EDG 4321 or C.I. Course objectives for a school curriculum and methods and materials.

SCE 5716 ED 3(3,0)
Methods in Elementary School Science: Organization of instruction in elementary school science including methods, evaluation, materials, strategies, and current practices.

SCE 5825 ED 3(3,0)
Space Science for Educators: PR: Senior standing or C.I. Introduction to space science, manned space flight and space education curriculum.

SLS 2311 AS 1(1,0)
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 AS 3(3,0)

SOP 3724 AS 3(3,0)
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 AS 3(3,0)
Psychology of Women: PR: PSY 2013. Examination of the psychological impact of changing sex roles on women in modern society. Topics include childrearing, working women, and sex differences in personality and cognition.

SOP 3772 AS 3(3,0)

SOW 3104 HPA 3(3,0)

SOW 3111 HPA 3(3,0)
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.

SPA 3101
Clinical Observation and 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; GPA 2.5 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
Social Services for the Elderly: Development of interventive skills for obtaining, providing, and improving social services in behalf of elderly persons and their families.

SOW 4645
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. May be taken twice for credit.

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 PR: SPA 3002. An analysis of techniques and methods of planning and executing therapeutic programs for communicatively handicapped individuals.

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 PR: SPA 3002, 3112. Survey of articulation disorders and their management.

SPA 4201L Communicative Disorders: Articulation Laboratory: Students will have practical experience in diagnosis and treatment in articulation disorders.


SPA 4222 Nonorganic Speech Disorders: PR: SPA 3550, 4201. Survey of nonorganic aspects of stuttering and voice disorders and their management.

SPA 4222L Nonorganic Speech Disorders Laboratory: Students will have practical experience in diagnosis and treatment in nonorganic speech disorders.


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 4360 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.

SPA 4382 Intermediate American Sign Language: Conversation. Emphasis on refining fluency receptively and expressively. Practicum with the deaf community.


SPA 4402L Communicative Disorders: Language Laboratory: Students will have practical experience in diagnosis and treatment in language disorders.
SPA 4412
Augmentative Communications Systems: PR: LIN 3710, SPA 4032. Students will learn the rudiments of nonverbal communication systems, for example, Bliss, Rebus, Manual Signing, Language Boards, and finger spelling.

SPA 4841
Practicum in Communicative Disorders.

SPA 5005
Survey of Communicative Disorders: A survey of speech, language, and hearing disorders for habilitative personnel and other interested professionals.

SPA 5120
Physiological Acoustics: PR: SPA 4032; Graduate status or C.I. Lectures, readings, and experiments pertaining to the subjective reception of sound.

SPA 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.

SPA 5225L
Fluency Disorders Laboratory: PR: Graduate status or C.I. Practical application of clinical skills in fluency disorders.

SPA 5307
Differential Diagnosis of Auditory Disorders: PR: SPA 4032; Graduate status or C.I. Clinical techniques in pure tone speech, acoustic impedance, and electrohy siologic response audiometry.

SPA 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.

SPA 5553
Differential Diagnostic in Speech and Language: PR: SPA 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.

SPA 5553L
Differential Diagnosis in Speech and Language Laboratory: PR: SPA 6204, 6403, 6211, 5805. Assignment to diagnostic teams to apply the diagnostic techniques presented in SPA 5553. Experiences include test administration, interviewing, writing diagnostic reports, and oral presentations.

SPA 5554
Therapeutic Communication: PR: Graduate status or C.I. Practical interviewing and counseling in the area of communicative disorders.

SPA 5600
Administration and Management of Communicative Disorders Programs: PR: SPA 3002. Methods and techniques for organization and administration of speech-language and hearing disorders in public school, hospital, rehabilitation center, and private practice facilities.

SPA 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. AS 3(1,2)

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. AS 3(3,0)

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. AS 3(3,0)

SPC 4440 Group Dynamics: A study of human behavior in group situations. AS 3(3,0)

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. AS 3(3,0)

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. AS 3(3,0)

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. AS 2(2,1)

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. AS 4(4,1)

SPN 1121 Elementary Spanish Language and Civilization II: PR: SPN 1115, SPN 1120 or experience with this language. Continuation of SPN 1120. AS 4(4,1)

SPN 1170 Elementary Spanish Study Abroad: Elementary Spanish language and civilization taught in the native environment. AS 8(16,10)

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.) AS 3(3,0)

SPN 2230 Intermediate Spanish Language and Civilization I: PR: SPN 1121 or equivalent. Development of language skills and cultural knowledge at the intermediate level. AS 4(3,1)

SPN 2231 Intermediate Spanish Language and Civilization II: PR: SPN 2230 or equivalent. Continuation of SPN 2230, with emphasis on Spanish civilization. AS 3(3,1)

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. AS 3(3,1)

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. AS 8(16,10)

SPN 3114 Business Spanish II: PR: C.I. Continuation of Business Spanish I. AS 3(3,0)

SPN 3142 Business Spanish III: PR: C.I. Continuation of Business Spanish II. AS 3(3,0)

SPN 3241 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. AS 3(3,0)

SPN 3420 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. AS 3(3,0)

SPN 4143 Business Spanish IV: PR: C.I. Advanced course in business terminology and development of advanced language skills. AS 3(3,0)

SPN 4410 Advanced Spanish Conversation: PR: SPN 3241. Advanced conversation on directed topics from various disciplines: literature, art, psychology, philosophy, music, business, and the sciences. AS 3(3,0)

SPN 4420 Advanced Spanish Composition: PR: SPN 3420. Readings and written imitations of modern literary styles in the form of themes, sketches, poems, and original stories. AS 3(3,0)
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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
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<tbody>
<tr>
<td>SPW 4450</td>
<td>Stylistics: PR: SPN 3420 or equivalent. An intense study of textural criticism.</td>
<td>An examination of the relationship between language and literature, explanations and linguistic analysis of literary texts.</td>
</tr>
<tr>
<td>SPW 4510</td>
<td>Spanish Civilization and Culture: PR: SPN 3241 or SPN 3420. A study of Spanish</td>
<td>A study of Spanish civilization and culture from Pre-Roman times to the present. Conducted in Spanish.</td>
</tr>
<tr>
<td>SPW 4920</td>
<td>Latin American Civilization and Culture: PR: SPN 3241 or SPN 3420. An overview</td>
<td>An overview of the currents in Latin American culture and civilization from the Pre-Columbian period to the present. Conducted in Spanish.</td>
</tr>
<tr>
<td>SPN 4800</td>
<td>Spanish-American Syntax: The course examines the Spanish language from its</td>
<td>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.</td>
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<tr>
<td>SPW 3101</td>
<td>Survey of Spanish Literature I: PR: SPN 2231 or equivalent. Main literary</td>
<td>Main literary currents and works from the Middle Ages through the Eighteenth century.</td>
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<td>currents and works from the Nineteenth century to the present.</td>
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<tr>
<td>SPW 3130</td>
<td>Survey of Spanish Literature II: PR: SPN 2231 or equivalent. Main literary</td>
<td>Main literary currents and works of the Nineteenth century to the present.</td>
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<td>currents and works from the colonial period to the Nineteenth Century</td>
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<td>Romanticism.</td>
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<tr>
<td>SPW 3131</td>
<td>Survey of Latin-American Literature I: PR: SPN 2231 or equivalent. Main</td>
<td>Main literary currents and works of the Nineteenth century from the Realism to the present.</td>
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<td>literary currents and works from the colonial period to the Nineteenth</td>
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<td>century Romanticism.</td>
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<tr>
<td>SPW 3370</td>
<td>Spanish Short Story: PR: SPN 2231 or equivalent. A study of representative</td>
<td>A study of representative 19th and 20th-century Spanish short stories and their authors.</td>
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<td>19th and 20th-century Spanish short stories and their authors.</td>
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<td>special emphasis on Lope, Tirso, Alarcon, and Calderon. The controversies of</td>
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<td>the Spanish theatre and its influence abroad.</td>
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<tr>
<td>SPW 4450</td>
<td>Spanish Literary Theory: PR: SPN 3420 or equivalent. A study of textual</td>
<td>A study of textual criticism with emphasis in the theory of genre.</td>
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<td>representative authors and works in Spanish Romanticism, Realism, and</td>
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<td>Naturalism.</td>
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<td>representative authors and works in drama and the novel.</td>
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<tr>
<td>SPW 4600</td>
<td>Cervantes I: PR: SPW 3100. Don Quixote.</td>
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<td>authors and their works.</td>
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<td>SPW 4770</td>
<td>Caribbean Spanish Literature: An overview of the literature of the Spanish-</td>
<td>An overview of the literature of the Spanish-speaking Caribbean countries from colonial time to the present.</td>
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<td>speaking Caribbean countries from colonial time to the present.</td>
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<td>SSE 3112</td>
<td>Teaching Social Science in the Elementary School: PR: Admission to Phase II</td>
<td>Selected themes, problems, and concepts; organizing for instruction; techniques; evaluation procedures.</td>
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<td>or C.I. Selected themes, problems, and concepts; organizing for instruction;</td>
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<td>techniques; evaluation procedures.</td>
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<td>SSE 3333</td>
<td>Social Science Instructional Analysis: PR: EDG 4321 or C.I. Study of</td>
<td>Study of instructional programs in social sciences; objectives; materials; techniques; organization of instruction; evaluation procedures; current research.</td>
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<td>instructional programs in social sciences; objectives; materials; techniques;</td>
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<td>organization of instruction; evaluation procedures; current research.</td>
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<tr>
<td>SSE 5113</td>
<td>Methods in Elementary School Social Science: Study of instructional programs</td>
<td>Study of instructional programs in social sciences; objectives; materials; techniques; current research; and their application in elementary school setting.</td>
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<td>in social sciences; objectives; materials; techniques; current research; and</td>
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<td>their application in elementary school setting.</td>
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<td>STA 3023</td>
<td>Statistical Methods I: PR: MAC 1104 or MGF 1203. First methods course</td>
<td>First methods course introducing probability and statistical inference, including estimation, hypothesis testing, binomial and normal distributions, sample size.</td>
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<td>sample size.</td>
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<tr>
<td>STA 3023H</td>
<td>Honors Statistical Methods I: PR: Honors Program Student; Calculus desired</td>
<td>Honors Program Student; Calculus desired but not necessary. Same as STA 3023 with honors-level content.</td>
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<td>but not necessary.</td>
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<tr>
<td>STA 3032</td>
<td>Probability and Statistics for Engineers: PR: MAC 3312 and computer</td>
<td>Probability and Statistics for Engineers: PR: MAC 3312 and computer programming. Axioms of probability; combinatorial and geometrical probability; probability distributions; measures of location and</td>
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<td>programming. Axioms of probability; combinatorial and geometrical probability;</td>
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<td>probability distributions; measures of location and</td>
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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 4222 AS 3(3,0)


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)


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 4852 AS 3(3,0)


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: PR: STA 4164. STA 5206 or STA 5156. Construction and analysis of designs for experimental investigations. Blocking, randomization, replication; incomplete block designs. Factorial and fractional designs; design resolution.

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

SUR 3101C
Surveying: PR: MAC 3311 and Junior standing. Theory and field practice in surveying measurements and the reduction and adjustment of field data.

SYA 3110
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
Modern Sociological Thought: PR: SYG 2000. A study of major European and American contributors to modern sociology since World War II.

SYA 3300

SYA 3301

SYA 3400
Research Methods and Statistics: PR: SYG 2000 and one other sociology course.

SYA 4450
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

SYD 3410

SYD 3700
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
Sex Roles in Modern Society: The traditional and changing roles of women and men viewed in a sociological perspective.

SYO 3000

SYO 3360
Social Organization and Human Relations: 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.

SYO 3410
Sociology of Mental Illness: A sociological examination of mental illness as a social problem; legal aspects of mental illness, and the mental health professions.
SYO 3530  
Social Stratification: PR: SYG 2000. Study of class, status and power, cultural variations in stratification systems; patterns of mobility and change.  
SYO 4100  
SYO 4250  
Sociology of Education: PR: SYG 2000. 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.  
SYO 4300  
Political Sociology: Sociological analysis of political and parapolitical groups: socioeconomic variable of voting behavior, power elites; societies and systems of government.  
SYO 4400  
Medical Sociology: Analysis of patient beliefs and behavior, health practitioners, the social organization of hospitals and health services; contemporary problems in the delivery of health care.  
SYP 3300  
Collective Behavior: PR: SYG 2000. Analysis of relatively unstructured social situations, such as mobs, crowds, etc. as well as more structured forms of collective behavior such as social movements.  
SYP 3400  
SYP 3510  
Sociology of Deviant Behavior: 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.  
SYP 3520  
Criminology: 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.  
SYP 3530  
Juvenile Delinquency: Types of delinquency behavior found among juveniles; possible causes and ways society attempts to treat the various forms of delinquency.  
SYP 3540  
Sociology and Law: The relationship between law and society, including the functions of law and its organization, social and economic consequences, jury selection, and modern trends.  
SYP 3551  
Sociology of Alcoholism: Introduction to the nature of alcoholism and review of its impact on society.  
SYP 3602  
Sociology of Popular Music: 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.  
SYP 3650  
Sociology and Sport: 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.  
SYP 4000  
SYP 4550  
SYP 4730  
Sociology of Aging: Sociological aspects of aging in America.  
TAX 3000  
Personal Income Tax: A study of federal income tax designated to convey basic tax concepts and skills related to the individual taxpayer. Not open to accounting majors.  
TAX 4001  
Federal Income Tax I: PR: Junior standing and ACG 3103 with a grade of "C" or better or C.J. Concepts and methods of determining taxable income of individuals, and selected topics.  
TAX 5015  
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.  
THE 1020  
THE 1020H  
Theatre Survey—Honors: An honors-level overview of the art and craft of the theatre.  
THE 2071  
Cinema Survey: A broad cultural approach to the study of cinema.
THE 2925
Theatre Practicum I: Open to all students interested in participating in productions of University Theatre. May be repeated for credit. Primarily an activity course.

THE 3110
Theatre History I: PR: None. Development of theatre art from the earliest times through the seventeenth century.

THE 3111
Theatre History II: PR: None. Development of theatre art from the seventeenth century to the twentieth century.

THE 3251
History of the Motion Picture: Development of the film industry; its social and economic impact. Major films and trends in context.

THE 3260

THE 3370
Modern Drama: Drama from Ibsen to Theatre of the Absurd, with reference to developing production styles and dramatic movements.

THE 3925
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.

THE 4760C
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.

THE 4800
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.

TPA 2200
Technical Theatre Production I: PR: None. History, theory, and practice of technical theatre production. [Service on crew as required.]

TPA 2204
Technical Theatre Production II: PR: None. A continuation of TPA 2210 [Service on crew as required].

TPA 3060
Scene Design I: PR: THE 1020, TPA 2210 or C.I. Study of and practice of scene design; perspective drawing, fundamentals of design, and drafting.

TPA 3077
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.

TPA 3220
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].

TPA 3221
Lighting Design: PR: TPA 3220. Continuation of Stage Lighting with emphasis on theory, style, and individual lighting design projects.

TPA 3230
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.)

TPA 3250
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, and 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
TTP 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.
TSL 5140
ESOL Strategies: This course will survey cross-cultural communication and understanding, testing and evaluation, curriculum and methods of teaching ESOL to meet the needs of limited English proficient students.
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.
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.
The date indicates the first year of employment at the University of Central Florida.

ABBOTT, DAVID W., Professor of Psychology
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(1968), B.A., M.A., Ph.D. (Ohio University)

ASHLEY, ROBERT A., Assistant Professor of Hospitality Management
(1984), B.S., M.S. (Florida International University)

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ATKINSON, STANLEY M., Associate Professor of Finance
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BAILEY, CHARLES D., Peat Marwick Professor of Accounting

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BAIL, JANICE W., Head, Access Services Department and University Librarian
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(1978), B.A., M.Ed. (Wayne State University)

BECKER, STEPHEN, Distinguished Lecturer in English
(1986), B.A. (Harvard College)

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BERGNER, JOHN F., Jr., Professor of Health Sciences
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BERRINGER, ORVILLE M., Professor of Molecular Biology and Microbiology
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(1982), B.S.I.E., M.S.E.S., Ph.D. (Syracuse University), P.E. (Florida and New Mexico)

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(1972), B.A., M.A., Ph.D. (Southern Illinois University)

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BLOCK, DAVID L., Director, Florida Solar Energy Center and Professor of Engineering
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(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)

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SHOFNER, JERRELL H., Professor of History (1972), B.S., M.S., Ph.D. (Florida State University)

SHOSTAK, THOMAS A., Director of Orlando Area Programs (1987), B.A., M.A., Ed.D. (Fairleigh Dickinson University)

SICILIANO, DARLENE M., Instructor of Education (1989) B.A., M.S. (Oklahoma State University)

SIEBERT, BARRY W., Associate Professor of Education (1972), B.S., M.A., Ph.D. (University of North Dakota)

SILFVAST, WILLIAM, Professor of Physics (1990), B.S., Ph.D. (University of Utah)

SILVER, NED C., Assistant Professor of Psychology (1990), B.A., M.S., Ph.D. (Tulane University)

SIMMONS, ROGER D., University Librarian (1990), B.A., M.L.S. (University of Chicago)


SKOGLUND, MARGARET A., Assistant Professor of Art (1977), B.S., M.A., Ph.D. (University of Missouri)

SLAUGHTER, DAVID B., Assistant Professor, Department of Public Service Administration (1978), B.A., J.D. (Florida State University)

SMITH, DOUGLAS R., Assistant Professor of Aerospace Studies (1991), B.S., M.S. (University of Texas-Austin)

SMITH, ERNEST, Assistant Professor of English (1990), B.A., M.A., Ph.D. (New York University)

SMITH, FRANCES B., Associate Professor of Nursing (1979), R.N., M.S.N., Ed.D. (Florida State University)

SMITH, HARRY W., JR., Director, Department of Theatre and Professor of Theatre (1969), B.A., M.A., Ph.D. (Tulane University)

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SMITH, WILLIAM F., Professor of Engineering (1968), B.A., M.S., Sc.D. (Massachusetts Institute of Technology), P.E. (Florida, California)

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SOMERVILLE, PAUL N., Professor of Statistics (1972), B.Sc., Ph.D. (University of North Carolina)

SOMMER, MARGARET E., Associate Professor of English (1972), B.A., M.Ed., Ed.D. (University of Georgia)
SORG, STEVEN E., Associate Professor of Education  
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SOSKIN, MARK D., Visiting Associate Professor of Economics  

SOWDER, JEFFREY D., Associate University Librarian  
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SPUDECK, RAYMOND E., Assistant Professor of Finance  

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(1976), B.A., M.A., Ph.D. (University of Florida)

STEGEMAN, GEORGE I.A., Chairholder, Cobb-L.J. Hooker Chair in Optical Sciences and  
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STRASSHOFER, SUSAN, Instructor of English  
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SUNG, STELLA, Assistant Professor of Music  

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(1967), B.S., M.A., M.S.N. (Villanova University)
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(1990), B.B.A. (University of Georgia)
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(1970), B.S., M.S., Ph.D. (University of Wisconsin)
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(1990), B.A., M.A. (University of Central Florida)
WOLF, J. GARY, Distinguished Service Professor of Music
(1972), B.M.Ed., M.M., D.M.A. (Eastman School of Music)
WOOD, ALEXANDER T., Associate Professor of Education
(1969), B.A., M.S., Ph.D. (Florida State University)
WOOTEN, WILLIAM, Assistant Professor of Psychology
(1985), B.A., M.S., Ph.D. (Memphis State University)
WORBS, HELMUTH E., Associate Professor of Engineering Technology
(1978), B.S.M.E., M.S.M.E. (Stanford University), P.E. (Florida, California)
WORKMAN, DAVID A., Associate Professor of Computer Science
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WORRELL, LEWIS T., Associate Professor of Health Sciences
(1976), B.S., M.P.H. (University of Central Florida)
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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XANDER, JAMES A., Associate Professor of Economics
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YARBROUGH, PATRICIA, Chair and Professor of Physical Therapy
(1992), P.T., M.P.H., Ph.D. (Georgia State University)
YON, DONNA L., Assistant Professor of Accounting
(1984), B.S., M.Acc., Ph.D. (Texas A&M University)
YOUUMANS, KAREN G., Visiting Assistant Instructor of Health Sciences
(1990), A.A.S., B.A., M.P.A. (Golden State University)
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., Professor of Mathematics
(1990), B.S., M.S., Ph.D. (University of Wisconsin)

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BROWNE, ROLAND A.
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COMISH, NEWEL W.
(1968), B.S., M.S., Ph.D. (Ohio State University)
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COX, ELAINE B.
(1973), B.S., M.A.T., Ph.D. (Florida State University)
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CRAIG, ALBERT
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DUTTON, ARTHUR M.
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ELLIS, LESLIE L.
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Professor Emeritus of Biology

ERICKSON, ERNEST E.
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ESLER, WILLIAM K.
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GREEN, HAROLD E.
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GRiffith, harold L.
(1972), B.S., M.S. (Pennsylvania State University), P.E. (Florida)
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McLELLON, WALDRON M.
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Dean and Professor Emeritus of Education

MILLER, ERNEST E.
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MILLICAN, CHARLES N.
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OSTLE, BERNARD  
(1967), B.A., M.A., Ph.D. (Iowa State University)  
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REIDENBACH, RICHARD C.  
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SCHRADER, GEORGE F.  
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WRIGHT, BURTON  
(1970), B.S., M.S., Ph.D. (Florida State University)  
Professor Emeritus of Sociology

*Deceased

HONORARY DEGREES AWARDED

December, 1969  Kurt H. Debus, Doctor of Engineering Science  
William H. Dial, Doctor of Commercial Science

June, 1970  John W. Young, Doctor of Applied Science

March, 1973  Louis C. Murray, Doctor of Public Service

August, 1974  Fred Elmo Clayton, Doctor of Professional Engineering

August, 1978  Richard F. Livingston, Doctor of Business Administration

June, 1979  Albert F. Hegenberger, Doctor of Engineering Science  
Lee R. Scherer, Doctor of Engineering Science

December, 1979  Joseph D. Duffey, Doctor of Humane Letters  
Thelma Vivian Jackson Dudley, Doctor of Humanities  
Howard Phillips (Posthumous), Doctor of Public Service

December, 1981  Gene Burns, Master of Letters

April, 1982  Andrew Duda, Jr., Doctor of Agricultural Service  
Ferdinand Duda, Doctor of Agricultural Service  
John Duda, Doctor of Agricultural Service  
Robert J. Whalen, Doctor of Engineering Science

July, 1982  Mary Jo Stroud Davis, Doctor of Public Service  
William E. Davis, Doctor of Public Service

December, 1982  Joseph A. Boyd, Doctor of Engineering Science  
J. W. Hubler, Doctor of Engineering Science  
Charles Wadsworth, Doctor of Public Service

December, 1984  Allan E. Gotlieb, Doctor of Laws

June, 1985  George J. Becker, Jr., Doctor of Public Service  
Jerry Collins, Doctor of Public Service  
D. Robert Graham, Doctor of Public Service  
Walter O. Lowrie, Doctor of Engineering Science  
William C. Schwartz, Doctor of Engineering Science

March, 1986  Isaac Bashevis Singer, Doctor of Letters

October, 1988  Elie Wiesel, Doctor of Letters

December, 1988  Sven Caspersen, Doctor of Engineering Science  
John D. Holloway, Doctor of Public Service  
Wolfgang-Detlef Petri, Doctor of Commercial Science

May, 1989  David Albertson, Doctor of Humane Letters  
Frank M. Hubbard, Doctor of Public Service  
William S. Jenkins, Doctor of Humane Letters  
Charles N. Millican, Doctor of Laws  
James C. Robinson, Doctor of Public Service
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)

BARANCZAK, STANISLAW, Professor of Foreign Languages and Literatures
M.A., Ph.D. (Adam Mickiewicz University)

BARGAR, SHERRI, Faculty Associate, Educational Services
M.S. (Rollins College)

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)

BOULWARE, ZELLA, Faculty Associate, Educational Services
M.A. (University of Central Florida)

BRIMER, MARK, PT, Clinical Faculty, Physical Therapy
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BROWN, ASHMUN, Clinical Faculty, Health Sciences
J.D. (University of Michigan)

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COMPANION, MICHAEL A., Faculty Associate, Psychology
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RT, (ARRT)
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Member, State University System of Florida